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The training manual is intended to clarify data definitions, provide examples and answer FAQs. It will be updated with new FAQs.

1. Demographics

Seq. #: 10

Long Name: Operations Table Record Identifier

Short Name: RecordID

Definition: An arbitrary, unique value generated by the software that permanently identifies each record in the participant's database (note that unlike the PatID value, this does not identify the individual patient). The value of the identifier is a combination of a code assigned to the software developer by the STS, and a value generated by the software to create a unique value. Once assigned to a record, this value can never be changed or reused. The data warehouse will use this value to communicate issues about individual records with the participant. It may also be used by the data warehouse to link this record to other clinical data.

Intent/Clarification:

A record should be initiated for inpatient and outpatient thoracic procedures on every visit to the operating room (includes the Endoscopy Suite or Outpatient Surgical Center) whether planned or unplanned.

Seq. #: 20

Long Name: Procedures Table Record Identifier

Short Name: RecordID

Definition: This field is the foreign key that links this record with the associated records in the "Operations" table.

Seq. #: 30

Long Name: Software Vendor's Identification

Short Name: VendorID

Definition: Software vendor's identification assigned by the STS.

Seq. #: 40

Long Name: Vendor's Software Version Number

Short Name: SoftVrsn

Definition: Vendor's software product version number identifying the software which created this record. Vendor controls the value in this field. Version passing certification/harvest testing will be noted at the data warehouse.

Seq. #: 50

Long Name: Version Of STS Data Specification

Short Name: DataVrsn

Definition: Version number of the STS Data Specifications/Dictionary, to which the record conforms. The value will identify which fields should have data, and what are the valid data values for those fields. It must be the version implemented in the software at the time the record was created. The value must be entered into the record automatically by the software.

Seq. #: 60

Long Name: Participant ID

Short Name: ParticID

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Definition: Participant ID is a unique number assigned to each database participant by the STS. A database participant is defined as one entity that signs a Participation Agreement with the STS, submits one data file to the harvest, and gets back one report on their data. The participant ID must be entered into each record.

Intent/Clarification:

Each participant's data, if submitted to harvest, must be in one data file. If one participant keeps data in more than one file (e.g. at two sites), the participant must combine them back into one file for harvest submission. If two or more participants share single purchased software and enter cases into one database, the data must be extracted into two different files, one for each participant ID, with each record having the correct participant ID number.

Seq. #: 70

Long Name: Operations Table Patient Identifier

Short Name: PatID

Definition: The foreign key that links this record with the associated records in the "Demographics" table.

Intent/Clarification:

Once assigned to a patient, this number can never be changed or reused.

Seq. #: 80

Long Name: Demographics Table Patient Identifier

Short Name: PatID

Definition: An arbitrary value that uniquely and permanently identifies each patient. The value of the identifier is a combination of a code assigned to the software developer by the STS, and a value generated by the software to create a unique value. The value in this field cannot be a value that would identify the patient outside of the database (such as Medical Record Number or Social Security Number). Once a value has been assigned to a patient, it can never be changed or reused. This field is the primary key that links this record with the associated records in the "Operations" table.

Seq. #: 90

Long Name: Demographics Table Data Version

Short Name: DemogDataVrsn

Definition: Version number of the STS Data Specifications/Dictionary, to which the Demographics record conforms. The value will identify which fields should have data, and what are the valid data for those fields. It must be the version implemented in the software at the time the record was created. The value must be entered into the record automatically by the software. Note that the data version of the demographics record does not necessarily need to match the data version of all of the associated operation records for that patient. This is because new data versions might be implemented in the software and used for the creation of operation records after a demographics record has been created for a patient.

Seq. #: 100

Long Name: Medical Record #

Short Name: MedRecN

Definition: Indicate the patient's medical record number at the hospital where surgery occurred. This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

This field is not required for record inclusion

Seq. #: 110

Long Name: Patient's First Name

Short Name: PatFName

Definition: Indicate the patient's medical record number at the hospital where surgery occurred. This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

This field is not required for record inclusion

Seq. #: 121

Long Name: Patient's Middle Name

Short Name: PatMName

Definition: Indicate the patient's middle name as documented in the medical record. Leave "blank" if no middle name. This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

Leave "blank" if no middle initial.

This field is not required for record inclusion

Seq. #: 130

Long Name: Patient's Last Name

Short Name: PatLName

Definition: Indicate the patient's medical record number at the hospital where surgery occurred. This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

This field is not required for record inclusion

Seq. #: 140

Long Name: Social Security Number

Short Name: SSN

Definition: Indicate the patient's Social Security Number (SSN). Although this is the Social Security Number in the USA, other countries may have a different National Patient Identifier Number. For example in Canada, this would be the Social Insurance Number. This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

This field is not required for record inclusion

Seq. #: 151

Long Name: Patient Participating In STS-Related Clinical Trial

Short Name: ClinTrial

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Definition: Indicate which, if any, STS-related clinical trial in which the patient is participating. The STS will assign a code to each clinical trial as they begin collecting data.

Intent/Clarification:

This applies only to STS trials. The instructions will be posted here when trials are available. There are currently no trials underway.

Seq. #: 152

Long Name: Patient Participating In STS-Related Clinical Trial - Patient ID

Short Name: ClinTrialPatID

Definition: Indicate the patient identifier used to identify the patient in the clinical trial.

Seq. #: 160

Long Name: Date Of Birth

Short Name: DOB

Definition: Indicate the patient's date of birth using 4-digit format for year. This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

This field is not required for record inclusion

Seq. #: 170

Long Name: Age At Time Of Surgery

Short Name: Age

Definition: Indicate the patient's age in years, at time of surgery. This should be calculated from the date of birth and the date of surgery, according to the convention used in the USA (the number of birth date anniversaries reached by the date of surgery). If patient is less than one year old, enter the value 1.

Intent/Clarification:

Age is needed for risk models

11/15 - Is there a minimum age of patients who should be included in the General Thoracic Surgery database? I have a Nuss Pectus Repair for a 12-year old - should this case be included? I find no specific age parameter in the official Data Specifications, Training Manual or Harvest Report (Overview, Summary or Appendix). **Yes, include. No age limit in thoracic database.**

Seq. #: 180

Long Name: Postal Code

Short Name: PostalCode

Definition: Indicate the ZIP Code of the patient's residence. Outside the USA, this data may be known by other names such as Postal Code (needing 6 characters). Software should allow sites to collect at least up to 10 characters to allow for Zip+4 values. This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

This field is not required for record inclusion

Seq. #: 190

Long Name: Gender

Short Name: Gender

Definition: Indicate the patient's gender at birth as either male or female.

Intent/Clarification:

Patients who have undergone gender reassignment surgery maintain the risk associated with their chromosomal gender. This field is included in risk models

Seq. #: 191

Long Name: Race Documented

Short Name: RaceDocumented

Definition: Indicate whether race is documented.

Intent/Clarification:

- Yes
- No
- Patient declined to disclose

Race should be self-reported by the patient or family.

Seq. #: 200

Long Name: Race - Caucasian

Short Name: RaceCaucasian

Definition: Indicate whether the patient's race, as determined by the patient or family, includes Caucasian. This includes a person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity: The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)

Intent/Clarification:

The Census Bureau collects race data in accordance with guidelines provided by the U.S. Office of Management and Budget and these data are based on self-identification. The racial categories included in the census form generally reflect a social definition of race recognized in this country, and are not an attempt to define race biologically, anthropologically or genetically. In addition, it is recognized that the categories of the race item include racial and national origin or socio-cultural groups.

People may choose to report more than one race to indicate their racial mixture, Such as "American Indian and White." People who identify their origin (ETHNICITY) as Hispanic, Latino or Spanish may be of any race. In addition, it is recognized that the categories of the race item include both racial and national origin and socio-cultural groups. You may choose more than one race category.

Seq. #: 210

Long Name: Race - Black / African American

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Short Name: RaceBlack

Definition: Indicate whether the patient's race, as determined by the patient or family, includes Black / African American. This includes a person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."

Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity : The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)

Intent/Clarification:

This includes a person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."

Reference:

www.whitehouse.gov/omb/fedreg/1997standards.html.

Seq. #: 220

Long Name: Race - Asian

Short Name: RaceAsian

Definition: Indicate whether the patient's race, as determined by the patient or family, includes Asian. This includes a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity: The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)

Seq. #: 230

Long Name: Race - American Indian / Alaskan Native

Short Name: RaceNativeAm

Definition: Indicate whether the patient's race, as determined by the patient or family, includes American Indian / Alaskan Native. This includes a person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity: The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)

Intent/Clarification:

American Indian or Alaska Native" refers to a person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicated their race(s) as "American Indian or Alaska Native" or reported their enrolled or principal tribe, such as Navajo, Blackfeet, Inupiat, Yup'ik, or Central American Indian groups or South American Indian groups.

This includes all in North American native peoples such as American Indian/Alaskan Native, Inuit.

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[The 2010 Census Redistricting Data (Public Law 94-171) Summary File]

Seq. #: 240

Long Name: Race - Native Hawaiian / Pacific Islander

Short Name: RacNativePacific

Definition: Indicate whether the patient's race, as determined by the patient or family, includes Native Hawaiian / Pacific Islander. This includes a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity: The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)

Intent/Clarification:

"Native Hawaiian or Other Pacific Islander" refers to a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicated their race(s) as "Pacific Islander" or reported entries such as "Native Hawaiian", "Guamanian or Chamorro", "Samoan", and "Other Pacific Islander" or provided other detailed Pacific Islander responses.

[The 2010 Census Redistricting Data (Public Law 94-171) Summary File]

Seq. #: 250

Long Name: Race Other

Short Name: RaceOther

Definition: Indicate whether the patient's race, as determined by the patient or family, includes some other race or mixture of races not otherwise indicated.

Definition source: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity: The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting. (www.whitehouse.gov/omb/fedreg/1997standards.html)

Intent/Clarification:

"Some Other Race" includes all other responses not included in the White, Black or African American, American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander race categories described above.

[The 2010 Census Redistricting Data (Public Law 94-171) Summary File]

Seq. #: 270

Long Name: Hispanic Or Latino Ethnicity

Short Name: Ethnicity

Definition: Indicate if the patient is of Hispanic or Latino ethnicity as determined by the patient / family. Hispanic or Latino ethnicity includes patient report of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

Intent/Clarification:

- Yes
- No
- Not documented

People who identify their origin as Hispanic, Latino or Spanish **may be of any race.**

[The 2010 Census Redistricting Data (Public Law 94-171) Summary File]

2. Follow Up

Seq. #: 271

Long Name: Date of Last Follow-Up

Short Name: LFUDate

Definition: Indicate the date on which the last follow-up was made. If patient dies in the hospital, this value will be the same as the date of death. If no follow-up is made after patient is discharged, this value will be the same as the discharge date.

Intent/Clarification:

This field is for those patients diagnosed and surgically treated for Lung CA and Esophageal CA. Need to track patients for five (5) years from the date of the original surgery. Work with your cancer registry people for assistance with this information.

09/15: Was wondering what date to use for date of last follow-up? Would it be first follow-up after discharge from having surgery or last date we can find in medical record? **Last patient follow up date.**

09/15: Are you looking at last FU date with surgeon or if the pt has outpatient admission to hospital for CXR, etc can we use that? 2. If pt is alive at last FU but we find the pt has since expired is it appropriate to enter Mortality date but alive at last follow-up? **This is for cancer registry patients only.**

April 2016: Does the follow up need to be with the surgeon who did the surgery or can it be with any provider? **Any Provider.**

April 2016: If a patient is not being treated for lung or esophageal CA, do we leave this section blank? **Yes** Also, is the registry looking for a follow up appointment to be made upon discharge or any appointment with ANY doctor in the medical record would be OK? **Any contact at all with the patient.**

July 2016: For non-lung and esophageal cancer cardio-thoracic surgeries such as Thymectomy or rib resection, can I fill out the date of last follow-up? **This is only for lung or esophageal patients.**

How often do we update the STS Date of last follow up for the patients diagnosed with lung and esophageal cancer that need to be tracked for 5 years? **At least once per year**

October 2016: In the July training manual there is a question from July 2016 stating that the date of follow-up may be completed for non-lung and non-esophageal cancers. In the August 2016 version of the training manual, the same question now shows a different answer- "This is for cancer registry patients only". I was at the recent AQO and felt that the consensus was that we could use this field for any patients, but it must be completed for lung and esophageal cancer patients. What is the correct answer? **This field must be completed for lung and esophageal patient but may be used on all patients.**

Seq. #: 272

Long Name: Mortality Status At Last Follow-Up

Short Name: LFUMortStat

Definition: Indicate the mortality status of the patient at the time of the last follow-up. If no follow-up is made after patient is discharged, this value will be the same as the Mortality Status At Hospital Discharge.

Intent/Clarification:

This field was added to facilitate long term follow-up for lung and esophageal cancer resection patients.

Seq. #: 273

Long Name: Mortality Date

Short Name: MortDate

Definition: Indicate the patient's date of death (even if after discharge).

3. Admission

Seq. #: 280

Long Name: Admission Status

Short Name: AdmissionStat

Definition: Indicate whether the procedure was an Inpatient or Outpatient / Observation procedure.

Intent/Clarification:

This field is required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

Outpatient/Observation should be selected if the operation was performed as an ambulatory procedure or if it included a period of overnight observation.

- Inpatient

- Outpatient / Observation

Seq. #: 290

Long Name: Admission Date

Short Name: AdmitDt

Definition: Indicate the date of admission. For those patients who originally enter the hospital in an out-patient capacity, the admit date is the date the patient's status changes to in-patient.

Intent/Clarification:

For purposes of this data definition, Outpatient and Observation status are the same. Enter INPATIENT admit date. This is a child field of admission status so if patient was never admitted as an inpatient you will not be asked to provide a date.

April 2016: Patient is seen and evaluated in the emergency department (ED) and then admitted as an inpatient without an outpatient or observation period. ED visit date is 3/28/16. Inpatient admission date occurs shortly after midnight, so is 3/29/16. What date should be captured as Admission Date for seq#290? **3/29**

Seq. #: 411

Long Name: Primary Payor

Short Name: PayorPrim

Definition: Indicate the primary insurance used for this admission

Intent/Clarification:

- None / self
- Medicare
- Medicaid
- Military Health
- Indian Health Service
- Correctional Facility
- State Specific Plan
- Other Government Insurance
- Commercial Health Insurance
- Health Maintenance Organization
- Non-U.S. Plan

Government insurance refers to patients who are covered by government-reimbursed care. This includes Medicare, Medicaid, Military Health Care (e.g. TriCare), State-Specific Plan, and Indian Health Service.

CHIP (Children's Health Insurance Plan), High Risk Pools Local Government Health Insurance Plan (LGHIP), state or federal prisoners.

Blue Cross Federal Government is coded as Commercial insurance.

If a pt is in a HMO, choose only HMO, you do not need to also choose commercial

08/15: How do you capture 'Aetna Medicaid'? **Capture as Medicaid with no secondary.**

08/15: The patients from our State Penitentiary are covered under BCBS. This is a specific plan for them and the state has a contract with BCBS for the inmates. Even the elderly ones don't come across as Medicare, just BCBS.

Capture as 'Correctional Facility' even if the care is contracted to commercial payers

11/15 - How do you code Medicare Replacement plans?

Medicare as primary

Commercial as secondary

March 2017: I have a question about how to classify a patient's primary payer. The patient's guarantor is the Lloyd F. Moss Free Clinic, which is a local non-profit provider for indigent patients. There is nothing in the database that is close. What should be entered for these patients, as they are not self-pay, and nothing else fits? **This patient is none/self pay.**

Seq. #: 412

Long Name: Primary Payor Medicare Fee For Service

Short Name: PrimMCareFFS

Definition: Indicate whether the patient is covered by Medicare fee for service (Part B)

Intent/Clarification:

The Social Security Website at www.socialsecurity.gov has a list explaining what the letters behind the Medicare claim # stand for. Those letters do not tell you whether they have Part B/Fee for service. It is the relationship of the cardholder to the Medicare/SSN #. For example, B stands for "Aged wife, 62 or older". The A would stand for "Primary claimant=the wage earner". D1 is for an "Aged widower, age 60 or over".

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This is used for PQRS Check with your hospital billing department if you are unsure whether the patient is considered Medicare Part B. Even if not using the registry for PQRS, CMS will be tracking outcomes for value based purchasing.

Seq. #: 413

Long Name: Secondary (Supplemental) Payor

Short Name: PayorSecond

Definition: indicate which, if any, secondary insurance was used for this admission

Intent/Clarification:

- None / self
- Medicare
- Medicaid
- Military Health
- Indian Health Service
- Correctional Facility
- State Specific Plan
- Other Government Insurance
- Commercial Health Insurance
- Health Maintenance Organization
- Non-U.S. Plan

Government insurance refers to patients who are covered by government-reimbursed care. This includes Medicare, Medicaid, Military Health Care (e.g. TriCare), State-Specific Plan, and Indian Health Service.

CHIP (Children's Health Insurance Plan), High Risk Pools Local Government Health Insurance Plan (LGHIP), state or federal prisoners.

Blue Cross Federal Government is coded as Commercial insurance.

If a pt is in a HMO, choose only HMO, you do not need to also choose commercial

Seq. #: 414

Long Name: Secondary Payor Medicare Fee For Service

Short Name: SecondMCareFFS

Definition:

Intent/Clarification: Indicate whether patient is covered by Medicare fee for service (part B)

The Social Security Website at www.socialsecurity.gov has a list explaining what the letters behind the Medicare claim # stand for. Those letters do not tell you whether they have Part B/Fee for service. It is the relationship of the cardholder to the Medicare/SSN #. For example, B stands for "Aged wife, 62 or older". The A would stand for "Primary claimant=the wage earner". D1 is for an "Aged widower, age 60 or over".

This is used for PQRS Check with your hospital billing department if you are unsure whether the patient is considered Medicare Part B. Even if not using the registry for PQRS, CMS will be tracking outcomes for value based purchasing.

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Seq. #: 420

Long Name: Surgeon's Name

Short Name: Surgeon

Definition: Indicate the name of the surgeon responsible for the patient's care.

Intent/Clarification:

If two surgeons participate in the procedure and both surgeons are participating in the Database, the surgeon of record for the database is the physician under whom the patient is admitted or the physician responsible for the care of the patient. If this is not evident from the operative dictation, communication with the involved physicians is necessary.

11/15 - We had a surgeon from another hospital bring a patient to our hospital and do a case with one of our Thoracic Surgeons because we have equipment here that was not available at his facility (they do not report to STS Thoracic), and he may do this again. Should we report this to the STS as our surgeon's case, or how should we view this?

Only data from an STS Thoracic Surgeon can be submitted into the database. If the visiting surgeon would like to sign an agreement, signs a Schedule A and pays the fee, then the data can be submitted, under him/her. If your surgeon was co-surgeon, you could put under your STS surgeon. Otherwise, you can't put visiting surgeon in. If not submitted, you should note in your records why this case was not submitted for auditing purposes.

Seq. #: 430

Long Name: Surgeon's National Provider Identifier

Short Name: SurgNPI

Definition: Indicate the individual-level National Provider Identifier of the surgeon performing the procedure. For Non-US surgeons a unique identifier will be assigned by STS.

Intent/Clarification:

The NPI is a unique identification number for health care providers. Health care providers will use the NPIs in the administrative and financial transactions adopted under HIPAA. The NPI is a 10 - position, intelligence - free numeric identifier (10 - digit number) Meaning that the numbers do not carry other information about healthcare providers, such as the state in which they live or their medical specialty. NPI look up link:

<https://nppes.cms.hhs.gov/NPPES/NPIRegistryHome.do>

Seq. #: 440

Long Name: Taxpayer Identification Number

Short Name: TIN

Definition: Indicate the Taxpayer Identification Number for the Taxpayer holder of record for the Surgeon's National Provider Identifier that performed the procedure. This may be an individual TIN or a group TIN depending on billing. This information is vital for PQRS reporting. This field will be blank for Non-US participants

Intent/Clarification:

If the physician is part of a medical group practice, use the name and taxpayer identification number of the medical group.

Seq. #: 450

Long Name: Hospital Name

Short Name: HospName

Definition: Indicate the full name of the facility where the procedure was performed. Values should be full, official hospital names with no abbreviations or variations in spelling for a single hospital. Values should also be in mixed-case.

Intent/Clarification:

Seq. #: 460

Long Name: Hospital Postal Code

Short Name: HospZIP

Definition: Indicate the ZIP Code of the hospital. Outside the USA, this data may be known by other names such as "Postal Code". Software should allow sites to collect up to 10 characters to allow for Zip+4 values.

This field should be collected in compliance with state/local privacy laws.

Intent/Clarification:

This field is intended to allow analysis of geographical disparities in care

Seq. #: 470

Long Name: Hospital Region

Short Name: HospStat

Definition: Indicate the region of the country (i.e., state or province) in which the hospital is located.

Intent/Clarification:

This enables regional comparisons

Seq. #: 480

Long Name: Hospital National Provider Identifier

Short Name: HospNPI

Definition: Indicate the hospital's National Provider Identifier (NPI). This number, assigned by the Center for Medicare and Medicaid Services (CMS), is used to uniquely identify facilities for Medicare billing purposes.

Non-US participants will have a unique hospital ID number assigned by STS.

Intent/Clarification:

This is different from the surgeon NPI. This field will be used for hospital level analysis and eventually public reporting. Hospitals may have more than one NPI for inpatient services, lab, etc. Use the acute care hospital NPI. If the hospital ownership changes, this number may change. Notify STS.

Lookup:

<https://nppes.cms.hhs.gov/NPPESRegistry/NPIRegistrySearch.do>

4. Pre-Operative Evaluation

Seq. #: 490

Long Name: Height In Centimeters

Short Name: HeightCm

Definition: Indicate the height of the patient in centimeters.

Intent/Clarification:

Height and weight is extremely important for the accurate interpretation of PFTs, body surface area and risk calculations.

Ft-in = cm

4'10" = 147

4'11" = 149

5'0" = 152

5'1" = 155

5'2" = 157

5'3" = 160

5'4" = 163

5'5" = 165

5'6" = 168

5'7" = 170

5'8" = 173

5'9" = 175

5'10" = 178

5'11" = 180

6'0" = 183

6'1" = 185

6'2" = 188

6'3" = 190

6'4" = 193

6'5" = 195

6'6" = 198

6'7" = 200

Seq. #: 500

Long Name: Weight In Kilograms

Short Name: WeightKg

Definition: Indicate the weight of the patient in kilograms.

Intent/Clarification:

Height and weight is extremely important for the accurate interpretation of PFTs, body surface area and risk calculations. To convert pounds to kilograms, divide # of lbs by 2.2 (1 kg = 2.2 lbs)

April 2016: Which weight do I use if there are multiple weights in the medical record prior to surgery? **Use the weight closest to surgery date.**

Seq. #: 510

Long Name: Weight Loss In Past Three Months

Short Name: WtLoss3Kg

Definition: Indicate by the number of kilograms lost in the last three months. Enter "0" if there was no weight loss.

Intent/Clarification:

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This is a significant indicator of the patient's overall health within the last few months. Unintentional weight loss may be an indicator of underlying pathology. If the amount of weight loss is not documented or it is unclear how much has occurred in the 3 month window leave this field blank.

Example:

What do I code for the patient who lost 3 kg in the last 6 months? Leave blank as you do not know what happened in the last three months.

12/15: Should we enter 0 or leave blank in case of intentional weight loss over past 3 months? **Blank since it was intentional**

July 2016: Surgeon would like to know why 3 months? Consideration should be made for 6 months especially for esophageal cancer patients when weight changes can be drastic before and after adjunctive therapy. **It was felt that 6 month memory will be less useful and many patients don't have measured weights going back that far, so 3 months is more accurate.**

August 2016: We have narrative documentation that the pt has recently lost 10 lbs (documented the admission in question, before the surgery). However, we also have actual weights from the admission and a weight taken approx. 5 months prior, which are within 2 lbs of each other. There were no weights taken at the 3 month mark. Should we use the 10 lbs b/c that is the best documentation we have, or leave blank, or ??? **If "recently" is within 3 months, then yes, document the weight loss since the physician documented that it occurred.**

Seq. #: 520

Long Name: Hypertension

Short Name: Hypertn

Definition: Indicate if the patient has a current diagnosis of hypertension defined by any 1 of the following:

- History of hypertension diagnosed and treated with medication, diet, and/or exercise
- Prior documentation of blood pressure >140 mm Hg systolic and/or 90 mm Hg diastolic for patients without diabetes or chronic kidney disease, or prior documentation of blood pressure >130 mm Hg systolic or 80 mm Hg diastolic on at least 2 occasions for patients with diabetes or chronic kidney disease
- Currently undergoing pharmacological therapy for treatment of hypertension

2013 ACCF/AHA Data Standards

Cannon et al. JACC Vol. 61, No. 9, 2013

Intent/Clarification:

The History & Physical form will list the patient's past medical history and also will list the current medications.

Code 'ye's for patients who report a history of high blood pressure and are currently normotensive on antihypertensive medication.

Seq. #: 530

Long Name: Steroids

Short Name: Steroids

Definition: Indicate whether the patient was taking oral or IV steroids within 24 hours of surgery. This does not include a one-time dose related to prophylaxis therapy (i.e., IV dye exposure for cath procedure or surgery pre-induction), or non-systemic medications (i.e., nasal sprays, inhalers, topical creams).

Intent/Clarification:

Systemic delivery only

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Non-systemic delivery is not included in this data element. Non-systemic delivery includes topical creams, nasal sprays, inhalers or ophthalmic or otic drops. Do not include one-time dose as part of clinical pathway guideline or procedure/surgical preparatory order.

- Yes-Capture those who are prescribed to take medications on a regular schedule and are presumed to be at a therapeutic level, within 24 hours preceding surgery (entry into the OR) - Do Not Include a one-time dose
- No-Patient did not receive a Steroid medication within 24 hours preceding surgery

Examples of oral and intravenous steroid medications include prednisone, hydrocortisone, dexamethasone, and Methylprednisolone.

Seq. #: 540

Long Name: Congestive Heart Failure

Short Name: CHF

Definition: Indicate if there is physician documentation or report that the patient has been in a state of heart failure within the past 2 weeks.

Heart failure is defined as physician documentation or report of any of the following clinical symptoms of heart failure described as unusual dyspnea on light exertion, recurrent dyspnea occurring in the supine position, fluid retention; or the description of rales, jugular venous distension, pulmonary edema on physical exam, or pulmonary edema on chest x-ray presumed to be cardiac dysfunction.

A low ejection fraction alone, without clinical evidence of heart failure does not qualify as heart failure.

An elevated BNP without other supporting documentation should not be coded as CHF.

Intent/Clarification:

Congestive heart failure occurs when the heart is unable to pump blood effectively throughout the body. The term congestive is used because lung congestion causes some of the main symptoms of heart failure.

The intent is to capture the patient's actual status in the two weeks before surgery, the new diagnosis or exacerbation of an existing heart failure condition.

DO NOT code stable or asymptomatic compensated failure or patients whose symptoms improved after medical therapy.

Seq. #: 550

Long Name: Coronary Artery Disease

Short Name: CAD

Definition: Indicate whether the patient has a history of coronary artery disease (CAD) as evidenced by one of the following:

1. Currently receiving medical treatment for CAD
2. History of Myocardial Infarction
3. Prior CV intervention including, but not limited to, CABG and/or PCI

Intent/Clarification:

Coronary artery disease is a type of atherosclerosis in which plaque builds up inside the arteries that carry blood to the heart. As the artery walls thicken, the passageway for blood narrows. Sometimes platelets gather at the narrowing, forming a clot that decreases or prevents blood flow to the region of the heart supplied by the artery.

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Documented blockage $\geq 50\%$ of one or more coronary arteries or documentation of CAD in H&P.

Documentation of angina, myocardial infarction (MI), CABG, PCI*, or sudden cardiac death with no known cause may be included.

*Percutaneous Coronary Intervention (PCI) includes angioplasty, coronary atherectomy and coronary artery stenting.

Seq. #: 560

Long Name: Peripheral Vascular Disease

Short Name: PVD

Definition: Indicate whether the patient has Peripheral Arterial Vascular Disease, as indicated by:

- claudication either with exertion or rest;
- amputation for arterial insufficiency;
- aorto-iliac occlusive disease reconstruction;
- peripheral vascular bypass surgery, angioplasty, or stent;
- documented AAA, AAA repair, or stent;
- non-invasive/invasive carotid test with greater than 79% occlusion;
- previous carotid artery surgery/intervention for carotid artery stenosis.

Intent/Clarification:

This refers to diseases of blood vessels outside the heart and brain. It is often a narrowing of vessels that carry blood to the legs, arms, stomach or kidneys.

09/15: The definition says we can include carotid disease/previous surgery/intervention; but the intent/clarification says PVD excludes vessels outside the brain and includes legs, arm, stomach and kidneys only. How should we code the patient with carotid disease/previous intervention: PVD "yes" or PVD "no"? **PVD = no**

09/15: If patient had a carotid artery stenting does he/she have both PVD and CVA risks? If the patient that has complaints of on/off dizziness, no weakness and carotid studies were done and revealed a greater than 79% stenosis, would this be a TIA or CVA? **Exclude carotid from PVD**

April 2016: In patient's record all LIP's are documenting that patient has a history of PVD but without the documentation of: claudication, amputation, aorto-iliac occlusive disease reconstruction, peripheral vascular bypass surgery, angioplasty, stent, or documented AAA. Approximately 3 weeks after surgery, she had a vascular consult (outpatient) and during that visit, they stated that patient presents with LONGSTANDING RLE claudication. Could I say YES to pt. having a history of PVD? **Yes.**

April 2016: Should the following 2 definitions be excluded from PVD section:

1) Non-invasive/invasive carotid test with greater than 79% occlusion. 2) Previous carotid artery surgery/intervention for carotid artery stenosis. **These belong in CVD**

Seq. #: 570

Long Name: Prior Cardiothoracic Surgery

Short Name: PriorCTS

Definition: Indicate whether the patient has undergone any prior cardiac and/or general thoracic surgical procedure that required a general anesthetic and an incision into the chest or mediastinum. A thoracotomy, median sternotomy, anterior mediastinotomy or thoracoscopy would be included here. A cervical mediastinoscopy or tube thoracostomy would not be included.

Intent/Clarification:

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Prior cardiothoracic surgery causes scar tissue to form and may increase difficulty and or risk in subsequent procedures. Do not include transcatheter procedures if no chest incision was performed.

April 2016: If a patient had previous CT surgery with a DaVinci robot to remove a mediastinal mass, should I code 'yes' to this data element? **Yes**

June 2016: Would Bilateral Mastectomy be considered prior CTS? **No, the pleural space was not entered.**

January 2018: Does a pacemaker qualify for prior cardiothoracic surgery? **No**

Seq. #: 580

Long Name: Preoperative Chemo - Current Malignancy

Short Name: PreopChemoCur

Definition: Indicate whether the patient received preoperative chemotherapy for the current thoracic malignancy. Do not report treatment for prior cancers.

Intent/Clarification:

Do not include methotrexate given for arthritis.

12/15: Does this have to be IV Chemotherapy to qualify. Patient is taking Gleevec (oral) for stomach cancer, which is patient's current malignancy. Shall I collect "yes" for this element? Thank you. **Yes.**

Seq. #: 590

Long Name: Preoperative Chemo - Current Malignancy - When

Short Name: PreopChemoCurWhen

Definition: Indicate when the patient received preoperative chemotherapy for the current thoracic malignancy.

Intent/Clarification:

- <= 6 Months
 - > 6 Months
-

Seq. #: 600

Long Name: Preoperative Thoracic Radiation Therapy

Short Name: PreopXRT

Definition: Indicate if the patient has received preoperative radiation therapy to the chest for any reason prior to this operation. May be included as a component of a chemotherapy radiation induction therapy. This item should also be selected if the radiation oncologist gave the patient radiation therapy prior to sending the patient for any surgical evaluation, if the intent of the radiation oncologist was to "shrink the tumor" prior to surgical intervention.

Intent/Clarification:

Radiation therapy causes changes to the tissues which may increase difficulty and or risk in subsequent surgeries. **Breast cancer radiation is excluded.**

April 2016: Pt has LLLobe lung cancer for which she had neoadjuvant chemotherapy prior to lung resection. At the time of diagnosis, pt was found to have metastasis to right posterior third rib. Received preoperative palliative radiation

therapy to the rib; 2600 cGy in 5 fractions. She did not receive preoperative radiation therapy to the LLLobe mass. Do I code YES to Preoperative Thoracic Radiation Therapy because of the palliative rib lesion radiation? **Yes, it increases risk.**

Seq. #: 610

Long Name: Preoperative Thoracic Radiation Therapy - Disease And When Treated

Short Name: PreopXRTDisWhen

Definition: Indicate when the patient received preoperative thoracic radiation therapy and for what disease.

Intent/Clarification:

If patient did not receive preoperative radiation therapy as indicated by a “Yes” in PreopXRT, there should be no option to answer.

- Same disease, <= 6 months
 - Same disease, > 6 months
 - Unrelated disease, <= 6 months
 - Unrelated disease, > 6 months
-

Seq. #: 620

Long Name: Cerebrovascular History

Short Name: CerebroHx

Definition: Indicate if the patient has a history of cerebrovascular disease, documented by any one of the following:

- Cerebrovascular Accident (CVA): Patient has a history of stroke, i.e., loss of neurological function with residual symptoms at least 24 hours after onset, presumed to be from vascular etiology.
- Transient Ischemic Attack (TIA): Patient has a history of loss of neurological function that was abrupt in onset but with complete return of function within 24 hours, presumed to be due to vascular etiology
- Non-invasive/invasive carotid test with greater than 79% occlusion.
- Previous carotid artery surgery/ intervention for carotid artery stenosis.

This does not include neurological disease processes such as metabolic and/or anoxic ischemic encephalopathy.

Intent/Clarification:

If a history of previous cerebrovascular disease exists, it should be noted whether the patient’s symptoms were reversible (i.e. transient ischemic attack) or whether the deficit is permanent (i.e. stroke).

Example:

What if a transient neuro event lasts more than 24 hours but resolves? Is this coded as reversible or irreversible?

Use the 24 hour timeframe - if symptoms resolve within 24 hours, code as reversible. If symptoms persist for more than 24 hours, code as irreversible.

Do not code asymptomatic findings on neuro scans as stroke.

- No CVD history
- Transient Ischemic Attack – TIA - reversible
- Cerebrovascular Accident – CVA – irreversible

08/15: How do I capture previous carotid stenting in a patient that does not have a hx of CVA?

Capture as TIA, reversible. This is the best available choice for now. We will review these options for the next version.

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April 2016: The definition for cerebrovascular disease includes: Non-invasive/invasive carotid test with greater than 79% occlusion. Previous carotid artery surgery/ intervention for carotid artery stenosis, however the only choices are for TIA or CVA or No CVD. If patient has previous history of CEA, how should that be collected? **TIA**

January 2017: This patient has a hx of cerebral aneurysm rupture with no residual deficits. She also has numerous small aneurysms on the R side of her brain, being followed with CT scans. She had repair of the rupture in 2009. How would this information be captured for her Pre-Op Evaluation? **Not captured**

Seq. #: 630

Long Name: Pulmonary Hypertension

Short Name: PulmHypertn

Definition: Indicate whether there is physician documentation of Pulmonary Hypertension as documented by:

- Right heart catheterization: mean pulmonary arterial pressure (PAP) > 25 mmHg at rest

or

- Echocardiographic diagnosis: PA systolic pressure >50 mmHg

Intent/Clarification:

High blood pressure in the arteries that supply the lungs is called pulmonary hypertension (PHT). The blood vessels that supply the lungs constrict and their walls thicken, so they cannot carry as much blood. This information may be found on a preoperative cardiac catheterization or echocardiogram. If the value is not known or documented, the data sheet should be marked accordingly.

RV systolic pressure may be used if no PA pressure is available, provided there is no pulmonary stenosis.

It is preferable to use pressures measured pre-op, prior to induction of anesthesia.

April 2016: How far back in a record can I look for Pulmonary Hypertension? **6 months**

February 2017: If the echo doesn't state the actual pressure of the RV but says "Normal Right Ventricular Systolic Function, could I code this as "NO" to having Pulmonary Hypertension or do I have to code it as NA / Not Documented?

Code "no" to pulmonary hypertension.

Seq. #: 640

Long Name: Diabetes

Short Name: Diabetes

Definition: History of diabetes diagnosed and/or treated by a healthcare provider. The American Diabetes Association criteria include documentation of the following:

1. Hemoglobin A1c $\geq 6.5\%$; or
2. Fasting plasma glucose ≥ 126 mg/dL (7.0 mmol/L); or
3. 2-h Plasma glucose ≥ 200 mg/dL (11.1 mmol/L) during an oral glucose tolerance test; or
4. In a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥ 200 mg/dL (11.1 mmol/L)

This does not include gestational diabetes.

2013 ACCF/AHA Data Standards

Cannon et al. JACC Vol. 61, No. 9, 2013

Intent/Clarification:

Indicate if the patient has a history of diabetes mellitus regardless of duration of disease or need for anti-diabetic agents. Exclusions are steroid induced hyperglycemia and gestational (transient), without elevated HbA1c and/or treatment, code "no".

Not all patients receiving diabetic medications are considered diabetic. It is important to remember, some medications used to treat diabetes may be used to treat other conditions.

A hemoglobin A1c value of $\geq 6.5\%$, collected within 3 months prior to surgery, is acceptable to use for documentation of diabetes = "yes".

Seq. #: 650

Long Name: Diabetes Therapy

Short Name: DiabCtrl

Definition: Indicate the diabetes therapy method. Patients placed on a preoperative diabetic pathway of insulin drip, then were controlled with "none", diet or oral methods, are not coded as insulin dependent.

Intent/Clarification:

Indicate the patient's diabetes control method as presented on admission. Patients placed on a preprocedure diabetic pathway of insulin drip at admission but whose diabetes was controlled by diet or oral methods are not coded as being treated with insulin.

Look for the long term management therapy that was used, if any.

***Oral treatments may include:**

Sulfonylureas - Diabinese, glipizide (Glucotrol, Glucotrol XL), glyburide (Micronase, DiaBeta, Glynase), and glimepiride (Amaryl).

Meglitinides - Repaglinide (Prandin) and nateglinide (Starlix).

Biguanides - metformin (Glucophage).

Thiazolidinediones - rosiglitazone (Avandia) and pioglitazone (Actos).

Alpha-glucosidase inhibitors - acarbose (Precose) and meglitol (Glyset).

DPP-4 inhibitor - sitagliptin (Januvia).

Choose the most aggressive therapy from the order below

- None = No treatment for diabetes.
 - Diet only = Treatment with diet only
 - Oral = Treatment with oral agent (includes oral agent with or without diet treatment) *see above list*
 - Insulin = Insulin treatment (includes any combination with insulin)
 - Other subcutaneous medication = Other subcutaneous medications (such as GLP-1 agonists; Byetta, Bydureon, Victoza, Symlin)
 - Other = Other adjunctive treatment, non-oral/insulin/diet
 - Unknown – choose unknown if the patient or family is unable to provide the information
-

Seq. #: 660

Long Name: Currently On Dialysis

Short Name: Dialysis

Definition: Indicate whether the patient is currently undergoing dialysis. This includes hemodialysis, peritoneal dialysis or CRRT. Does not include ultra-filtration.

Intent/Clarification:

Includes any form of peritoneal or hemodialysis the patient is receiving prior to surgery. Also, may include Continuous Veno-Venous Hemofiltration (CVVH, CVVH-D), and Continuous Renal Replacement Therapy (CRRT) as dialysis.

Code "No" for renal dialysis if ultrafiltration is the only documentation found in the record since this is for volume management.

Capture lab values if available. Not all patients will have (or need) all of the following labs drawn. This does not imply that the labs listed below are required or should be added to routine preop screening. Most hospitals have a policy on how far back preop labs can be drawn. Obviously as close to surgery as possible is preferred. STS recommends within 30 days of surgery except where stated otherwise. This includes POC (Point of Care) testing results.

11/15- Patient had kidney disease but no dialysis prior to admit. During admit but prior to surgery, had dialysis x 2 due to acute renal failure. No need after surgery or on discharge. Should this Sequence # be answered yes or no? **Yes, since prior to surgery.**

Seq. #: 670

Long Name: Creatinine Level Measured

Short Name: CreatMeasured

Definition: Indicate whether the creatinine level was measured within one month prior to the surgical procedure and prior to anesthetic management (induction area or operating room).

Intent/Clarification:

Creatinine, urea and urate all increase as the ability of the kidneys to filter fluid within the body declines. Creatinine is a marker for kidney function.

Seq. #: 680

Long Name: Last Creatinine Level

Short Name: CreatLst

Definition: Indicate the creatinine level closest to the date and time prior to surgery.

Intent/Clarification:

Prior to anesthetic management (induction area or operating room).

A creatinine level should be collected on all patients, even if they have no prior history of renal disease. A creatinine value is a high predictor of a patient's outcome and is used in the predicted risk models.

Creatinine (Cr) is a chemical waste molecule that is generated from muscle metabolism. If the kidneys become impaired for any reason, the creatinine level in the blood will rise due to poor clearance by the kidneys. Abnormally high levels of creatinine thus warn of possible malfunction or failure of the kidneys.

Anesthetic management begins when a member of the anesthesiology team initiates care. The administration of IV fluids in the holding area can cause dilution of blood. Do not capture labs drawn after the patient receives fluids in the holding area or O.R.

Seq. #: 690

Long Name: Hemoglobin Level Measured

Short Name: HemoglobinMeasured

Definition: Indicate whether the patient's hemoglobin level was measured within one month prior to this surgical procedure.

Intent/Clarification:

Hemoglobin is the protein molecule in red blood cells that carries oxygen from the lungs to the body's tissues and returns carbon dioxide from the tissues to the lungs. The iron contained in hemoglobin is responsible for the red color of blood.

Seq. #: 700

Long Name: Last Hemoglobin Level

Short Name: HemoglobinLst

Definition: Indicate the hemoglobin level closest to the date and time prior to surgery and prior to anesthetic management (induction area or operating room).

Intent/Clarification:

The hemoglobin (Hgb) test may be used to screen for, diagnose, or monitor a number of conditions and diseases that affect red blood cells (RBCs) and/or the amount of hemoglobin in blood. The hospital laboratory report should be accessed first when coding this variable. If this is unavailable, then additional source documents may be referenced for lab results.

Capture only measured hemoglobin levels, not calculated values.

Anesthetic management begins when a member of the anesthesiology team initiates care. The administration of IV fluids in the holding area can cause dilution of blood. Do not capture labs drawn after the patient receives fluids in the holding area or O.R.

The value used should be the most recent one prior to entering the operating room.

Seq. #: 710

Long Name: COPD

Short Name: COPD

Definition: Indicate whether the patient has a history of chronic obstructive pulmonary disease (COPD) as evidenced by previous diagnosis, treatment, and/or spirometric evidence.

Intent/Clarification:

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Chronic Obstructive Pulmonary Disease (COPD) is a preventable and treatable lung disease with some significant extrapulmonary effects. It is characterized by airflow limitation that is not fully reversible, usually progressive and associated with an abnormal inflammatory response in lung tissue. Diagnosis is confirmed and severity is graded using pulmonary function testing (PFT). Bronchitis and emphysema are considered COPD, asthma is not.

GOLD is short for the Global Initiative for Chronic Obstructive Lung Disease, collaboration between the National Institutes of Health and the World Health Organization. Spirometric evidence per GOLD criteria follows:

No: FEV1/FVC $\geq$ 0.7

Yes**: Mild: FEV1/FVC $<$ 0.7 and / or FEV1 $\geq$ 80%

Moderate: FEV1/FVC $<$ 0.7 and / or FEV1 between 50-80%

Severe: FEV1/FVC $<$ 0.7 and / or FEV1 $<$ 50%

June 2016: I have a question regarding the use of the GOLD criteria for coding if a pt. has COPD 710. We have a pt with an FEV1 %Predicted of 57 and an FEV1/FVC% predicted of 107. All the FEV1/FVC values look like they must be $<$ 70% for coding mild, moderate or severe. How would we code COPD or would we be able to? Do both criteria need to be met? The impression on the PFT was Moderately Severe Reduction in FEV1 and Ratio is normal at 79. Recommend lung volumes to assess for restriction. Pre-Bronch FEV1/FVC % Actual =79, Pred=73 and %Pred=107. Do we use %Pred for the FEV1/FVC value? **Use the FEV1; the patient does not need to meet both criteria.**

February 2017: If only FEV1% is recorded, I am reading that all patients who have FEV1 $\geq$ 80% have COPD. Please clarify, because when patient has FEV1 $>$ 80% it is normal breathing. **If there is a physician diagnosis and/or treatment for COPD code "yes." Enter the PFT values per results but we are not to interpret the results. Use physician documentation.**

Seq. #: 720

Long Name: Interstitial Fibrosis

Short Name: InterstitialFib

Definition: Indicate whether the patient has a diagnosis of interstitial fibrosis based on clinical and radiological or pathological evidences.

Intent/Clarification:

Interstitial lung disease (ILD), also known as diffuse parenchymal lung disease (DPLD), refers to a group of lung diseases affecting the interstitium (the tissue and space around the air sacs of the lungs). [2] It concerns alveolar epithelium, pulmonary capillary endothelium, basement membrane, perivascular and perilymphatic tissues. The term ILD is used to distinguish these diseases from obstructive airways diseases; (ex. ILD, DPLD, Cystic Fibrosis)

Seq. #: 730

Long Name: Cigarette Smoking

Short Name: CigSmoking

Definition: Indicate the patient's history of smoking cigarettes.

Intent/Clarification:

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

- Never smoked
- Past smoker (anyone who has not smoked within 30 days prior to admission)
- Current smoker (within 30 days prior to admission)
- Unknown (patient and/or family unable to provide history, cannot determine from the medical record documentation)

Electronic cigarettes (Ecig) = "No"

Example:

How do you code smoking status if there is conflicting documentation in the chart? Code yes to smoking if any provider documents it in the record and capture the highest number of pack years documented.

Example: Patient who smoked prior to admission, has been in the hospital > 2 weeks prior to surgery, and did not smoke while in the hospital is captured as "Yes". The patient smoked within the 30 day window.

December 2016: I am looking for guidance as to how to code use of non-medical (recreational) marijuana. I have a patient who states he smokes marijuana daily. **The field is only asking for cigarette usage. Only document cigarette smoking.**

Seq. #: 740

Long Name: Pack Years Known or can be estimated

Short Name: PackYearKnown

Definition: Indicate whether the number of pack years is known or can be estimated.

Intent/Clarification:

08/15: I have a patient that no pack year is documented, but the docs documented the patient as a "social smoker". Is it acceptable to put "pack year = 1" even without a documented pack year? **No, do not guess. Answer no to this field.**

April 2016: I had a patient that smoked 3 cigs/day for 20 years. Can I estimate that or use an equation that's on the internet to figure that out, or just answer "NO"? **Estimate the number of packs / year.**

Seq. #: 750

Long Name: Pack-Years Of Cigarette Use

Short Name: PackYear

Definition: Indicate the number or estimate of pack-years by multiplying the average number of packs of cigarettes smoked per day by the number of years of smoking. For example if the patient smoked 1 ppd for 10 years and 3 ppd for the next 10 years, the average ppd would be 2 ppd x 20 years = 40 pack-years of smoking.

Intent/Clarification:

Code the highest # of pack years if you have a range, ex. 20-30 years, code 30.

Seq. #: 760

Long Name: Pulmonary Function Tests Performed

Short Name: PFT

Definition: Indicate whether pulmonary function tests (PFT's) were performed prior to this operation. PFT's done more than 12 months prior to the primary surgical procedure should not be included here.

Intent/Clarification:

Pulmonary function testing is a valuable tool for evaluating the respiratory system, representing an important adjunct to the patient history, various lung imaging studies, and invasive testing such as bronchoscopy and open-lung biopsy. Insight into underlying pathophysiology can often be gained by comparing the measured values for pulmonary function tests obtained on a patient at any particular point with normative values derived from population studies. The percentage of predicted normal is used to grade the severity of the abnormality. Pulmonary function testing is used in clinical medicine for evaluating respiratory symptoms such as dyspnea and cough, for stratifying preoperative risk, and for diagnosing common diseases such as asthma and chronic obstructive pulmonary disease.

PFT = "yes" if only FEV1 is done.

Use bedside PFTs if that's the only available test.

Seq. #: 770

Long Name: PFT Not Performed Reason

Short Name: PFTNotPerReas

Definition: Indicate the reason why pulmonary function testing was not done.

Intent/Clarification:

There are acceptable reasons not to perform PFTs. These will be included in the NQF exclusions:

- Not Major Lung Resection
- Never smoked, no lung disease
- Patient unable to perform
- Tracheostomy or ventilator dependent
- Urgent or emergent status

Example:

The PFT field 770 should be answered "Not a major lung resection" for cases that are highlighted as "non-analyzed" cases. Lung resections that are listed as "major" on the DCF should have PFTs. A therapeutic wedge is a major procedure, even though not a major anatomic resection, and PFTs are expected.

08/15: Are PFT's required for diagnostic wedge resections? **No**

08/15: Define "major lung resection." Is it lobectomy or greater- segmentectomy or greater?

Minor procedures are highlighted in blue. Lung resections that are not highlighted are considered major, should be collected on the Major Procedure DCF, and should have PFTs. If done for lung cancer, staging should be documented. A lobectomy is a major lung resection. Major lung resections without PFT results will not be analyzed.

12/15: The first of 5 choices is "Not a Major Lung Resection." What constitutes a "major lung resection"? Specifically, is a "VATS Right Upper Lobectomy" in combination with a "Complete thoracic lymphadenectomy" enable selection of "Not a Major Lung Resection"? (There are no PFT's in the record. This patient is a prior smoker, had an elective admission, and

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did not receive a trach and is not on a ventilator.) **This pt should have PFT's! Check not a major lung resection to get it into the database. VATS major – won't be analyzed since missing PFTs. Minor would be the biopsy.**

Seq. #: 780

Long Name: Forced Expiratory Volume Test Performed

Short Name: FEV

Definition: Indicate whether a Forced Expiratory Volume at 1 second (FEV1) test was performed. FEV1 test should be performed for a major lung resection (e.g., wedge resection, segmentectomy, lobectomy, sleeve lobectomy, bilobectomy, or pneumonectomy). Select "Not applicable" ONLY if none of these procedures was performed.

Intent/Clarification:

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

Seq. #: 790

Long Name: FEV1 Predicted

Short Name: FEVPred

Definition: Indicate the % predicted FEV1 obtained for the patient.

Intent/Clarification:

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

Indicate the FEV1 % predicted from the most recent pulmonary function test prior to procedure. Do not use values obtained more than 12 months prior to surgery. Choose the highest value reported for % predicted, whether or not a bronchodilator was used.

FEV1 is the maximal amount of air forcefully exhaled in one second. It is then converted to a percentage of normal. For example, the FEV1 may be 80% of predicted based on height, weight, and race. FEV1 is a marker for the degree of obstruction. In normal persons, the FEV1 accounts for the greatest part of the exhaled volume from a spirometric maneuver and reflects mechanical properties of the large and the medium-sized airways.

If there are multiple PFTs in the record, choose the study which best reflects the patient's status just prior to surgery.

April 2016: A patient had PFTs done but the report says "normal" for FEV1 and DLCO with no numerical values. Is there a standard percentage used to code for "normal" FEV1 and DLCO? **No, there is no standard percentage.**

December 2017: Which PFT results should be coded? Regular PFT (70%) done 3 weeks prior to surgery or Cardiopulmonary Exercise Test with spirometry (55%) done 1 week prior to surgery. **If an FEV1 is obtained with the spirometry, use that since it is closest to surgery. If FEV1 was not obtained, use the PFT result.**

Seq. #: 800

Long Name: DLCO Test Performed

Short Name: DLCO

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Definition: Indicate whether a lung diffusion test (DLCO) was performed. DLCO test should be collected for a major lung resection (e.g., wedge resection, segmentectomy, lobectomy, sleeve lobectomy, bilobectomy, or pneumonectomy). Select "Not applicable" ONLY if none of these procedures was collected.

Intent/Clarification:

The diffusing capacity (DLCO) is a test of the integrity of the alveolar-capillary surface area for gas transfer.

Do not use values obtained more than 12 months prior to surgery.

Seq. #: 810

Long Name: DLCO Predicted

Short Name: DLCO Pred

Definition: Indicate the % predicted DLCO value obtained for the patient.

Intent/Clarification:

The diffusing capacity (DLCO) may be reduced, <80% predicted, in disorders such as emphysema, pulmonary fibrosis, obstructive lung disease, pulmonary embolism, pulmonary hypertension and anemia. DLCO >120% of predicted may be seen in normal lungs, asthma, pulmonary hemorrhage, polycythemia, and left to right intracardiac shunt.

Choose the value that represents the **highest % predicted** unadjusted/uncorrected DLCO.

DO NOT USE the DLCO/VA (adjusted/corrected).

December 2017: How would you capture DLCO when only adjusted DLCO is reported? **You cannot use the adjusted DLCO. Look for the actual report.**

Seq. #: 820

Long Name: Zubrod Score

Short Name: Zubrod

Definition: The Zubrod performance scale should be marked to indicate the level of the patient's performance measured within two weeks of the surgery date. The Zubrod performance scale is a measure of the patient's function. Select the one description that best fits the patient.

Intent/Clarification:

This score is used in risk calculation therefore it is important not to "under code".

Example: Use the score that most accurately represents the patient's status at the time of surgery. If a patient is ambulatory at the time of admission but deteriorates in the hospital, becoming bedridden, capture the bedridden status. Conversely, if the patient comes in bedridden, but is stabilized and ambulatory just prior to surgery, capture ambulatory.

A new data collection form generated for a subsequent surgery may have a different Zubrod score than the previous data collection form (previous surgery).

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

c	ECOG	ZUBROD
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GENERAL THORACIC SURGERY DATABASE v.2.3

TRAINING MANUAL

January 2018

0	Fully active, able to carry on all pre-disease performance without restriction	Normal activity, no symptoms
1	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work	Symptoms, fully ambulatory
2	Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours	Symptoms, in bed <= 50% of time
3	Capable of only limited self-care, confined to bed or chair more than 50% of waking hours	Symptoms, in bed >50% but less than 100% of time
4	Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair	Bedridden
5	Dead	Moribund

- Normal activity, no symptoms
- Symptoms, fully ambulatory
- Symptoms, in bed <= 50% of time
- Symptoms, in bed >50% but less than 100% of time
- Bedridden
- Moribund

09/15: Patient KL was Zubrod 1 prior to surgery. After surgery, while still in PACU, taken back to OR for bleeding-evacuation of hemothorax. Would I still use the Zubrod that was prior to first surgery?

No, use closest to surgery-bedridden

09/15: Patient KL had esophagectomy. Prior to surgery was Zubrod Score 1. She was brought back later the same day for thoracotomy for evacuation of hemothorax and ligation of bleeding at the staple line. Should there be a different Zubrod for the 2nd procedure or use the original one?

No, use closest to surgery-bedridden

April 2016: Does the patients function need be written from a doctor or can it be estimated based on notes in the chart?

Prefer the physician to do.

November 2016: I was reviewing the importance of documenting the Zubrod score to my surgeons. He said most of our patients have heartburn, and then it would mean most of them would then be scored at least a Grade 1, if fully ambulatory. He found that hard to believe. My question is, if a patient was having a lung procedure, was fully ambulatory and only had heartburn, would we score them as 1? Do the symptoms need to be congruent with the disease? If a patient was having an esophageal procedure, only had heartburn preop and was fully ambulatory, I would code them as a 1. **This person should definitely be a zero. Their GERD has nothing to do with their symptoms/function of normal activity. That is what they are referring to – not any symptom like reflux.**

November 2017: At what point does a Zubrod 0 change to a 1. If the patient has any symptoms even if mild, example SOB, fatigue, weakness etc. but can still perform ADLs. This is very gray. **If the patient has any symptoms it is Zubrod 1.**

Seq. #: 830

Long Name: Lung Cancer

Short Name: LungCancer

Definition: Indicate whether a major lung resection was performed for lung cancer (e.g. wedge, segment, lobe, pneumonectomy), open or VATS.

If yes complete clinical and pathological staging.

Intent/Clarification:

If Lung Cancer documented, and resection performed, complete both:

Clinical Staging (ClinStageLungT, ClinStageLungN, and ClinStageLungM)

AND

Pathological Staging (PathStageLungT, PathStageLungN, and PathStageLungM)

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

09/15: Patient received a bilateral lung transplant for ILD. Incidental finding of adenocarcinoma found in explanted lungs. Further testing revealed brain mets. Since the cancer was not known, and therefore no staging done, do I mark lung cancer yes or no? **No**

11/15 - Epithelioid malignant mesothelioma of the left hemithorax status post neoadjuvant chemotherapy

Name of Operation:

1. Flexible Bronchoscopy
2. Extended left posterolateral thoracotomy
3. Left extrapleural pneumonectomy
4. Partial pericardial resection and reconstruction
5. Left hemidiaphragm resection and reconstruction
6. Hyperthermic Intraoperative Chemotherapy
7. Excision of prior VATS port site
8. Chest wall resection x 2
9. Harvest of omental flap

Codes as follows:

1. 31622 flex branch
2. 32400 pneumonectomy-primary procedure
- 3 & 4. Other
5. 39560
- 6 & 7 no code
8. How much of a resection was done? Maybe chest wall resect
9. 49904

April 2016: Patient is found to have a mass and undergoes wedge resection for tissue diagnosis. Once the pathology report comes back, the patient is found to have a malignancy. Would lung cancer, and thus, clinical staging for lung cancer, be marked as yes or no? **No staging necessary.** In essence, do you code cases with what you know at the time of the procedure, or do you code cases with what you know at the end of the clinical course? **Wait until the end, if the pathology report has TMN that is your staging.**

May 2016: Patient had diagnosis of lung cancer in lower lobe & nodule in middle lobe preop. Dr. performed a lower lobectomy & middle lobe wedge. 3 days later, pt. had a middle lobe infarction & was taken back to O.R. & Dr. performed a middle lobectomy. The question is, if there's pathology from both surgeries re: middle lobe stating there's CA in middle lobe (but is not the reason why the surgeon took pt. back to O.R, do I complete the Lung Cancer & Pathology staging section anyway? **The 2nd OR and possible Ca would be a secondary dx so no staging. Indicate 'unexpected return to OR' and Abnormal Radiologic Findings; Primary Dx and no staging.**

July 2016: I have a patient who had a lung nodule discovered on a chest x-ray who then was sent for a CT of the Chest and then for a PET/CT which showed an irregular nodule, measuring 1 x 1.6 in the left upper lobe and extending to the pleural space of the anterior mediastinum. the maximum SUV is 2.5. There is a 1 x 1.9 left sided prevascular lymph node with a maximum SUV of 3.0. Patient was brought in for Robotic assisted left upper lobe therapeutic wedge resection with lymph node biopsy and bronchoscopy. Pathology was positive for carcinoma. Do I mark Lung Ca as a

yes or no? Do I do the clinical staging and/or the pathological staging? **Lung cancer is 'Yes' and you do complete the clinical staging and the pathological staging.**

December 2016: If the patient comes in and has Lung Met from Colon Cancer would I answer Sequence 830 yes or no?

Document 'no' since it is mets from the colon.

April 2017: Patient had a 7.1 cm right lower lobe tumor removed in 2016 and at that time a 5 mm left lower lobe nodule that was left alone. The nodule has now grown to 2.3 cm and is glucose avid. Both were/are adenocarcinoma. Do I fill out all the staging for the second surgery? It isn't really metastatic because the nodule was present in 2016. How is this coded? **What was the final pathology from the second surgery? The path report will give you your answer. If it is a metastatic lesion from the previous RLL, then no staging needed as it isn't primary lung cancer. If it is a separate, new primary lung cancer, then you would say YES to seq. 830 and enter the staging from the second path report. Just because the lesion was present back in 2016 doesn't exclude it from being a met.**

May 2017: A patient had pre-op biopsy proven non-small cell carcinoma in the right upper lobe and had VATS right upper lobectomy. The surgical pathology came back negative for malignancy. Should we code lung cancer in the clinical staging? The diagnosis was granuloma. Should we include lung cancer in the diagnosis since it was part of the clinical staging? How should the staging be filled out? **Clinical and final path may be contradictory. Not enough information –**

- **How was the biopsy taken?**
- **Did the patient have neo-adjuvant chemo or radiation? That could lead to a final path of no malignancy found.**
- **Was the granuloma in the final path report? (sometimes that happens)**

With biopsy proven carcinoma, and lobectomy, would code as lung cancer = "Yes", and final path would code as T0 (no evidence of primary tumor).

June 2017: Patient had Left VATS wedge resection for Adenocarcinoma in 2015 with Rad/chemo for positive Lymph node and positive AP window mass. CT scan 2017 revealed successfully treated Left upper lung carcinoma and mediastinal lymph nodes with radiation. But, there were numerous small pulmonary nodules which are new since 2016 and are suspicious for lung metastases. March 2017 patient has Right VATS wedge and final pathology just states adenocarcinoma. Surgeons notes identifies nodule as metastatic lung cancer. Is this VATS right lung wedge not considered lung cancer since it is metastatic from 1st lesion? **The second procedure, VATS wedge, is a diagnostic procedure confirming metastatic disease. It should not be counted as a lung cancer operation because only one of many nodules was removed for diagnostic purposes.**

July 2017: Pt had a vats w/wedge in late May, path came back adenocarcinoma, 2 weeks later they had a lobectomy, path report stated all benign lymph nodes. Readmitted now for pleural effusion. Thoracentesis revealed empyema. Thoracotomy with total decortication performed. Previous data bases I answered yes to lung cancer. Do I leave sequence 830 blank now since last path report benign lymph nodes? **If this is for the decortication, then you mark NO to 830 because this is not a lung resection for lung cancer. It's a decortication for empyema. Do not leave it blank as this is a required field.**

July 2017: Pt had a bilobectomy for lung ca, 8 days post-op while still in the hospital had to vats with decortication due to loculated pleural effusion. I know that I collect a second database. My question is do I answer Yes to lung cancer (830) & complete 840 & 841. **Not for the second surgery, no. Only mark YES to 830 when it's a lung resection for lung cancer.**

September 2017: Patient went in for a diagnostic wedge resection...frozen section came back as adenocarcinoma so the surgeon proceeded with a LUL lobectomy. The tumor was sent out to lab...pathology came back as leiomyoma, mimicking adenocarcinoma. So should lung cancer be coded as yes or no? I would assume no. **You are correct; this is not lung cancer.**

October 2017: A patient presented with lung nodules and underwent lobectomy. The pathology report indicates that the lung tissue was positive for low-grade B-cell lymphoma. All nodes were negative for malignancy. Should this be coded as lung cancer? There is no staging on path report. **This is lymphoma. You should indicate 'no' to lung cancer (#830).**

GENERAL THORACIC SURGERY DATABASE v.2.3

TRAINING MANUAL

January 2018

Seq. #: 840

Long Name: Clinical Staging Performed For Lung Cancer

Short Name: ClinStagDoneLung

Definition: Indicate whether clinical staging was performed on this patient related to this procedure.

Intent/Clarification:

Clinical staging is based on evidence gathered before primary treatment. Diagnostic and/or radiologic tests are performed to determine the type and extent of the cancer and used to guide treatment decisions.

Example:

Patient had a VATS wedge for lung cancer in October last year. Now with recurrence and is having a completion lobectomy. Can I use the Clinical Staging Methods that were done prior to the first surgery, or must they be after the first surgery and up to the present procedure? Ideally, staging should be repeated. Bottom line, if the surgery is for curative (therapeutic) intent, then staging needs to be done. If it is just to document a metastasis (diagnostic), then would not provide clinical staging.

09/15: Initially patient had a segmentectomy but the patient returned to the OR during the same admission for a lobectomy. Clinical Staging was completed on the initial surgery but do I complete it on the second surgery? **Yes, if it was to complete resection and use the same form. If lobectomy was for a bleed or air leak then No.**

09/15: Patient has clinical stage IIIA lung CA. Received neoadjuvant chemo and radiation therapy followed by lung resection (lobectomy). Surgical pathology report "Necrotizing granulomatous inflammation with no residual adenocarcinoma, forming a 3.2x2.7x1.7 cm area, consistent with complete pathologic response." Final path stage – ypT0M0N0. However, the path report also documents a new finding of a separate minimally invasive adenocarcinoma located 2.0 cm from the necrotic previously treated tumor. Was not seen preop. Final path stage – pT1aN0M0. Per path report, they are synchronous carcinomas. I coded the clinical stage (T2aN2M0) for the only tumor they were aware of preop and treated with neoadjuvant chemo radiation. Which pathological TNM should be coded? **The tumor for the clinical staged nodule. "M12" rule.**

October 2017: For staging methods, how far back can I look for methods used? **Go as far back as the decision to work it up.**

Seq. #: 841

Long Name: Preoperative Positive Tissue Diagnosis Obtained

Short Name: PreopPosTisOb

Definition: Indicate whether a positive tissue diagnosis was obtained prior to this operation.

Intent/Clarification:

July 2016: Are positive results from a bronchial brushing counted here, or does this only apply to tissue samples? **Yes, it counts.**

July 2017: Patient was admitted after having a seizure and imaging revealing a mass in the brain AND in the lung. Pt underwent a craniotomy and the brain tumor was taken out. Path. stated that it was metastatic lung adenocarcinoma. Do I check off YES to having preop positive tissue obtained? Do I also check off "OTHER" under Clinical Staging Methods because a crani was done to obtain the brain tissue? **You can mark Yes to 841 for the positive tissue from the brain. The Craniotomy is not a staging method.**

Seq. #: 850**Long Name:** Clinical Staging Method - Lung - Bronchoscopy**Short Name:** ClinStagLungBronc**Definition:** Was bronchoscopy used for clinical staging?**Intent/Clarification:**

Bronchoscopy is a procedure in which a cylindrical fiberoptic scope is inserted into the airways. This scope allows the visual examination of the lower airways. During a bronchoscopy, a physician can visually examine the lower airways, including the larynx, trachea, bronchi, and bronchioles. The procedure is used to examine the mucosal surface of the airways for abnormalities that might be associated with a variety of lung diseases. Its use includes the visualization of airway obstructions such as a tumor, or the collection of specimens for the diagnosis of cancer originating in the bronchi of the lungs (bronchogenic cancer). It can also be used to collect specimens for culture to diagnose infectious diseases such as tuberculosis. The type of specimens collected can include sputum (composed of saliva and discharges from the respiratory passages), tissue samples from the bronchi or bronchioles, or cells collected from washing the lining of the bronchi or bronchioles. The instrument used in bronchoscopy, a bronchoscope, is a slender cylindrical instrument containing a light and an eyepiece or, more commonly, a direct video attachment. There are two types of bronchoscopes, a rigid bronchoscope is a metal tube that is used to visualize the airway. It has a larger lumen and larger instruments can be passed through it in addition to being able to ventilate the patient. A flexible bronchoscope is generally a smaller, flexible, fiber optic tube that has a smaller working port but is also easier to place into the airway.

Seq. #: 860**Long Name:** Clinical Staging Method - Lung - EBUS**Short Name:** ClinStagLungEBUS**Definition:** Was Endobronchial Ultrasound used for clinical staging?**Intent/Clarification:**

EBUS is an invasive procedure in which physicians use ultrasound devices on the end of a special bronchoscope or placed through a bronchoscope to examine the airways and the lung for exploration of the structures of airway walls, the surrounding mediastinum, and the lungs. It is commonly used to biopsy lymph nodes outside the airway wall.

October 2017: Is super Dimensional bronchoscopy (electromagnetic navigation bronchoscopy considered as EBUS? If not where should this pre-procedure diagnostic test be coded? **No, super dimensional bronchoscopy is not EBUS. Code this as a bronch.**

December 2017: If EBUS is done in the OR just prior to surgery can this be coded as clinical staging? **Yes**

Seq. #: 870**Long Name:** Clinical Staging Method - Lung - EUS**Short Name:** ClinStagLungEUS**Definition:** Was Endoscopic Ultrasound used for clinical staging?

Intent/Clarification:

EUS is a procedure that combines endoscopy and ultrasound to obtain images and information about the digestive tract and the surrounding tissue and organs. In EUS a small ultrasound transducer is installed on the tip of the endoscope placed into the esophagus (not the airway) allowing the transducer to get closer to internal organs. This generally permits more accurate and detailed images of those organs than ones obtained by traditional ultrasound done from the surface of the body.

Seq. #: 880**Long Name:** Clinical Staging Method - Lung - Mediastinoscopy/Chamberlain**Short Name:** ClinStagLungMedia**Definition:** Was Mediastinoscopy or Chamberlain procedure used for clinical staging?**Intent/Clarification:**

Mediastinoscopy is a procedure that enables visualization of the contents of the mediastinum, usually for the purpose of obtaining a biopsy. Mediastinoscopy is often used for staging of lymph nodes of lung cancer or for diagnosing other conditions affecting structures in the mediastinum such as sarcoidosis or lymphoma. Mediastinoscopy involves making an incision approximately 1 cm above the suprasternal notch of the sternum, or breast bone. Dissection is carried out down to the pretracheal space and down to the carina. A scope (mediastinoscope) is then advanced into the created tunnel which provides a view of the mediastinum. The scope may provide direct visualization or may be attached to a video monitor. The Chamberlain procedure is used to biopsy lymph nodes in the center of the chest, or to biopsy a mass in the center of the chest. The Chamberlain procedure differs from a cervical mediastinoscopy by the location of the incision, and the location of the lymph nodes or mass to be biopsied. The Chamberlain procedure is used to biopsy lymph nodes or masses in the aorto-pulmonary window on the left side of the chest, or nodes in the hilar areas of the lung. (In contrast, the cervical mediastinoscopy procedure is used to biopsy nodes or masses to the front or side of the trachea, or windpipe.) The aorto-pulmonary window is the area in the center of the chest bound by the aorta superiorly, and the pulmonary artery inferiorly. This area contains lymph nodes that filter lymph coming from the left lung, especially the left upper lobe. If a lung cancer is present in the left lung, the Chamberlain procedure is useful for staging the cancer (determining the extent of spread.) The hilar areas of the lung (the hilum) are the areas of the lung where the pulmonary artery and vein (the blood supply) join the lung.

Seq. #: 890**Long Name:** Clinical Staging Method - Lung - PET or PET/CT**Short Name:** ClinStagLungPET**Definition:** Was PET scan or PET/CT used for clinical staging?**Intent/Clarification:**

Positron emission tomography, also called PET imaging or a PET scan, is a type of nuclear medicine imaging. Nuclear medicine or radionuclide imaging procedures are noninvasive and, with the exception of intravenous injections, are usually painless medical tests that help diagnose medical conditions. These imaging scans use radioactive materials called radiopharmaceuticals or radiotracers.

Seq. #: 900

1/2018

Long Name: Clinical Staging Method - Lung - CT

Short Name: ClinStagLungCT

Definition: Was CT scan used for clinical staging?

Intent/Clarification:

Computed tomography (CT) scan, also called computerized axial tomography (CAT) scan, is used to create cross-sectional images of structures in the body. In this procedure, x-rays are taken from many different angles and processed through a computer to produce a three-dimensional (3-D) image called a tomogram.

Seq. #: 910

Long Name: Clinical Staging Method - Lung - VATS

Short Name: ClinStagLungVATS

Definition: Was a Video Assisted Thoracoscopic procedure used for clinical staging?

Intent/Clarification:

Video-assisted thoracoscopic surgery (VATS) is a minimally invasive surgical technique used to diagnose and treat problems in the chest. During this surgery, a tiny camera (thoracoscope) and surgical instruments are inserted in the chest through small incisions. The thoracoscope transmits images of the inside of the chest onto a video monitor, guiding the surgeon performing the procedure. Video-assisted thoracoscopic surgery (VATS) can be used for many purposes, ranging from a biopsy to removal of tumors or entire lobes from the lung.

August 2016: Can I use the VATS exploration done in the OR at the time of the lobectomy (but prior to it) as "yes" for clinical staging? ~~No the VATs cannot be used for clinical staging because it is a surgical procedure.~~ **Yes, the VATS can be used for clinical staging if done prior to the actual procedure. Additional disease could be found which could change the patients staging.**

Seq. #: 920

Long Name: Clinical Staging Method - Lung - Laparoscopy

Short Name: ClinStagLungLap

Definition: Was a laparoscopy used for clinical staging?

Intent/Clarification:

Laparoscopy is a minimally invasive procedure used as a diagnostic tool and surgical procedure that is performed to examine the abdominal and pelvic organs. Tissue samples can also be collected for biopsy using laparoscopy and malignancies treated when it is combined with other therapies.

Seq. #: 921

Long Name: Clinical Staging Method - Lung – Brain MRI

Short Name: ClinStagLungMRI

Definition: Was a brain MRI used for clinical staging?

Intent/Clarification:

Seq. #: 922

Long Name: Clinical Staging Method - Lung – Brain Scan

Short Name: ClinStagLungBrain

Definition: Was a brain scan used for clinical staging?

Intent/Clarification:

CT scan of the brain with contrast and MRI of the brain are acceptable means of staging the brain. A CT scan of the head without contrast is not useful for staging the brain.

June 2017: I have come across patients that had PET/CT skull to mid thigh done with contrast, do these count as CT Brain with contrast? **No, this is a PET scan.**

Seq. #: 923

Long Name: Clinical Staging Method - Lung – Needle Biopsy

Short Name: ClinStagLungNeedle

Definition: Was a needle biopsy done for clinical staging?

Intent/Clarification:

FINA – fine need aspiration

09/15: A needle biopsy was attempted for pre-op clinical staging, but was unsuccessful in getting any tissue. Would we mark this as a yes or no on DCF?

Code “No” since tissue was not obtained and couldn’t be used for staging.

11/15 - Does an ENB with triple needle brushings done for biopsy qualify as a Needle Biopsy in the clinical staging method section? **You could count as -Other (it is a scraping), but not a needle biopsy**

September 2017: We do electromagnetic Navigation Bronchoscopy (ENB) or Cross Country. This technology is known as Electromagnetic Navigation Bronchoscopy (ENB). ENB uses electromagnetic tracking and CT-generated virtual bronchoscopy to create a three-dimensional "GPS map" of the lung, guiding the surgeon directly to the tumor. The surgeon is then able to perform bronchoscopy and biopsy the tumor from inside the bronchus. I checked with my Physician Champion about whether to code this as needle biopsy or Other? He suggested needle biopsy but said, "What would be most accurate would be some sort of code for electromagnetic navigation bronchoscopy with needle biopsy, FNA, forceps biopsy, or something like that. Please advise how you want us to code until the new version comes out. Is both Needle biopsy and Other or just Needle biopsy? **Code as Needle Biopsy.**

Seq. #: 929

Long Name: Clinical Staging Method - Lung – Other

Short Name: ClinStagLungOth

Definition: Indicate if method/technology other than those listed was used for clinical staging.

Intent/Clarification:

Indicate if any other method/technology was used for clinical staging.

Seq. #: 930

Long Name: Lung CA Tumor size – T

Short Name: ClinStagLungT

Definition: Choose the largest dimension of a solitary tumor. If more than one tumor is present, choose from below.

Intent/Clarification:

Question:

How are small nodules reported on lung CT addressed for staging? If there is no biopsy, the PET CT is negative, nodules are < 5 mm and the surgeon/oncologist chooses not to address these, do not consider them when staging. 40% of people over the age of 50 have small lung nodules which are not cancerous.

-For solitary masses:

- Tumor <= 2cm is T1a
- Tumor >2cm, <= 3cm is T1b
- Tumor > 3cm, <= 5 cm is T2a
- Tumor > 5 cm, <=7 cm is T2b
- Tumor > 7 cm is T3
- Unknown Tx - primary tumor cannot be assessed

For multiple tumors:

- Separate tumor nodule in the same lobe is T3
- Separate tumor nodule in a different lobe on the same side T4
- Separate tumor nodule on the opposite side M1a

Scenarios:

A 5.5 cm tumor in the right lower lobe with a separate 1 cm tumor in the same lobe is what T stage? T3

A solitary 5.5 cm tumor in the right lower lobe is what T stage? T2b

A 5.5 cm tumor in the right lower lobe with a separate 1 cm tumor in the right middle lobe is what T stage? T4

A 5.5 cm tumor in the right lower lobe with a separate 1 cm tumor in the left upper lobe is what T stage? T2b (This patient would be a T2bNxM1a which would make them a stage IV)

April 2016: Patient presented with an abnormal chest xray. Despite no hx of smoking, pulmonologist was concerned for non-resolving infiltrates and referred patient for navigational bronch. Results included negative cultures, cytology negative for malignancy, and pathology of atypical cells that could not exclude malignancy. Patient then referred for biopsy. My surgeon's H&P confirms no discrete mass and documents 'clinical staging could not be done due to no focal lesion/tumor'. Wedge of the lower lobe revealed adenocarcinoma on frozen section and one 2 cm peribronchial node with adenocarcinoma. Only 2 other nodes found, 1 peribronchial and 1 inferior ligament, and both were negative. Surgeon proceeded to do a thoracotomy and resection of the LLL, with multiple nodes attached. Final pathology was T3, N1, MO for an 8cm mass in the LLL, visceral pleural invasion and mets to 5 of 19 regional nodes. Do I use these final pathology findings for my clinical pathology? **No, cannot use pathological staging for clinical staging. Look at pre-op imaging for clinical staging. If can't find, can document TxNxMO.**

January 2017: A pt is diagnosed with Mesothelioma and right extrapleural pneumonectomy is performed. On the preop CT, a tumor size is not reported. Do I collect this as "unknown"? Also, on the final path report, the histology type is Epithelioid Mesothelioma. How do I collect this? **Mesothelioma is not a lung cancer; it is classified as a Malignant tumor of the pleura and as such does not need staging (including tumor size and histology).**

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TRAINING MANUAL

January 2018

May 2017: CT of the chest on 11/23/16 revealed a RUL mass of 5.7 x 4.7 cm, received neo-adjuvant therapy starting 1/12/17. Repeat CT on 1/26/2017 RUL mass is now 3.9x 3.4 cm. Prior to surgery of 4/14/17, another CT was done and it is now 4.25 x 3.6 cm. Which is the correct T size that I would input on this field? **Use the greatest size, before any treatment (5.7 x 4.7cm)**

Seq. #: 940

Long Name: Lung Cancer- Invasion of Adjacent Structures

Short Name: LCIInvAdjStr

Definition: Does clinical evaluation (imaging, endoscopy, etc . . .) indicate that the tumor invades adjacent structure(s)?

Intent/Clarification:

Based on preop testing, indicate whether the tumor appears to invade adjacent structures.

08/15: If visceral invasion of the pleura is noted on the path report (no prior mention of this) should I code it in clinical staging too? **No, only code what is found during the preop work up in clinical staging.**

~~09/15: if pathology shows visceral invasion, do we mark yes to invasion of adjacent structures and choose visceral pleura. **Yes, and choose location of invasion per report.**~~

09/15: If no mention is made of the visceral pleura as an invasion site is not made until the path report post-op, should visceral pleura be marked as positive on the pre-treatment cancer staging? **No**

May 2017: If a patient CT/Pet etc. does not show any invasion in adjacent area pre-op, but once the surgery takes place and it shows invasion, can we go back and add it to sequence 940 to show invasion, even though found during surgery. **No**

Seq. #: 950

Long Name: Clinical Staging Lung Tumor Invasive Pleura

Short Name: ClinStageLungTInvPI

Definition: Does imaging indicate tumor invasion of the pleura?

Intent/Clarification:

This refers to visceral pleura only. If the tumor invades the parietal pleura, code as invading the chest wall (next field). This is very difficult to diagnose prior to surgery.

August 2016: The surgeon says in his note, I think the tumor is probably invading the pleura, but does not seem to be invading the chest wall. Is probably adequate to code as Yes to Visceral Pleura invasion of adjacent structures? **Yes.**

Seq. #: 960

Long Name: Clinical Staging Lung Tumor Invasive Chest Wall

Short Name: ClinStageLungTInvCW

Definition: Does imaging or physical exam indicate tumor invasion of the chest wall?

Intent/Clarification:

Code tumors that invade the parietal pleura as invading the chest wall.

Seq. #: 970

Long Name: Clinical Staging Lung Tumor Invasive Diaphragm

Short Name: ClinStageLungTInvDia

Definition: Does imaging indicate tumor invasion of the diaphragm?

Intent/Clarification:

Seq. #: 980

Long Name: Clinical Staging Lung Tumor Invasive Phrenic Nerve

Short Name: ClinStageLungTInvPN

Definition: Does imaging indicate tumor invasion of the phrenic nerve?

Intent/Clarification:

Phrenic nerve invasion can be determined by a paralyzed diaphragm which appears elevated on an imaging study. This may be documented with a fluoroscopy study (Sniff test) demonstrating lack of diaphragm movement when a person is breathing.

Seq. #: 990

Long Name: Clinical Staging Lung Tumor Invasive Pericardium

Short Name: ClinStageLungTInvPer

Definition: Does imaging indicate tumor invasion of the pericardium?

Intent/Clarification:

Seq. #: 1000

Long Name: Clinical Staging Lung Tumor Invasive Main Bronchus

Short Name: ClinStageLungTInvMB

Definition: Does imaging or bronchoscopy indicate tumor invasion of the main bronchus?

Intent/Clarification:

Seq. #: 1010

Long Name: Clinical Staging Lung Tumor Obstructive

Short Name: ClinStageLungTInvOb

Definition: Does imaging indicate that the tumor is associated with atelectasis or obstructive pneumonitis of the entire lung?

Intent/Clarification:

January 2018: Definition of #1010: "Does imaging indicate that the tumor is associated with atelectasis or obstructive pneumonitis of the entire lung?" My patient has obstructive atelectasis of a single lobe. Please confirm I should NOT code 1010 as Yes. Assuming that's true, is there a place where we capture obstructive atelectasis that involves less than the entire lung? **There is no code for partial. Answer 'no' to #1010 since it is not the whole lung.**

Seq. #: 1020

Long Name: Clinical Staging Lung Tumor Invasive Nodule(s)

Short Name: ClinStageLungTInvNod

Definition: Does imaging indicate separate tumor nodule(s) in the same lobe?

Intent/Clarification:

Seq. #: 1030

Long Name: Clinical Staging Lung Tumor Invasive Invasive Mediastinum

Short Name: ClinStageLungTInvMed

Definition: Does imaging indicate lung tumor invasion in mediastinum?

Intent/Clarification:

Seq. #: 1040

Long Name: Clinical Staging Lung Tumor Invasive Heart

Short Name: ClinStageLungTInvHt

Definition: Does imaging indicate lung tumor invasion into heart?

Intent/Clarification:

Seq. #: 1050

Long Name: Clinical Staging Lung Tumor Invasion Great Vessels

Short Name: ClinStageLungTInvGrVes

Definition: Does imaging indicate lung tumor invasion into the great vessels?

Intent/Clarification:

Seq. #: 1060

Long Name: Clinical Staging Lung Tumor Invasion Trachea

Short Name: ClinStageLungTInvTr

Definition: Does imaging or bronchoscopy indicate lung tumor invasion into the trachea?

Intent/Clarification:

Seq. #: 1070

Long Name: Clinical Staging Lung Tumor Invasive Recurrent Laryngeal Nerve

Short Name: ClinStageLungTInvRLN

Definition: Does imaging or clinical assessment indicate lung tumor invasion into the recurrent laryngeal nerve?

Intent/Clarification: Recurrent laryngeal nerve invasion leads to paralysis of a vocal cord and therefore hoarseness. The diagnosis is generally made by direct visualization of cord function (laryngoscopy), often performed by an ENT.

Seq. #: 1080

Long Name: Clinical Staging Lung Tumor Invasive Esophagus

Short Name: ClinStageLungTInvEo

Definition: Does imaging or endoscopy indicate lung tumor invasion into the esophagus?

Intent/Clarification:

Seq. #: 1090

Long Name: Clinical Staging Lung Tumor Invasive Vertebral Body

Short Name: ClinStageLungTInvVB

Definition: Does imaging indicate lung tumor invasion into a vertebral body?

Intent/Clarification:

Seq. #: 1100

Long Name: Clinical Staging Lung Tumor Invasive Carina

Short Name: ClinStageLungTInvC

Definition: Does imaging or bronchoscopy indicate lung tumor invasion into the carina?

Intent/Clarification:

Seq. #: 1110

Long Name: Clinical Staging Lung Tumor Invasive Nodule(s) Diff Lobe

Short Name: ClinStageLungTInvNDL

Definition: Does imaging indicate lung tumor nodule(s) in a different ipsilateral lobe?

Intent/Clarification:

Seq. #: 1120

Long Name: Lung Cancer Nodes - N

Short Name: ClinStageLungN

Definition: Indicate the appropriate descriptor for the lung cancer nodal metastases. All nodes > 1cm on CT or PET/CT are considered positive. All PET positive nodes are considered positive. Results of previous invasive staging (EBUS, Mediastinoscopy) should be included here.

Clinical staging is based on the PRE-TREATMENT ESTIMATED staging workup which may include CT scan, PET scan, endoscopic ultrasound, etc.

Intent/Clarification:

Code nodal involvement (if any.) Ipsilateral = same side as tumor, contralateral= opposite side

- N0 = No regional lymph node metastasis
- N1 = Metastasis in ipsilateral peribronchial or hilar and intrapulmonary nodes. Includes direct extension.
- N2 = Metastasis in ipsilateral mediastinal and/or subcarinal lymph nodes
- N3 = Metastasis in contralateral mediastinal or contralateral hilar nodes, ipsilateral or contralateral scalene or supraclavicular nodes

(Lymph nodes may be reported by station #. Generally speaking ipsilateral (same side as tumor) lymph node with double digit numbers are N1 lymph nodes, ipsilateral lymph nodes with single digits are N2 lymph nodes, contralateral (opposite side as tumor) lymph nodes of any number are considered N3)

August 2017: Pt had a 1.9cm mass, went for a vats w/wedge & path report stated pT2a, pNX. Later underwent Lobectomy. I'm using this path report for my clinical staging but for sequence 1120 there is not an option for pNX, what should I use? **Use N0M0**

October 2017: Pre staging PET scan showed hypermetabolic N1 Hilar lymphadenopathy. Pre staging mediastinoscopy with biopsy done a week later showed no evidence of malignancy. Which do I code for sequence (1120)? **If biopsy of the lymph node was done and it was negative then indicate 'N0'. If the hypermetabolic node was not biopsied then indicate 'N1'.**

November 2017: Is there a hierarchy for this data elements. Example if CT Chest is positive N2, however the EBUS is negative N0? Which should be used to code this element? **Any tissue sampling modality should trump imaging (CT, PET-CT is trumped by EBUS/C.med/EUS), although they are all clinical staging.**

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January 2018: CT Scan "...MEDIASTINUM/ THORACIC NODES: Precarinal node previously 1.6 x 1.1 cm now 1.9 x 1.2 cm. 1.6 x 1.2 cm right hilar node unchanged..." N1 or N2? **N2**

Seq. #: 1130

Long Name: Lung Cancer Metastasis - M

Short Name: ClinStageLungM

Definition: Indicate the appropriate descriptor for the lung cancer distant metastases.

Clinical staging is based on the PRE-TREATMENT ESTIMATED staging workup which may include CT scan, PET scan, endoscopic ultrasound, etc.

Intent/Clarification:

Metastasis or metastatic disease (sometimes abbreviated mets), is the spread of cancer from one organ to another non-adjacent organ or part.

- M0 = No distant metastasis
 - M1 = Distant Metastasis
-

Seq. #: 1140

Long Name: Esophageal Cancer

Short Name: EsophCancer

Definition: Indicate whether an esophagectomy was performed for esophageal cancer.

If yes complete clinical and pathological staging.

Intent/Clarification:

If Esophageal Cancer documented, "Yes", and resection performed, complete both Clinical Staging (ClinStageEsophT, ClinStageEsophN, ClinStageEsophM, ClinStageEsophH, and ClinStageEsophG) AND Pathological Staging (PathStageEsophT, PathStageEsophN, PathStageEsophM, PathStageEsophH, and PathStageEsophG).

Guidelines (measurements) for coding esophageal tumor location - Use these measurements in cm from incisors: Upper third = 17-25 cm

Middle third = 26-34 cm

Lower third = 35-42 cm

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

Seq. #: 1150

Long Name: Clinical Staging Performed For Esophageal Cancer

Short Name: ClinStagDoneEsoph

1/2018

Definition: Indicate whether clinical staging was performed on this patient related to this procedure.

If yes complete clinical and pathological staging.

Intent/Clarification:

Clinical staging is the Pre-Treatment estimate of cancer. Indicate whether clinical staging was performed and if so choose the method(s).

Seq. #: 1160

Long Name: Clinical Staging Method - Esophageal - Bronchoscopy

Short Name: ClinStagEsophBronc

Definition: Was bronchoscopy used for clinical staging?

Intent/Clarification:

Bronchoscopy is a procedure in which a cylindrical fiberoptic scope is inserted into the airways. This scope contains allows the visual examination of the lower airways. During a bronchoscopy, a physician can visually examine the lower airways, including the larynx, trachea, bronchi, and bronchioles. The procedure is used to examine the mucosal surface of the airways for abnormalities that might be associated with a variety of lung diseases. Its use includes the visualization of airway obstructions such as a tumor, or the collection of specimens for the diagnosis of cancer originating in the bronchi of the lungs (bronchogenic cancer). It can also be used to collect specimens for culture to diagnose infectious diseases such as tuberculosis. The type of specimens collected can include sputum (composed of saliva and discharges from the respiratory passages), tissue samples from the bronchi or bronchioles, or cells collected from washing the lining of the bronchi or bronchioles. The instrument used in bronchoscopy, a bronchoscope, is a slender cylindrical instrument containing a light and an eyepiece. There are two types of bronchoscopes, a rigid tube that is sometimes referred to as an open-tube or ventilating bronchoscope, and a more flexible fiber optic tube. This tube contains four smaller passages—two for light to pass through, one for seeing through and one that can accommodate medical instruments that may be used for biopsy or suctioning, or that medication can be passed through.

Seq. #: 1170

Long Name: Clinical Staging Method - Esophageal - EBUS

Short Name: ClinStagEsophEBUS

Definition: Was Endobronchial Ultrasound used for clinical staging?

Intent/Clarification:

EBUS is an invasive procedure in which physicians use ultrasound devices inside the airways and the lung for exploration of the structures of airway walls, the surrounding mediastinum, and the lungs.

Seq. #: 1180

Long Name: Clinical Staging Method - Esophageal - EUS

Short Name: ClinStagEsophEUS

Definition: Was Endoscopic Ultrasound used for clinical staging?

Intent/Clarification:

A procedure that combines endoscopy and ultrasound to obtain images and information about the digestive tract and the surrounding tissue and organs. In EUS a small ultrasound transducer is installed on the tip of the endoscope introduced into the esophagus to permitting the transducer to get closer to the organs inside the body so the resultant ultrasound images are often more accurate and detailed than ones obtained by traditional ultrasound.

Seq. #: 1190

Long Name: Clinical Staging Method - Esophageal - Mediastinoscopy/Chamberlain

Short Name: ClinStagEsophMedia

Definition: Was Mediastinoscopy or Chamberlain procedure used for clinical staging?

Intent/Clarification:

Mediastinoscopy is a procedure that enables visualization of the contents of the mediastinum, usually for the purpose of obtaining a biopsy. Mediastinoscopy is often used for staging of lymph nodes or for diagnosing other conditions affecting structures in the mediastinum such as sarcoidosis or lymphoma. Mediastinoscopy involves making an incision approximately 1 cm above the suprasternal notch of the sternum, or breast bone. Dissection is carried out down to the pretracheal space and down to the carina. A scope (mediastinoscope) is then advanced into the created tunnel which provides a view of the mediastinum. The scope may provide direct visualization or may be attached to a video monitor.

The Chamberlain procedure is used to biopsy lymph nodes in the center of the chest, or to biopsy a mass in the center of the chest. The Chamberlain procedure differs from a cervical mediastinoscopy by the location of the incision, and the location of the lymph nodes or mass to be biopsied. The Chamberlain procedure is used to biopsy lymph nodes or masses in the aorto-pulmonary window on the left side of the chest, or nodes in the hilar areas of the lung. (In contrast, the cervical mediastinoscopy procedure is used to biopsy nodes or masses to the front or side of the trachea, or windpipe.) The aorto-pulmonary window is the area in the center of the chest bound by the aorta superiorly, and the pulmonary artery inferiorly.

Seq. #: 1200

Long Name: Clinical Staging Method - Esophageal - PET or PET/CT

Short Name: ClinStagEsophPET

Definition: Was PET scan or PET/CT used for clinical staging?

Intent/Clarification:

Positron emission tomography, also called PET imaging or a PET scan, is a type of nuclear medicine imaging.

Nuclear medicine or radionuclide imaging procedures are noninvasive and, with the exception of intravenous injections, are usually painless medical tests that help diagnose medical conditions. These imaging scans use radioactive materials called radiopharmaceuticals or radiotracers.

Seq. #: 1210

Long Name: Clinical Staging Method - Esophageal - CT

Short Name: ClinStagEsophCT

1/2018

Definition: Was CT scan used for clinical staging?

Intent/Clarification:

Computed tomography (CT) scan, also called computerized axial tomography (CAT) scan, is used to create cross-sectional images of structures in the body. In this procedure, x-rays are taken from many different angles and processed through a computer to produce a three-dimensional (3-D) image called a tomogram.

Seq. #: 1220

Long Name: Clinical Staging Method - Esophageal - VATS

Short Name: ClinStagEsophVATS

Definition: Was a Video Assisted Thoracoscopic procedure used for clinical staging?

Intent/Clarification:

Video-assisted thoracoscopic surgery (VATS) is a minimally invasive surgical technique used to diagnose and treat problems in the chest. During this surgery, a tiny camera (thoracoscope) and surgical instruments are inserted in the chest through small incisions. The thoracoscope transmits images of the inside of the chest onto a video monitor, guiding the surgeon performing the procedure. Video-assisted thoracoscopic surgery (VATS) can be used for many purposes, ranging from a biopsy to removal of tumors.

Seq. #: 1230

Long Name: Clinical Staging Method - Esophageal - EGD

Short Name: ClinStagEsophEGD

Definition: Was Esophagogastroduodenoscopy used for clinical staging?

Intent/Clarification:

Esophagogastroduodenoscopy (EGD) is an examination of the lining of the esophagus, stomach, and upper duodenum with a small camera (flexible endoscope) which is inserted down the throat.

December 2017: Does this include EGD done with biopsy or just done without biopsy? Do you have to count an EGD with biopsy as "ClinStagEsophOth #1245" as I see no other way to capture unless you allow for EGD to count as with or without biopsy. **An EGD can be counted with or without a biopsy. When you indicate tissue biopsy 'yes', you would then indicate EGD.**

Seq. #: 1240

Long Name: Clinical Staging Method - Lung - Laparoscopy

Short Name: ClinStagEsophLap

Definition: Was a laparoscopy used for clinical staging?

Intent/Clarification:

Laparoscopy is a minimally invasive procedure used as a diagnostic tool and surgical procedure that is performed to examine the abdominal and pelvic organs. Tissue samples can also be collected for biopsy using laparoscopy and malignancies treated when it is combined with other therapies.

Seq. #: 1241

Long Name: Clinical Staging Method - Endoscopic Mucosal Resection

Short Name: ClinStagEsophEMR

Definition: Was an endoscopic mucosal resection used for clinical staging?

Intent/Clarification:

December 2016: Is an Endoscopy with Biopsy the same as an Endoscopic Mucosal Resection? If not, do I document it under 'Other'? **No, they are not the same. The Endoscopic Mucosal Resection is a diagnostic procedure. Choose EGD; 43205.**

Seq. #: 1245

Long Name: Clinical Staging Method - Esophageal – Other

Short Name: ClinStagEsophOth

Definition: Indicate if method/technology other than those listed was used for clinical staging.

Intent/Clarification:

Indicate if any other method/technology was used for clinical staging.

Seq. #: 1250

Long Name: Esophageal Cancer Tumor - T

Short Name: ClinStagEsophT

Definition: Record T status based on EUS report. If EUS not done, estimate T based on CT or PET/CT. No esophageal thickening = T1. If esophageal thickening is present, use T2. If CT or PET/CT indicated invasion of adjacent structures, use T4.

Intent/Clarification:

Record T based on EUS if done, if not done estimate T based on CT or PET/CT. No esophageal thickening = T1. Choose T2 if esophageal thickening is present. If thickening noted on CT scan, code as T2. If stricture is noted on endoscopy or barium swallow or the patient is experiencing dysphagia, code as T3.

- T0 = No evidence of primary tumor
- Tis = High grade dysplasia
- T1 = Tumor invades lamina propria, mucosa or submucosa
- T2 = Tumor invades muscularis propria
- T3 = Tumor invades adventitia
- T4 = Tumor invades adjacent structures

December 2017: Can the path report from the 1st surgery be use to stage the 2nd surgery? "POD#12 s/p EGD w/stent placement and LVATS for washout after presenting w/a perforated esophageal cancer. POD#1 s/p esophagectomy via thoracotomy w/ spit fistula and decompressive PEG tube placement. Or should this patient not be coded as cancer for the 2nd procedure (all same episode of care)? **The second surgery occurred as a result of a post op event, no staging is to be done on this surgery. The primary diagnosis is perforation of the esophagus.**

December 2017: I am trying to code a pre-op Esophageal cancer staging. Pt received Chemo/rad tx prior to Surgery. What PET/CT results do you use? Time of initial diagnosis (presence of tumor and PET positive nodes) or most recent PET/CT prior to surgery after chemo/rad tx? (No tumor or PET avid nodes remain) **Use pre-treatment results.**

Seq. #: 1251

Long Name: Clinical Diagnosis of Nodal Involvement

Short Name: ClinStageEsophNode

Definition: Indicate whether there was a clinical diagnosis of N1, N2 or N3 nodal involvement.

Intent/Clarification:

Indicate nodal status. Nodes > 1cm on CT or PET/CT or EUS are considered positive. All positive PET nodes are considered positive. Count biopsy positive nodes. Choose Nx if nodes cannot be assessed.

Seq. #: 1270

Long Name: Esophageal Cancer Metastasis - M

Short Name: ClinStageEsophM

Definition: Indicate the appropriate descriptor for the esophageal cancer distant metastasis.

Clinical staging is based on the PRE-TREATMENT ESTIMATED staging workup which may include CT scan, PET scan, endoscopic ultrasound, etc.

Intent/Clarification:

Metastasis or metastatic disease (sometimes abbreviated mets), is the spread of cancer from one organ to another non-adjacent organ or part.

- M0 = No Distant Metastasis
 - M1 = Distant Metastasis
-

5. Diagnosis (Category of Disease)

Seq. #: 1300

Long Name: Category Of Disease - Primary

Short Name: CategoryPrim

Definition: Indicate the PRIMARY diagnosis (category of disease) for which the procedure was performed.

For the majority of cases, there will be only one condition treated (i.e., lung cancer treated by lobectomy and lymph node dissection). Rarely, there will be cases where two unrelated conditions are treated at one time (i.e., a thymoma and a lung cancer). In these rare cases, indicate the primary or most important diagnosis in this "Category of Disease - Primary" field, followed by the secondary or lesser diagnosis treated in the "Category of Disease - Secondary". For example, in the case of lung cancer with incidental thymoma, the primary category of disease = lung cancer, and the secondary category of disease = thymoma.

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Intent/Clarification:

Choose the primary diagnosis or reason for the procedure. Input should be based upon the final pathology report. If you entered a Category of Disease before final path, then you need to change it based on the final pathology.

Example:

If you start with a diagnosis of “abnormal radiological finding”, a wedge resection is done and cancer is found, the diagnosis should be changed to cancer based upon the pathology report.

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

09/15: Pt is a 12 y/o originally dx with osteosarcoma of L knee. Developed chemo induced cardiomyopathy, ended up on ECMO, BiVAD and eventual heart transplant. This year dx with lesions on bilat lungs. Therapeutic wedge resection of left lung done on 7/15, biopsied as metastatic osteosarcoma. Right lung done on 7/24 but biopsy showed no neoplastic attributes. Both specimens sent to a different pathology lab. Their report states that, although they would have made the same initial diagnosis, the final result is that all of the lesions were actually "metastatic calcification". They could find no evidence of neoplasm. How should I categorize this disease? Should I go with the original diagnosis which directed the therapy or should I go with the final diagnosis that was received after the patient was discharged? Patient is under 18 years old, would not be analyzed. If patient was over 18 diagnosis is that of path, which would be metastatic in this case.

09/15: Having difficulty with the diagnosis and procedure for the following:

Patient had a previous thoracotomy. Now has a chronic, persistent thoracotomy infection. Is diagnosis empyema with fistula? **No. If infection within 30 day put on the previous surgery. Use ‘other infected incision’.**

Procedure # 1– Left thoracic incision and debridement of skin, soft tissue, muscle, left latissimus advancement flap into base of wound, wound VAC placement. Would procedure be unlisted procedure, neck and thorax 21899 and application of wound VAC? **No; # 32120**

Procedure # 2 – Wound closure and removal of wound VAC. Would I choose the same diagnosis and procedure? Other minor procedure? **Minor.**

Procedure # 3 – Pre-op diagnosis = New air leak; Procedure = Redo Thoracotomy with evacuation of hematoma and closure of air leak. Diagnosis – Abnormal radiologic finding 793.1. Would procedure be: 32100 Thoracotomy with exploration, 32120 Thoracotomy for post op complications or 32150 Thoracotomy major with removal of foreign body or hematoma? **If within 30 days post op use 32120; if > 30 days use 32100**

Procedure: removal of wound VAC and delayed sternal closure. What procedure code is used? **Other**

09/15: What a surgeon does a wedge resection for diagnostic purposes I fill out a non – analyzed form. I was taught that when the pathology comes back positive for Ca and the wedge becomes therapeutic treatment I should change it to a major procedure form. Is this correct? **Yes. Needs to be therapeutic wedge. Suggest waiting for path report.**

09/15: Patient was admitted emergently and had a planned 32651 with complications during surgery requiring VA ECMO placement 36822. Is this captured in Thoracic database? **Yes, as “other” major procedures and write it in.**

09/15: Patient had CABG in August 2014, comes back 60 days out from cardiac procedure with sternal wound infection and has Radical Resection of Sternum. Patient expires during this hospital stay. Does this procedure and death go to Thoracic? Wouldn't this be due to the cardiac procedure and service? **If the Thoracic Surgeon performed the sternal resection include in the Thoracic database and count the death. It is past 30 days post op of the initial surgery.**

12/15: I am wondering how to code a lung cancer reoccurrence. The patient had RML cancer with lobectomy in October of 2014. The patient had a RUL nodule and had a lobectomy in November of 2015. The pathology came back as recurrent squamous cell carcinoma. So this doesn't get restaged. My question is should the primary diagnosis be middle lobe lung cancer because that is the original site or should it be counted as upper lobe lung cancer because that is the site of the recurrent disease? And the second question is should I leave the T, N, M section blank or should I revert back to the Middle lobectomy pathology? **Diagnosis = 197.0 metastatic lung cancer. Metastatic is not staged.**

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12/15: Pt has diagnosis of "Traumatic rupture R hemidiaphragm d/t blunt chest trauma".

How do you code this diagnosis? **"Other" and write in diaphragm rupture.**

April 2016: What is the best choice for mediastinal mass? The pathology shows fibrosis with reactive lymphoid tissue, negative gram stain. Fibro-inflammatory infiltrate with keloidal fibrosis? **Abnormal radiographic mass.**

June 2016: A patient was admitted for GI Bleed- during an EGD the scope caused a perforation at the gastro-esophageal junction that extended downward into the stomach- (according to the OP notes the esophagus was intact) the EGD was aborted and the patient was taken for an emergent repair- should this patient be included in the GTSD? **The answer to your question depends on what procedure was done and who did the repair. Where was the perforation? If the procedure involves the esophagus then this would be a thoracic case. If the esophagus was not involved in the repair then it is not a thoracic case. The physician doing the repair must also be a CT surgeon participating in the registry. The EGD can be collected in the GTSD.**

July 2016: We have a patient who has the following diagnosis- #1- Gastrointestinal hemorrhage, #2- gastrinoma, malignant, #3- acute respiratory failure, #4- sepsis, #5- liver metastases On hospital day 5 after severe nausea/vomiting- she developed a esophageal perforation- she went to the OR in severe shock & received CPR in OR after intubation- should this patient be included in the registry- since her primary diagnosis are above do not include any type of esophageal disease. **Include this case only if the patient had surgery for the esophageal perforation. Make sure the Zubrod score reflects the patient's severe condition.**

July 2016: 2 diagnostic wedge resections were performed for a diagnosis of "pulmonary nodule". The pathology stated that the lung nodule & opacity from other lobe were benign. The training manual has LUNG NODULE, BENIGN (not a tumor) #518.89 as a choice, but that option is not on the Data Collection Form. Why is that and what Category of Disease should I select then? **Use Pulmonary Nodule, not a tumor. We will correct this in the next version.**

August 2016: How do you want us to code right loculated hydropneumothorax as Category of Disease? Pt has right thoroscopic partial decortication and Tracheostomy change. **Document whichever is greater; the air or the fluid.**

April 2017: I have read the definition for primary diagnosis but my interpretation of this definition is not the same as my coworker. For those cases where the patient had Bullae, I have been instructed to capture the category of disease as pneumothorax, the path report for this particular case was reported as bleb the case was entered as Emphysematous bleb for the category of disease. The manager has instructed for the primary diagnosis, it should be what the patient came in for to be treated. For the patient with surgical intervention for recurrent pneumothorax to select category of disease as pneumothorax. She stated the bleb was an incidental find, and that the primary diagnosis is technically is what the patient came in to be checked out for. My understanding of the definition is to choose the primary diagnosis or reason for the procedure. The pneumothorax brought the patient in and required a surgical procedure but the final pathology report was bleb, therefore I selected what I thought was the best option. Emphysematous bleb (492.0, J43.9). Please advise. **Both are correct. If pathology showed a bleb, then use that as your primary and list pneumothorax as secondary.**

June 2017: This patient was diagnosed pre-procedure with a pancoast tumor invading T1-T3 vertebral bodies and was identified as Squamous cell carcinoma on prior biopsy. She had neo-adjunctive chemo and radiation tx prior to surgery. On the pathology note after surgery it was stated as FINAL DIAGNOSIS A. LUNG, RIGHT UPPER LOBE, RIBS 1ST, 2ND, 3RD; RESECTION: THERAPY INDUCED FIBROSIS WITH CALCIFICATION AND DEBRIS, MEASURING 3.4CM IN THE GREATEST DIMENSION; NO VIABLE RESIDUAL CARCINOMA IDENTIFIED; BRONCHIAL, VASCULAR AND RESECTION MARGINS NEGATIVE FOR MALIGNANCY; RIBS UNINVOLVED BY TUMOR. How should I code this primary diagnosis? **The primary diagnosis is Lung Ca Upper Lobe. On clinical staging there is invasion to the vertebral bodies. You would indicate "yes" to chemotherapy and radiation treatment prior to surgery. For Pathology Staging the T is T0.**

July 2017: I am reviewing a patient who had a therapeutic wedge resection for suspected ca with a history of single transplanted lung 7/7/13. My question is do I use transplanted lung complications or the results of the path report for the primary diagnosis? If I use the path report findings, do I put transplanted lung complications as the secondary diagnosis? **The primary COD should be based off of the final pathology after the wedge. Secondary diagnosis is not required.**

Trachea

Dysphagia, unspecified (787.2, R13.10): Dysphagia is difficulty swallowing. It may be caused by esophageal disorders, neurologic pathology or neuromuscular disorders.

Tracheomalacia-congenital (748.3, Q32.0): Refers to a condition in newborns whose tracheal cartilage lacks its usual rigid structure. This leads to airway obstruction during expiration and infants will present with difficulty breathing and inability to clear secretions.

Tracheomalacia-acquired (519.1, J39.8): Condition in which the normal rigid tracheal cartilage becomes soft and flaccid. This may be due to changes in the airway as a result prolonged endotracheal intubation.

Tracheostenosis-congenital (748.3, Q32.1): A process present in newborns in which the normal tracheal, and sometimes bronchial, airway diameter is significantly compromised. The amount of airway involvement can vary from case to case. Newborns or infants can present with stridor or difficulty in breathing or feeding.

Tracheostenosis-acquired postintubation (519.1, J39.8): Refers to narrowing of the normal tracheal diameter often by scar tissue formed from prolonged endotracheal intubation. Afflicted patients typically present with shortness of breath and stridor.

Tracheostomy-hemorrhage (519.09, J95.01): Describes excessive bleeding as a result of a tracheostomy tube. This may be due to granulation tissue within the airway or may represent the presence of a communication between the trachea and innominate artery or tracheoinnominate fistula.

Tracheostomy related stenosis (519.02, J95.03): Refers to the process when the trachea is narrowed at the location of a healed tracheostomy stoma.

Tracheal tumor, malignant (162.0, C33): Describes conditions where either primary cancer develops within the trachea or where cancers from the lung or thyroid gland grow into the trachea. Primary malignant tracheal tumors are often either squamous cell cancers or adenoid cystic carcinomas. Other malignant tumors of the trachea include sarcomas and mucoepidermoid carcinomas.

Tracheal tumor, benign (212.2, D14.2): These are lesions that originate from the trachea itself and are not considered cancers. Chondromas, leiomyomas, and adenomas are some of the types of benign tracheal tumors.

Tracheal tumor, metastatic (197.3, C78.30): A process when cancers of distant sites can occasionally spread to the trachea and lead to airway obstruction or bleeding. Renal cell carcinomas, breast cancers, and melanomas can metastasize to the airway.

Larynx

Subglottic stenosis-congenital (748.3, Q31.1): This refers to a condition of narrowing of the subglottic larynx in the absence of an identifiable cause such as prior endotracheal intubation.

Subglottic stenosis-acquire (post intubation) (478.74, J38.6): Patients who have been intubated with either an oral endotracheal tube or a tracheostomy appliance can develop narrowing of their subglottic larynx due to airway irritation and scarring. Airway narrowing may lead to stridor and cause patients to suffer from shortness of breath.

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Vocal cord paralysis unspecified (478.3, J38.00): This refers to a complication of thoracic surgery where the patient's vocal mechanism is impaired due to trauma to the nerve supply to the larynx. Paralysis of a vocal cord may lead to voice changes and may predispose a patient to experience aspiration events.

Vocal cord paralysis, unilateral (478.31, J38.01): One of the two vocal cords is immobile or has extremely limited movement. This often impacts speech and swallowing.

Vocal cord paralysis, bilateral (478.33, J38.02): Both vocal cords are immobile, often stuck partially open. This impacts speech and can lead to difficulty swallowing and aspiration.

Lung

Lung tumor, metastatic (197.0, C78.00): This condition includes all cancers of the body that spread to the lungs. A primary lung cancer may metastasize to a different lobe of the lung and be considered a metastatic lung tumor.

Lung tumor, benign (212.3, D14.30): These are masses within lung tissue that are not malignant. They can grow, but rarely cause symptoms. Benign lung tumors include hamartomas, chondromas, and fibromas.

Lung cancer, main bronchus, carina (162.2, C34.00): This is a condition where a centrally-located lung cancer becomes locally advanced and involves either the right/left main bronchus or carina. Surgical resection involves removing involved airway and lung and may require removing a portion of the central airway as well.

Lung cancer, upper lobe (162.3, C34.10): This refers to a primary lung cancer, usually non-small cell or small cell carcinoma, that is located within either the right or left upper lobes.

Lung cancer, middle lobe (162.4, C34.2): This refers to a primary lung cancer located within the right middle lobe of the lung.

Lung cancer, lower lobe (162.5, C34.30): This refers to a primary lung cancer located within either the right or left lower lobe of the lung.

Lung cancer, location unspecified (162.9, C34.90): This code should be used when the exact origin of the primary lung cancer cannot be exactly determined due to large size or when the location was not specifically documented by the surgeon.

Lung abscess (513.0, J85.2): Represents an infectious condition of the lung when a collection of infected material develops within the substance of the lung.

Pneumothorax (512.8, J93.1): This is a process that occurs when the lining of the lung parenchyma is disrupted and air leaks into the pleural space (the space between the lung and rib cage). This leads to varying degrees of lung collapse and subsequent symptomatology. In its most severe form, this can lead to acute respiratory failure.

Bronchiectasis (494.0, J47.9): Refers to a localized, irreversible dilation of the bronchial tree. Patients can present to their physicians with recurrent respiratory infections and significant airway bleeding as a result.

Empyema with fistula (510.0, J86.0): This describes an infectious process within the pleural space with evidence of a communication between the bronchial tree within the lung and the pleural space. Treatment involves appropriate antibiotics with drainage of the pleural infection and correction of the bronchopleural fistula.

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Empyema without fistula (510.9, J86.9): This describes an infectious process within the pleural space without evidence of a communication between the bronchial tree within the lung and the pleural space. Pleural infection is usually due to pneumonia within the lung tissue. Treatment involves appropriate antibiotics with drainage of the pleural infection.

Emphysema (492.8, J43.8): Is a form of chronic obstructive pulmonary disease (COPD) characterized by loss of elasticity of the lung tissue. This results in air-trapping and over distended lung tissue leading to shortness of breath and impaired gas exchange.

Emphysematous bleb (492.0, J43.9): This refers to a collection of air within the lung tissue due to rupture of the alveolar space. These can be either single or multiple and can enlarge to the point of significantly compressing normal lung tissue resulting in shortness of breath.

Interstitial lung disease/fibrosis (516.3, J84.1): Refers to a number of conditions that lead to the progressive scarring of lung tissue. This scarring results in significant respiratory dysfunction and in its most severe form can lead to respiratory failure. In general, the scarring is irreversible.

Pneumonia (486, J18.9): Is a condition in which a portion of the lung is involved with an active infection. These can be due to bacterial, viral, or fungal organisms. Treatment is aimed at identifying the causative etiology and initiating appropriate antimicrobial therapy.

Pulmonary insufficiency following surgery/trauma (ARDS) (518.5, J95.82): This refers to a diffuse inflammatory process that typically involves all lung tissue. This condition can lead to severe impairment of gas exchange within the lung despite mechanical ventilation.

Hemothorax (511.8, J94.2): Is defined as the presence of blood within the pleural space. This may be due to a traumatic event with damage to the chest wall or lung. Treatment may require drainage with a chest tube or surgical intervention to address the bleeding source.

Lung nodule, benign (not a tumor, e.g., granuloma, subpleural lymph node, pulmonary infarct) (518.89): This is used to classify lesions within the substance of the lung that do not contain malignant cells. Included in this category are hamartomas, non-necrotizing granulomatous processes such as sarcoidosis and atypical infections that result in necrotizing granulomatous lesions.

Acute respiratory failure (518.81, J96.00): Acute respiratory failure is a new onset of pulmonary dysfunction resulting in inadequate ventilation and gas exchange. Causes may include airway obstruction, damaged lung tissue, decreased respiratory drive or failure of the muscles that control breathing.

Aspergillosis (117.3, B44.9): This is a fungal infection caused by aspergillus, a common mold. It can be seen in persons with compromised immune function.

Cystic fibrosis with pulmonary manifestations (277.02, E84.0): CF is a life threatening genetic disease leading to production of thick, tenacious mucous resulting in frequent pulmonary congestion and infections. It also impacts digestive enzymes and function.

Carcinoid tumor of the bronchus and lung; malignant, atypical (209.21, C7A.090): "Atypical carcinoid" - angrier looking cells with more mitoses, more cellular irregularity, much higher incidence of lymph node metastases and higher incidence of M1 involvement with a lower 5 year survival than typical carcinoid.

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Carcinoid tumor of bronchus and lung; benign, typical (209.61., D34.090): "Typical carcinoid" - regular appearing cells, low number of mitoses, slow growing, rarely involves lymph nodes and only rarely metastasizing with an 80-90% cure rate following excision but still officially "malignant"

Gangrene and necrosis of lung (513.0, J85.0): Death of lung tissue due to loss of blood supply. Primary causes include: pneumonia, pulmonary embolism, neoplasm (tumor). Secondary causes include: trauma, surgery disrupting blood supply, lobar torsion, septic emboli, systemic infection, lung toxicity of chemotherapeutic agents, radiation effect, and foreign body aspiration. Treatment and prognosis depend on the etiology and extent of lung damage.

Solitary pulmonary nodule (not a tumor, e.g., granuloma, subpleural lymph node, pulmonary infarct) (793.11, R91.1): A solitary pulmonary nodule is defined as a discrete, well-marginated, rounded opacity less than or equal to 3 cm in diameter that is completely surrounded by lung parenchyma, does not touch the hilum or mediastinum, and is not associated with adenopathy, atelectasis, or pleural effusion. Lesions larger than 3 cm are considered masses and are have a higher risk of malignancy.

Malignant neoplasm other parts of bronchus or lung (162.8, C34.8): Malignant (cancerous) tumor in a location not otherwise listed.

Neoplasm of uncertain behavior of trachea, bronchus and lung (235.7, DM38.1): Lesion in trachea, bronchus or lung without a definitive diagnosis.

Personal history of malignant neoplasm of bronchus and lung (V10.11, Z85.118): History of cancer of the bronchus and lung.

Post inflammatory pulmonary fibrosis (515, J84.89): Post inflammatory pulmonary fibrosis is a condition in which the tissues in the lungs thicken or become scarred. The lung tissues also become rigid, which makes breathing difficult. As post inflammatory pulmonary fibrosis advances, lung tissue becomes more damaged and shortness of breath worsens. Post inflammatory pulmonary fibrosis typically occurs after some sort of infection that causes serious damage to the lung tissues. There is no cure for post inflammatory pulmonary fibrosis, but medications like corticosteroid drugs may be helpful in managing inflammation and swelling. Damage to the lungs caused by post inflammatory pulmonary fibrosis is permanent, and those with significant damage may need a lung transplant.

Primary pulmonary hypertension (416.0, I 27.0): Primary pulmonary hypertension (PPH) is a rare disease characterized by elevated pulmonary artery pressure with no apparent cause. PPH is also termed precapillary pulmonary hypertension or, as is currently preferred, idiopathic pulmonary arterial hypertension (IPAH). Untreated IPAH leads to right-sided heart failure and death.

Pulmonary sequestration (748.5, Q33.2): Pulmonary sequestration (also called accessory lung) refers to aberrant formation of segmental lung tissue that has no connection with the bronchial tree or pulmonary arteries. It is a bronchopulmonary foregut malformation (BPFM).

Transplanted lung complication(s) (996.84, T86.8XX): Some complications are related to the operation itself, others are a result of immunosuppressive medication, which is needed to prevent rejection. Complications may include bleeding, rejection, bronchiolitis obliterans syndrome, post-transplantation lymphoproliferative disorder, infection, side effects of long term use of immunosuppressants.

Mediastinum

Mediastinitis (519.2, J98.5): Refers to either acute or chronic inflammation of the mediastinum. Acute mediastinitis is usually due to a bacterial infection from a perforation of the esophagus or due to sternal wound infections after cardiac surgery procedures. Treatment often requires antibiotics and surgical drainage. Chronic mediastinitis represents a fibrosis of the mediastinum and can be a result of radiation therapy or due to previous infection with histoplasmosis or tuberculosis.

Mediastinal nodes, metastatic (196.1, C77.1): Refers to a process where cancers within the chest, or from other locations, spread to the lymph nodes within the mediastinum. These lymph nodes can be biopsied at mediastinoscopy.

Mediastinal nodes, benign (229.0, D36.0): Describes a condition where mediastinal lymph nodes demonstrate a benign or non-malignant process such as sarcoidosis or anthracosis. These conditions may result in the enlargement of the involved lymph nodes.

Anterior mediastinal tumor, primary (germ cell cancer, seminoma) (164.2, C38.1): Refers to tumors of the mediastinum which are classified as either seminomas or nonseminomatous germ cell tumors of the mediastinum. These tumors often cause symptoms due to their size and resulting compression of heart, lung, or airway. Treatment often involves a combination of chemotherapy, surgery, and radiation therapy.

Anterior mediastinal tumor-metastatic (197.1, C78.1): Cancers from other locations can occasionally spread to the anterior mediastinum. These can originate from the lung, esophagus, breast, or other location and spread to the mediastinum via the lymphatic system.

Anterior mediastinal tumor-benign (e.g., teratoma) (212.5, D15.2): A teratoma is often a benign tumor which can be located within the anterior mediastinum. This tumor consists of normal types of cells, but in an abnormal configuration and location. They can produce symptoms from their large size and are treated with surgical resection.

Anterior mediastinal tumor-thymus tumor (thymoma, thymic carcinoma) (164.0, C37): The thymus gland is located within the anterior mediastinum and serves a role in the development of the immune system. The thymus usually disappears during childhood, but can be the source of particular tumors. These can range from less aggressive thymomas to very malignant thymic carcinomas. Surgical resection is the procedure of choice for these abnormalities if feasible.

Lymphoma, intrathoracic (202.82, C85.92): Lymphomas are a type of cancer that arises from cells of the immune system or lymphocytes. Thoracic surgeons are often involved in obtaining tissue via mediastinoscopy to assist medical oncologists in making the diagnosis of lymphoma. The treatment of these conditions centers on the use of chemotherapy.

Posterior mediastinal malignant tumor-primary (164.3, C38.2): These are malignant tumors located in the posterior third of the mediastinum between the posterior pericardium and spine. Malignant tumors in this location are rare and predominantly malignant neurogenic tumors.

Posterior mediastinal tumor-metastatic (197.1, C78.1): These are unusual occurrences where cancers from other locations can metastasize to the posterior mediastinum.

Posterior mediastinal tumor-benign (i.e., neurogenic tumor) (212.5, D15.2): These are masses that arise from peripheral nerves or the sympathetic ganglia. These typically are slow-growing lesions that are asymptomatic. Schwannomas and neurofibromas are the usual tumor types.

Myasthenia gravis (358.0, G70.00): This is a neuromuscular disease caused by antibodies generated in one's own body. These antibodies lead to muscle weakness, fatigue, and occasionally respiratory failure. This condition is associated with thymomas and patients may gain significant symptom improvement with resection of a thymoma or even a normal thymus gland.

Mediastinal cyst, bronchogenic (519.3, J98.5): Is the most common mediastinal cyst. These are thin walled cavities lined with respiratory epithelium and can cause symptoms due to their size or become infected. Surgical resection may involve removal of the cyst alone or may require concomitant lung resection.

Mediastinal cyst, foregut duplication (519.3, J98.5): These are benign cyst originating from and attached to the intrathoracic esophagus. These may be asymptomatic or associated with dysphagia due to compression of the adjacent esophagus. Removal requires simple resection of the cyst.

Mediastinal cyst, pericardial (519.3, J98.5): These are unusual cysts arising from the pericardium. Treatment, when necessary, may involve CT-guided needle aspiration and recurrences are treated with simple cyst excision.

Mediastinal cyst, thymic (519.3, J98.5): This describes cystic lesions within the thymus gland. They can be associated with thymomas and rarely cause symptoms.

Benign neoplasm of thymus (212.6, D15.0): Benign tumors of the thymic gland are relatively rare. Although most of these lesions are asymptomatic in nature, they may result in respiratory distress.

Mediastinal abscess (513.1, J85.3): An infection manifested by a collection of pus in the mediastinal space.

Neoplasm of uncertain behavior of pleura, thymus, mediastinum (235.8, D38.2-D38.4): Growth of the pleura, thymus or mediastinum without a definitive diagnosis.

Unspecified disease of thymus gland (254.9, E32.9): Disease of the thymus gland not otherwise listed.

Thyroid

Goiter, nodular (241.9, E04.9): This describes a condition of an enlarged thyroid gland which may be due to dietary deficiencies in iodine or autoimmune inflammation. Symptoms may occur due to excessive thyroid enlargement which can result in tracheal and esophageal compression.

Thyroid neoplasm, malignant (193.0, C73): This condition refers to cancers that arise within the thyroid gland. Occasionally these cancers can enlarge and invade the underlying trachea which can result in airway obstruction or bleeding.

Thyroid neoplasm, benign (226.0, D34): An overwhelming majority of nodules that arise within the thyroid gland are benign tumors. Fine needle aspiration of thyroid nodules can often distinguish whether they are benign or malignant.

Pleura

Pleural effusion, sterile (511.9, J90): This is a condition where fluid accumulates in the space between the lung and chest wall. This type of fluid is not due to cancer in the pleura nor is it infected.

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Pleural effusion, infected (empyema) (511.1, J86.9): Empyema describes a situation where infected fluid is present in the pleural space. This condition usually chest tube or surgical drainage for successful treatment.

Pleural effusion, malignant (197.2, C78.2): Cancers from the chest or from elsewhere can spread to the pleural lining of the chest wall. This often, in turn, results in the production of excessive fluid within the pleural space. Patients may present complaining of chest pain and difficulty breathing. Treatment may involve sclerosis of the pleural space.

Pleural tumor, malignant (e.g., mesothelioma) (163.9, C38.4): Malignant mesothelioma is an aggressive type of cancer that originates from cells that line the pleural space. Asbestos exposure is a known risk factor for the development of this malignancy. Chemotherapy, surgery, and radiation therapy are often employed in the treatment of this disease.

Pleural tumor, metastatic (197.2, C78.2): Cancers of the lung, breast, ovary, and kidney can spread to the pleura lining the chest wall and present as a pleural nodule or tumor.

Pleural tumor, benign (212.4, D19.0): Rarely, a benign tumor of the pleura can develop. These are typically classified as benign fibrous tumors of the pleura and have no known association with asbestos exposure. They are usually discovered as incidental lesions on a chest x-ray or CT scan. Treatment involves simple surgical excision.

Pleural thickening (511.0, J94.9): This describes a nonspecific finding on a chest x-ray or CT scan. Pleural thickening may be due to pleural plaques or calcified lesions which are frequently seen in patients with asbestos exposure.

Pleural effusion, other specified, except TB (511.89, J90): Pleural effusion is excess fluid that accumulates in the pleural cavity, the fluid-filled space that surrounds the lungs. Code effusions other than infection, malignant, sterile or those caused by tuberculosis here. These may include those caused by autoimmune diseases or medications.

09/15: What is the appropriate code for Exudative Pleural Effusion. Culture negative, negative for malignancy. Biospy came back for fibrosis and chronic inflammation.

Pleural effusion, other specified except TB

Malignant neoplasm other specified sites of pleura (163.8, C38.4): Malignant neoplasm (cancerous tumor) of contiguous or overlapping sites of pleura whose point of origin cannot be determined

Chest Wall

Pectus excavatum (754.81, Q67.6): Represents the most common congenital abnormality of the chest wall. Atypical rib and cartilage growth leads to the caved-in or concave appearance of the anterior chest. Some degree of cardiopulmonary impairment may be present in severe cases.

Pectus carinatum (754.82, Q67.7): Another congenital chest wall abnormality in which abnormal rib and cartilage growth leads to protrusion abnormalities of the anterior chest. No certain cardiopulmonary abnormalities are known to be caused by this deformity. Heart valve abnormalities have been found to be associated with this condition.

Sternal tumor, malignant (170.3, C41.3): A variety of primary malignant tumors of the sternum have been described. A majority of these are of the soft tissue sarcoma origin and many are thought to be related to previous external beam radiation therapy. Treatment often consists of radical resection of the sternum with complex reconstructive requirements.

Sternal tumor, metastatic (198.5, C79.51): This refers to the development of cancers within the sternum that are tumors that have originated from other locations in the body. Surgical resection for metastatic disease to the sternum is rare, but can be considered in well-selected instances.

Sternal tumor, benign (213.3, D16.7): Benign tumors of the sternum are quite unusual. Osteochondromas are the most common type of benign sternal tumor.

Rib tumor, malignant (e.g., osteosarcoma, chondrosarcoma) (170.3, C41.3): Primary cancers of the chest wall can originate from the ribs. Chondrosarcoma is the most common primary malignant tumor of the chest wall. These cancers typically require extensive chest wall resection with complex reconstructive techniques. Malignant rib tumors can spread to other sites within the body.

Rib tumor, metastatic (198.5, C79.51): Cancers from distant sites can spread to bone and the ribs are a frequent site of bony metastases. Occasionally, rib resection is performed to determine the nature of a metastatic rib tumor. When symptomatic, metastatic rib tumors frequently cause pain at their location.

Rib tumor, benign (e.g., fibrous dysplasia) (213.3, D16.7): It is often difficult to distinguish benign from malignant rib tumors without removing the mass and examining its cellular characteristics. Several benign rib tumors exist and include chondromas, osteomas, and fibrous dysplasia to name a few.

Thoracic outlet syndrome (353.0, G54.0): This refers to a constellation of physical signs and symptoms related to compression of the brachial plexus and subclavian artery and vein. This can be caused by abnormalities of the first rib, clavicle, and musculature surrounding the brachial plexus and subclavian vessels as they travel out from the chest to supply the arm. Surgical intervention may be necessary to relieve the anatomic compression and improve symptoms.

Diaphragm

Diaphragmatic paralysis (519.4, J98.6): Each diaphragm is innervated by its respective phrenic nerve. Diaphragmatic paralysis can occur when there is injury to a phrenic nerve during a surgical procedure or may be related to a viral illness. Patients that suffer from high spinal cord injuries may be ventilator dependent as the innervation of both phrenic nerves becomes compromised by their spinal injury.

Diaphragm tumor, malignant (171.4, C49.3): Primary malignant tumors of the diaphragm are quite rare. Occasionally, liver cancers can invade the diaphragm and require partial resection of the diaphragm during liver surgery.

Diaphragm tumor, metastatic (198.89, C79.89): Cancers from other sites can spread to the chest and involve the pleura as described. When this occurs, diaphragmatic involvement is usually encountered.

Diaphragm tumor, benign (215.4, D21.3): These are extremely rare tumors, but can include the same types of benign tumors seen elsewhere in the body. One type of benign diaphragmatic tumor is a lipoma.

Diaphragmatic hernia with obstruction, without gangrene (552.3, K44.0): A diaphragmatic hernia is a defect or hole in the diaphragm that allows the abdominal contents to move into the chest cavity, in this case leading to gastrointestinal obstruction without development of gangrene.

Diaphragmatic hernia with gangrene (551.3, K44.1): A diaphragmatic hernia is a defect or hole in the diaphragm that allows the abdominal contents to move into the chest cavity, in this case leading to ischemia of tissue and development of gangrene.

Diaphragmatic hernia without obstruction or gangrene (553.3, K44.9): A diaphragmatic hernia is a defect or hole in the diaphragm that allows the abdominal contents to move into the chest cavity, in this case without gastrointestinal obstruction or development of gangrene.

Esophagus

08/15: What is the category of disease for a leak post esophagectomy and does the same code apply to leak at the GE junction after bariatric surgery? **For esophagectomy cases, code V45.79, Acquired absence of the esophagus. For bariatric cases, code as other unlisted category of disease.**

Esophageal cancer, lower third (150.5, C15.5): This is the most common location of esophageal cancers in the United States and its incidence is steadily increasing. Lesions here are typically adenocarcinomas and are often treated by a combination of surgery, chemotherapy, and radiation therapy.

Esophagus cancer, middle third (150.4, C15.4): Refers to carcinomas arising in the mid-thoracic esophagus. These are usually squamous cell carcinomas.

Esophagus cancer, upper third (150.3, C15.3): These carcinomas are located within the esophagus located within the lower neck and upper chest.

Esophageal cancer, esophagogastric junction (cardia) (151.0, C16.0): Describes cancers that are located with the junction between the esophagus and stomach and involve a portion of the cardia or upper part of the stomach.

Esophageal tumor, benign (i.e., leiomyoma) (211.0, D13.0): This includes a variety of tumors that can exist within the esophagus, but do not spread to adjacent lymph nodes or other parts of the body. Patients can present with difficulty in swallowing. Surgical resection of the tumor alone often results in significant symptomatic improvement.

Esophageal stricture (530.3, K22.2): Refers to a process in which the lumen of the esophagus is narrowed by a non-malignant condition. This may result from a caustic substance that was ingested or from a hiatal hernia. Endoscopic dilation may improve symptoms of obstruction, but surgery is sometimes necessary.

Barrett's esophagus (530.85, K22.70): Is a condition where the normal lining of esophagus is altered due to the presence of reflux of acid from the stomach. Barrett's esophagitis increases the risk of developing esophageal adenocarcinoma. Various medical, endoscopic, and surgical approaches have been utilized to treat this condition.

Achalasia of the esophagus (530.0, K22.0): Describes a motility disorder of the esophagus that results in progressive difficulty in swallowing. The exact cause of achalasia is not known in most cases. Surgery aimed at dividing the outer muscular layer of the esophagus is usually very effective in addressing this problem.

Esophageal perforation (530.4, K22.3): Refers to a violation in the wall of the esophagus. This disruption leads to contamination of the mediastinum and often pleural space and can be fatal if not addressed properly. Perforation may be due to an esophageal cancer or secondary to an endoscopic procedure.

Zenker's diverticulum (530.6, K22.5): Describes an out pouching of the esophagus within the neck that occurs as a result of an abnormally functioning upper esophageal sphincter. This out pouching can entrap ingested food and lead to difficulty swallowing and aspiration. Treatment is directed at correction of the overactive muscle.

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Epiphrenic diverticulum (530.6, K22.5): This refers to an esophageal out pouching that develops in a location just above the level of the diaphragm. This usually occurs due to an overactive lower esophageal sphincter. Patients can experience difficulty in swallowing and the regurgitation of undigested food.

Gastroesophageal reflux (GERD) (530.81, K21.9): Is defined by the presence of symptoms or changes within the lining of the esophagus due to abnormal reflux of stomach contents. Symptoms include heartburn, chest pain, and difficulty swallowing.

Tracheoesophageal fistula (530.84, J86.0): Refers to an abnormal communication between the esophagus and airway. This can be a congenital lesion that is diagnosed shortly after birth. In adults, this abnormality is frequently due to esophageal cancer that locally invades the trachea. Lung contamination from the esophageal contents results in infectious complications.

Gastric outlet obstruction, pyloric stenosis, acquired (537.0, K31.1): This condition describes an abnormality within the outlet of the stomach to the small bowel. The cause of this condition is unknown. Obstruction of the stomach can result in excessive emesis and malnutrition. Pyloric obstruction can be seen after esophagectomy due to interruption of neural input to the stomach and pylorus. Endoscopic dilatation of the pylorus is often effective in dealing with this problem.

Acquired absence of esophagus (post esophagectomy) (V45.79, Z90.89): There are instances in which a patient will undergo an emergent esophagectomy without immediate reconstruction. Patients who are extremely ill due to esophageal perforation with prolonged thoracic contamination may need to return to the operating room at a later date to have continuity of their gastrointestinal tract restored. This diagnostic code describes such a patient.

Barrett's esophagus with High Grade Dysplasia (530.85, K22.711): High grade dysplasia (HGD) refers to precancerous changes in the cells of the esophagus. Gastroesophageal reflux disease (GERD) can be complicated by Barrett's esophagus (BE), a change in the normal esophageal cells to intestinal-like cells. BE cells can become abnormal or dysplastic. HGD significantly increases a person's risk for esophageal adenocarcinoma and in most cases will progress to cancer without any treatment. When someone is diagnosed with HGD, an intervention is advised including endoscopic resection, ablation or in some cases, esophagectomy is recommended for treatment.

Dyskinesia/spasm of esophagus (530.5, K22.4): This is a hypermotility disorder of the esophagus that is characterized by spastic non-peristaltic responses to swallowing; chest pain; and dysphagia. It may include disorders affecting the motor function of the upper esophageal sphincter; lower esophageal sphincter; the esophagus body, or a combination of these parts. The failure of the sphincters to maintain a tonic pressure may result in gastric reflux of food and acid into the esophagus (gastroesophageal reflux). Other disorders include hypermotility (spastic disorders) and markedly increased amplitude in contraction (nutcracker esophagus).

Esophagitis (530.1, K20.9): Esophagitis is a term used to describe inflammation, irritation or swelling of the esophagus. There are several types of esophagitis depending on the cause. Esophagitis can be caused by infection, irritation of the esophagus, or inflammation of the lining of the esophagus.

Foreign body esophagus (935.1, T18.108a): An esophageal foreign body is any object that does not belong in the esophagus that becomes lodged.

Malignant neoplasm stomach unspecified (151.9, C16.9): Cancerous tumor of the stomach, location and type not specified

Malignant neoplasm of the esophagus, unspecified (150.9, C15.9): Cancerous tumor of the esophagus, location and type not specified

Malignant other part esophagus, specified (150.8, C15.8): Cancer in part(s) of the esophagus not otherwise listed

Mallory Weiss tear (530.7, K22.6): Mallory-Weiss syndrome is characterized by upper gastrointestinal bleeding secondary to longitudinal mucosal lacerations (known as Mallory-Weiss tears) at the gastroesophageal junction or gastric cardia. This may result from persistent retching and vomiting or after any event that provokes a sudden rise in intragastric pressure or gastric prolapse into the esophagus.

Reflux esophagitis (530.11, K21.0): Reflux esophagitis is an esophageal mucosal inflammation that occurs secondary to retrograde flux of gastric contents into the esophagus. Clinically, this is referred to as gastroesophageal reflux disease (GERD). Typically, the reflux disease involves the distal 8-10 cm of the esophagus and the gastroesophageal junction. The disease is patchy in distribution.

Stricture and stenosis of esophagus (530.3, K22.2): **Esophageal stricture** or stenosis is narrowing or tightening of the internal diameter of the **esophagus** resulting in swallowing difficulties.

Ulcer esophagus with bleeding (530.21, K22.11): An esophageal ulcer is a defect in the lining of the esophagus. Esophageal ulcers can be caused by: GERD (gastroesophageal reflux disease), infection of the esophagus, irritants that damage the esophagus, excessive vomiting, chemotherapy or radiation. Bleeding may be acute or chronic.

Ulcer esophagus without bleeding (530.2, K22.10): An esophageal ulcer is an open sore in the lining of the esophagus. Esophageal ulcers can be caused by: GERD (gastroesophageal reflux disease), infection of the esophagus, irritants that damage the esophagus, excessive vomiting, chemotherapy or radiation.

Other digestive system complication (997.49, K91.XX): Any adverse event involving the digestive system not otherwise listed.

Other disease of the esophagus (530.89, K22.8): Other disease or condition of the esophagus not listed.

Trauma

Rib fracture (807.0, S22.39xa): Injury to the chest wall may result in rib fractures. Alone, these injuries are usually self-limited. However, rib fractures can cause a pneumothorax or hemothorax.

Sternal fracture (807.2, S22.20xa): These can be caused by blunt trauma to the chest and may herald more serious injuries. If significantly displaced, surgical fixation may be necessary.

Flail chest (807.4, S22.5xxa): Describes a condition when a segment of ribs becomes separated from the rest of the chest wall as a result of multiple rib fractures. Patients often experience respiratory compromise as a result of impaired breathing mechanics.

Tracheal injury (807.5, S12.8xxa): This life-threatening injury may be due to blunt or penetrating trauma to the neck or chest. Airway obstruction can result as a consequence. Surgical intervention is often required to address the airway injury.

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Traumatic pneumothorax (860.0, S27.0xxa): Collapse of a lung may occur as a result of either blunt or penetrating trauma to the chest. Chest tube placement is frequently needed to drain the pleural space.

Rib fractures, multiple (807.0, S22.49xa): Fractures involving more than one rib, typically caused by trauma

Cardiovascular

Pericarditis with effusion (420.9, I30.9): Inflammation of the pericardium may lead to accumulation of fluid within the pericardial sac. This fluid may cause cardiac dysfunction and require a percutaneous drainage procedure or creation of a pericardial window.

Pericardial effusion, malignant (198.89, C79.89): This occurs when malignant cancers spread to the lining of the pericardium and result in the buildup of fluid with the pericardial sac.

SVC syndrome (459.2, I87.1): The superior vena cava (SVC) can be compressed by tumors of the mediastinum, lung cancers, or mediastinal lymphadenopathy. Obstruction of the venous drainage of the arms, upper chest, and head often leads to severe swelling and engorged superficial veins. Therapy is aimed at restoring blood flow through this obstruction.

Abdominal aneurysm without rupture (441.4, I171.4): Dilatation, expansion or bulging of the abdominal aorta without leakage of blood into a false lumen or outside the vessel wall

Cardiac tamponade (423.3, I31.4): Collection of blood or fluid in the pericardial space which compresses the chamber walls of the heart preventing normal filling. This impairs cardiac output and requires immediate intervention.

Pericarditis, constrictive (432.2, I31.1): Constrictive pericarditis is long-term (chronic) inflammation of the sac-like covering of the heart (the pericardium) with thickening, scarring, and muscle tightening (contracture) leading to disruption of cardiac function.

Unspecified disease of the pericardium (423.9, I31.9): Pericardial condition or disease not otherwise listed.

Miscellaneous

Hyperhidrosis, focal, axilla (705.21, L74.510): Hyperhidrosis is a condition characterized by excessive sweat production. It may involve the hands, axillae, or feet. Disruption of the sympathetic chain via thoracoscopic techniques has proven to be a potentially therapeutic solution to this problem.

Hyperhidrosis, focal, face (705.21, L74.511): Hyperhidrosis is a condition characterized by excessive sweat production. It may involve the hands, axillae, or feet. Disruption of the sympathetic chain via thoracoscopic techniques has proven to be a potentially therapeutic solution to this problem.

Hyperhidrosis, focal, palms (705.21, L74.512): Hyperhidrosis is a condition characterized by excessive sweat production. It may involve the hands, axillae, or feet. Disruption of the sympathetic chain via thoracoscopic techniques has proven to be a potentially therapeutic solution to this problem.

Lymphadenopathy (785.6, R59.9): This refers to enlargement of a lymph node or group of lymph nodes and may be due to benign processes or the presence of metastatic cancer.

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Abnormal radiologic finding (793.1, R91): This is a generalized explanation to describe atypical imaging results reported by a radiologist. Abnormal radiologic findings may initiate diagnostic procedures to determine the exact nature of the lesion identified.

Chronic airway obstruction not elsewhere classified (496, J44.9): Includes COPD and chronic nonspecific lung disease

Chylothorax (457.8, 189.8): Chylothorax refers to the presence of lymphatic fluid in the pleural space secondary to leakage from the thoracic duct or one of its main tributaries.

Disruption of internal operation, surgical wound (998.31, T81.32XA): Disruption or dehiscence of closure of: fascia, superficial or muscular, internal organ, muscle or muscle flap, ribs or rib cage, sternum or sternotomy, deep disruption or dehiscence of operation. Do not assign this code when the surgeon purposely leaves the wound open.

Hemorrhage complicating a procedure (998.11, multiple codes): Bleeding related to the surgical procedure. Do not assign hemorrhage as a complication of a procedure when the blood loss is from the disease itself, such as bleeding esophageal varices or angiodysplasia.

Hematoma complicating a procedure (998.12, multiple codes): A hematoma is a localized collection of blood outside the blood vessels, usually in liquid form within the tissue in this case resulting from a surgical procedure. The lay term is a bruise.

Hemoptysis unspecified (786.3, R04.2): Hemoptysis is the coughing up of blood or bloody sputum from the lungs or airway. It may be either self-limiting or recurrent. Hemoptysis can be caused by a range of disorders: infections (pneumonia; tuberculosis; aspergillosis; and parasitic diseases), tumors that erode blood vessel walls, cocaine abuse, trauma, vascular disorders, bronchitis, foreign bodies in airway, coagulopathies, or as a result of invasive procedures.

Other non-infectious disorders of lymphatic channels (457.8, I89.8): Condition of lymphatic system not related to infection or otherwise listed

Malignant neoplasm of connective tissue and other soft tissue of the thorax (171.4, C49.3): Cancerous tumor of connective tissue, cartilage, fascia, fat, muscle of the thorax, excluding breast neoplasms

Malignant poorly differentiated neuroendocrine carcinoma, any site (209.3, C74.1): Neuroendocrine tumors are a heterogeneous group of solid tumors that originate from neuroendocrine cells found throughout the body. The World Health Organization (WHO) classifies neuroendocrine tumors according to the malignant potential of these tumors into well-differentiated neuroendocrine tumors (also referred to as grade 1 and 2), and poorly-differentiated neuroendocrine tumor carcinoma. Poorly differentiated (grade 3) neuroendocrine tumors are extremely aggressive with poor prognosis.

Non-healing surgical wound (998.83, T81.89XA): A non-healing or chronic wound is defined as a wound that does not improve after four weeks or does not heal in eight weeks.

Other post- op infection (998.59, T81.4XXA): Infection acquired following surgery not otherwise listed

Persistent post-op fistula not otherwise classified (998.6, T81.83XA): A fistula is an abnormal connection between two epithelialized surfaces. Fistulas are usually caused by injury or surgery, but they can also result from an infection or inflammation

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Post-operative air leak (512.2, J95.812): A post-operative air leak may follow lung surgery and involves air escaping into the pleural space. This usually resolves with chest tube therapy. A prolonged air leak is an air leak that lasts beyond postoperative day 5.

Secondary malignant neoplasm of other specified sites (198.89, C79.89): A cancerous tumor in a site or organ separate from the primary tumor, does not include lymph node metastasis

Shortness of breath (786.05, R06.02): Shortness of breath (dyspnea) is a subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity. Distinct sensations include effort/work, chest tightness, and air hunger (the feeling of not enough oxygen). Dyspnea is a normal symptom of heavy exertion but becomes pathological if it occurs in unexpected situations. It may result from asthma, pneumonia, cardiac ischemia, interstitial lung disease, congestive heart failure, chronic obstructive pulmonary disease, or psychogenic causes such as panic disorder and anxiety.

Swelling, mass or lump in chest (786.6, R22.2): Abnormal lesion which may or may not be cancerous in the chest, does not include breast masses

Other unlisted category of disease: Diagnosis not in any of the listed categories

Seq. #: 1310

Long Name: Category Of Disease - Primary - Other Specify

Short Name: CategoryPrimOth

Definition: Indicate the PRIMARY diagnosis (category of disease) for which the procedure was performed.

Choose from the list when possible, if the category of disease is not listed, enter free text.

Intent/Clarification:

Capture unlisted primary diagnosis here after carefully reviewing choices above.

Seq. #: 1311

Long Name: Category Of Disease - Primary - Other ICD

Short Name: CategoryPrimOthICD

Definition: Enter ICD-9 or ICD-10 code, if known, of other primary diagnosis (category of disease) not listed.

Intent/Clarification:

The intent is to track category of disease codes for possible inclusion in next version and /or for internal analysis.

Seq. #: 1320

Long Name: Category Of Disease - Secondary

Short Name: CategorySecond

Definition: Indicate the SECONDARY diagnosis (category of disease) for which the procedure was performed.

Intent/Clarification:

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The Secondary diagnosis can be left blank. As long as a primary diagnosis is selected, the record will be accepted as complete without having a secondary indicated.

April 2016: The diagnosis for the patient is 'low inferior Lung Herniation.' There was chest wall reconstruction with Gore Tex mesh. What would be the diagnosis for this patient? **Abnormal Radiographic Finding**

June 2016: ICD 10 coding from my facility was C45.9 which I could not find on the list of provided ICD codes on the STS registry. The closest code was C38.4 but it did not really fit the diagnosis I had. **You should always code by the patient's diagnosis and procedure in the medical record; not by the ICD 10 and CPT codes by the Coders and Billers. For this example use the C38.4.**

Seq. #: 1330

Long Name: Category Of Disease - Secondary - Other Specify

Short Name: CategorySecondOth

Definition: Indicate the SECONDARY diagnosis (category of disease) for which the procedure was performed if not listed.

Intent/Clarification:

Capture unlisted secondary diagnosis here after carefully reviewing choices above.

Seq. #: 1331

Long Name: Category Of Disease - Secondary - Other ICD

Short Name: CategorySecondOthICD

Definition: Enter ICD-9 or ICD-10 code, if known, of secondary diagnosis (category of disease) not listed.

Intent/Clarification:

The intent is to track category of disease codes for possible inclusion in next version and /or for internal analysis.

Seq. #: 1340

Long Name: Date Of Surgery

Short Name: SurgDt

Definition: Indicate the date of surgery, which equals the date the patient enters the operating room.

Intent/Clarification:

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

Seq. #: 1350

Long Name: OR Entry Time

Short Name: OREntryT

Definition: Indicate to the nearest minute (using 24 hour clock) the time the patient enters the operating room.

Intent/Clarification:

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This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

January 2018: Pt has Ivor Lewis Esophagectomy procedure. Abd proportion is done by general surgeon from 1059 to 1505; thoracic surgeon from 1439 to 1849 for thoracic portion. General surgeon and thoracic surgeon both dictate their portion of the surgery, they both list the other as "co-surgeon". Is this included in the thoracic registry and do we use the thoracic surgeon times in and out as the 'procedure start/stop' times? **Yes, this is included and you use the whole time of the surgery, not just the GT surgeon's time.**

Seq. #: 1360

Long Name: OR Exit Time

Short Name: ORExitT

Definition: Indicate to the nearest minute (using 24 hour clock) the time the patient exits the operating room.

Intent/Clarification:

Even if the thoracic surgeon was present for only part of the case, code the entire time.

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

Seq. #: 1370

Long Name: Anesthesia Start Time

Short Name: AnesthStartT

Definition: Indicate the time of anesthesia induction.

Intent/Clarification:

This is the start of anesthetic management, placing lines, induction of anesthesia.

This time should be recorded on the anesthesia record.

Seq. #: 1380

Long Name: Anesthesia End Time

Short Name: AnesthEndT

Definition: Indicate the anesthesia end time documented in the medical record. The definition of anesthesia end time is when the anesthesiologist is no longer in personal attendance, that is, when the patient is safely placed under post-anesthesia supervision.

Intent/Clarification:

If the patient is extubated in the OR, indicate time of extubation otherwise use OR exit time as anesthesia end time.

August 2017: Your "definition" of 1380 contradicts your "intent" of 1380. The definitions states when anesthesia is no longer in attendance- usually a few minutes after they go to recovery (time documented in anesthesia record), but your intent states either extubation time or OR exit time (depending). I do not feel that either of these two accurately address the actual anesthesia end time. I guess my questions is, which of these 3 times would you like us to document? **Pick one of the times to use and use it consistently for coding. Indicate which time you are collecting in your source document.**

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Seq. #: 1390

Long Name: Procedure Start Time

Short Name: ProcStartT

Definition: Indicate the time the procedure started.

Intent/Clarification:

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

09/15: Procedure start and incision time are usually different, there is set up time between this time i.e., bronch and true incision. This conflicts for core measures and quality for antibiotic start time within hour of incision. As this has been discussed over and over, why can't we get a resolution that works for both?

NQF metric has its own definition. Unfortunately, no change planned at this time.

Seq. #: 1400

Long Name: Procedure End Time

Short Name: ProcEndT

Definition: Indicate the time the procedure ended.

Intent/Clarification:

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

Seq. #: 1410

Long Name: Multi-Day Operation

Short Name: MultiDay

Definition: Indicate whether the operation continued through midnight from one day to the next.

Intent/Clarification:

These are cases that continue through midnight.

May 2017: I had a patient that went into the OR on 3/15 at 1315 and anesthesia ended on 3/16 at 0004. Since we collect 3 different times on the DCF, which time frame is the data field referring to? Does it cover from when the patient enters and leaves the OR, surg start and stop times, or start /end of anesthesia? We need clarification in the Training Manual on what time frame "through midnight" covers. **This is looking at the operation (procedure) start and end times.**

Seq. #: 1420

Long Name: Status

Short Name: Status

Definition: Indicate the status that best describes the clinical status of the patient at the time of the primary surgical procedure.

1. Emergent: The surgical procedure must be performed within 24 hours of presentation.
2. Urgent: All of the following conditions are met:
 - a. Not elective status
 - b. Not emergent status.

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- c. Procedure required during same hospitalization in order to minimize chance of further clinical deterioration.
- 3. Elective: The patient has been stable in the days or weeks prior to the operation.
- 4. Palliative: procedure intended to provide comfort or relief of symptoms but not improve prognosis.

Intent/Clarification:

- Emergent status is coded for cases that require immediate intervention to prevent life threatening deterioration or death such as (but not limited to) esophageal perforation, severe hemorrhage or massive hemoptysis.
- Urgent status is coded for cases in which the operation must be performed before the patient can be discharged. Examples of urgent cases would include bronchopleural fistula, pneumothorax or decortication for empyema.
- Elective status is coded for cases that are performed during the same hospitalization for convenience would not be considered urgent. A medical patient with an incidental CXR finding who undergoes a diagnostic bronchoscopy or mediastinoscopy prior to discharge would have the procedure status coded as elective.
- Palliative – Treatment of malignant pleural effusions is often palliative and may include pleurodesis or placement of a chronic indwelling pleural drain (e.g. Pleurx catheter).

April 2016: For emergent status, does "Presentation" mean from the actual hospital, or 24 hrs of worsening symptoms? (i.e - Patient in hospital for 10 days s/p chest tube for pleural effusion. Patient's clinical picture suddenly declines including fever, leukocytosis, and worsening resp. distress. Patient taken to O.R. with 24 hrs. of deterioration. Should this be coded Emergent or Urgent? **Urgent since they waited 24 hours.**

Seq. #: 1430

Long Name: Reoperation

Short Name: Reop

Definition: Indicate whether the patient ever had a previous surgical procedure in the same cavity.

Intent/Clarification:

If a patient is returned to the operating room from the post anesthesia care unit after the initial surgery, before they are sent to a patient disposition location (ICU, Regular Floor Bed, etc.), is the second surgery considered a new operation, thus requiring a separate STS data collection forms? For this purpose, PACU would = intermediate care. Yes, fill out a 2nd form. A patient who had a CABG 5 years ago and presents for lung resection is a redo surgery.

09/15: What is the difference between Previous CT surgery (570) and Reoperation (1430)? What would be included in one and not the other? **Previous CT Surgery can be anywhere. Reoperation is the opening of the same incision.**

Captures risk.

January 2017: A patient comes in for an elective chest wall mass debridement. In the H&P the physician does inform the patient there could be the possibility of returning to the OR for additional debridement. Pt. was taken initially to the OR for chest wall mass debridement including muscle, bone and tissue with wound vac placement. Pt. did return to OR two more times for additional chest wash outs, tissue and bone debridement and wound vac change. Would this be counted as reoperation (I am not counting unexpected return to OR) for the additional two surgeries and would the status be elective since the initial surgery was elective. **Reoperation. Status would be urgent. This is a minor procedure. No second DCF would need to be completed, but "Other event with general anesthesia" would need to be coded on the index DCF.**

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May 2017: The definition for this field and the 09/15 question/answer seem to contradict each other. Is a reop considered a previous surgical procedure "in the same cavity" or the "opening of the same incision"? **Reoperation is considered surgery in the same cavity; access through the same incision is not a requirement.**

December 2017: Pt. underwent a VATS therapeutic wedge Resection. PMH: CABG via sternotomy. Do I check off 'yes' for Reoperation or only check off Prior Cardiothoracic Surgery. **This is a prior CT surgery and a re-operation.**

December 2017: Is a previous pleurx or thoracentesis counted as a Re-op under this definition? **No**

Seq. #: 1440

Long Name: Robotic Technology Assisted

Short Name: Robotic

Definition: Indicate whether the thoracic surgery was assisted by robotic technology.

Intent/Clarification:

Was robotic technology used for any part of the procedure?

January 2018: If there are co-surgeons on a procedure; one is in the thoracic surgeon, the other a general surgeon. The general surgeon uses robotic assistance for his portion of the procedure, the thoracic surgeon does not (Ivor Lewis procedure). Is robotic assisted collected since the thoracic surgeon did not use it, but the general surgeon did? **Yes. It was used during the procedure.**

Seq. #: 1441

Long Name: Unanticipated Surgical Approach Conversion

Short Name: UnanticConv

Definition: Indicate whether or not there was an unanticipated conversion of the surgical approach.

Intent/Clarification:

- VATS to open
- Robotic to VATS
- Robotic to open
- No

Remember to capture both the original and converted procedure codes.

Conversion in a procedure does not mean something always went wrong or was not appreciated preoperatively – many times it is done for better visibility, etc. This should not be viewed as a punitive data element.

Seq. #: 1442

Long Name: Unanticipated Surgical Approach Conversion Type

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Short Name: UnanticConvTy

Definition: Indicate the type of surgical approach conversion.

Intent/Clarification:

- Elective
 - Emergent
-

Seq. #: 1443

Long Name: Unanticipated Surgical Approach Conversion Reason

Short Name: UnanticConvRsn

Definition: Indicate the reason for the surgical approach conversion.

Intent/Clarification:

- Vascular- examples: pulmonary artery or vein injury, intercostal or other vascular injury
 - Anatomy- examples: adhesions, visualization issues, tumor size or location
 - Lymph nodes- examples: bulky, sticky or calcified lymph nodes
 - Technical- examples: staple misfire, equipment malfunction
-

Seq. #: 1450

Long Name: Intraoperative Packed Red Blood Cells

Short Name: IntraopPRBC

Definition: Indicate whether the patient received packed Red Blood Cells intraoperatively.

Intent/Clarification:

Intraoperatively is defined as any blood started inside of the OR.

For these Intraop Blood Product data fields the intent is to ONLY collect blood products that were transfused any time intraoperatively during THIS SURGERY.

Seq. #: 1460

Long Name: Intraoperative Packed Red Blood Cells - Number

Short Name: IntraopPRBCNum

Definition: Indicate the number of units of packed Red Blood Cells the patient received intraoperatively.

Intent/Clarification:

Do not include autologous, cell-saver, pump-residual or chest tube recirculated blood.

Seq. #: 1470

Long Name: ASA Classification

Short Name: ASA

Definition: Indicate the patient's American Society of Anesthesiologists Risk Scale for this surgical procedure. This information can be found in the operating room Anesthesia Record.

Intent/Clarification:

ASA Classification is determined by the anesthesiologist of the procedure based on the patient's condition. This is a standard risk scale for patients undergoing anesthesia.

- I = A normal healthy patient
- II = A patient with mild systemic disease
- III = A patient with severe systemic disease
- IV = A patient with severe systemic disease that is a constant threat to life
- V = A moribund patient who is not expected to survive without the operation
- VI = A declared brain-dead patient whose organs are being removed for donor purposes

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

April 2016: : If the American Society of Anesthesiologists Risk Scale is not in the O.R. Anesthesia record, can the abstractor formulate the risk after reading other notes (nursing, Physical therapy, etc.)? **No, it must be documented.**

6. Procedure

Seq. #: 1480

Long Name: Procedure

Short Name: Proc

Definition: Indicate the general thoracic procedures being performed during this operating room visit. Please note: A separate data collection form should be completed for each general thoracic operating room or endoscopy suite visit that involves a "major" procedure.

Intent/Clarification:

Check ALL the procedures that were performed. Complete Primary to indicate Primary procedure. The General Thoracic Surgery Database requires a separate data collection form for every OR / procedural area visit for major general thoracic procedure(s).

Note: Not all procedu

res will have an assigned procedure code. Placeholders were not assigned in this version to avoid confusion when/if codes become available prior to the next upgrade. Remember that billing codes do not always accurately capture the clinical procedure. Search by key word and check with the surgeon if clarification is necessary.

***** When trying to determine thoracotomy vs thoracoscopy, remember that if a rib spreader is used, the case is considered an open case (thoracotomy) regardless of the incision size.**

Minor (non-analyzed) procedures are highlighted on the DCF, all others are considered major.

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

09/15: Can procedure code 38746 – (Thoracic lymphadenectomy, regional, including mediastinal and peritracheal nodes) be used when the surgeon does the procedure VATS or is this only used when a thoracotomy is performed? **Yes**

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09/15: A patient comes in with bilateral upper lobe lung cancer and is scheduled to undergo a fiber optic bronchoscopy, cervical mediastinoscopy, and median sternotomy and was scheduled to have bilateral upper lobectomies but was unable to keep O2 sats up and remain stable. The patient did have the fiber optic bronchoscopy, cervical mediastinoscopy, and median sternotomy, but due to instability was switched to bilateral wedges instead of the bilateral upper lobectomies. Do I choose 32505 twice? I'm unable to do this due to the vendor I have and the primary procedure I picked is 32505. Is this correct or should I have chosen a different procedure? **32506, correct under laterality even though ipsilateral.**

09/15: Patient presented with a tissue confirmed diagnosis of NSCLC with a 1.4cm module in the RLL. The patient was not considered an ideal candidate for lobectomy due to co-morbidities and functional status but was considered appropriate for local resection and node sampling. The patient underwent bronchoscopy, R VATS, wedge resection of the RLL superior segment and resection of 1 level 7 node with no further adenopathy seen. The final path was T2a, NO, MO, adenocarcinoma, no visceral pleural invasion and no malignancy seen in the node. The tumor was larger than expected due to lepidic growth pattern and microscopic tumor was seen at the staple margin. Due to findings it was recommended the patient undergo completion lobectomy. The patient returned a month later for completion lobectomy. Final path report reads benign bronchial and vascular margins, benign lobar nodes with anthracotic node, and no residual neoplasm identified. Is the second procedure a lung resection for Ca? **Other COD, not lung CA**

09/15: Patient comes in with infected sternoclavicular joint (from arthritis), has right sternoclavicular joint abscess incision and debridement (soft tissue, joint space, and bone). Wound VAC placement. Would this be included in the Thoracic Registry? **Yes, minor – optional**

09/15: Case where VATS was converted to mini-thoracotomy in order to obtain bx. The frozen section came back as malignant spindle cell neoplasm with abundant cartilage formation so the mass was resected from the middle lobe without taking the whole lobe. The final pathology came back as benign cartilaginous hamartomatous lesion. Can 32505 be used even though it started out as diagnostic? Either way the surgeon would have resected the mass because of the patient's symptoms. Or should this be a non-analyzed code 32097? **Yes - 32505**

11/15 - Epithelioid malignant mesothelioma of the left hemithorax status post neoadjuvant chemotherapy

Name of Operation:

1. Flexible Bronchoscopy
2. Extended left posterolateral thoracotomy
3. Left extrapleural pneumonectomy
4. Partial pericardial resection and reconstruction
5. Left hemidiaphragm resection and reconstruction
6. Hyperthermic Intraoperative Chemotherapy
7. Excision of prior VATS port site
8. Chest wall resection x 2
9. Harvest of omental flap

Codes as follows:

3. 31622 flex branch
4. 32400 pneumonectomy-primary procedure
- 3 & 4. Other
5. 39560
- 6 & 7 no code
8. How much of a resection was done? Maybe chest wall resect
9. 49904

11/15 - I have a patient that came in for a diagnostic wedge however during the procedure she had a partial pleurectomy in hope of increasing adhesion between the ventral right upper lobe and the chest wall. Should it be counted as a major procedure because of the pleurectomy or a non analyzed procedure because it is a diagnostic wedge. The intent of the surgery was to obtain diagnosis. **Pleurectomy, thus major, and primary procedure. Wedge is a secondary. Pleurectomy is the biggest (trumps) procedure.**

11/15 - Due to the issue of use or non-use of a rib spreader for a VATS lobectomy, is there any mechanism for separating out VATS lobectomies using a rib spreader from major thoracotomies for lobectomy since both are captured with the
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same procedure code? With public reporting looming on the horizon, this could be misleading as to the use of minimally invasive procedures vs. major ones at a particular institution.

If rib spreader used, no longer VATS, it is considered open

12/15 Follow up to above: our concern is in how this will be portrayed in public reporting. A VATS lobectomy IS a minimally invasive procedure, even when a neonatal or pediatric rib spreader is used, but if it must be coded as open, will it be portrayed in public reporting as such? If a full-blown open thoracotomy for lobectomy and the procedure described above are reported the same way, this is misleading and is very concerning for my medical staff. **If a rib spreader is used, no matter the size, it automatically converts to thoracotomy.**

April 2016: A patient underwent a co-surgery, the primary part was liver transplant done by a non GTS participating surgeon, the minor part was diaphragmatic tumor resection with patch repair done by one of our GTS surgeons. My question is: (1) How shall I record this case in STS? Which procedure should I put as primary procedure? Liver Transplant is not GTS, so it's not in the procedure list. **The primary procedure is #5960, the Liver Transplant** (2) If I put diaphragmatic resection & repair as Primary Procedure, shall I choose NO to Post-Procedure events, since the complications were mainly related to liver transplant? **No, cannot choose which to include. Include all blood products also.**

April 2016: I have a pt. who had several major procedures during one admission. According to the definition "a separate data collection form should be completed for each general thoracic operating room or endoscopy suite visit that involves a "major" procedure." So if he's readmitted and has multiple complications how do I capture those without counting 'twice' the multiple readmissions and complications for one admission? **Put the post op events on the index procedure or put the events onto each procedure (assign to each subsequent procedure. Must be consistent no matter which way is chosen.**

April 2016: Please tell me which code to use for a VATS wedge that is performed because of an inadvertent lung tear during another procedure such as a VATS decortication? If it were a Thoracotomy I would use 32110 but there seems to be no match for the VATS procedure that corresponds. **32654.**

May 2016: How would the following surgery be coded? MD office coded as 32097, but did not do lung BX, only mediastinal mass. It was done thoracotomy approach. Mass was bx, not removed. "In the right chest, a small anterior thoracotomy incision was made in approximately the 5th to 6th intercostal space. Came down through the intercostal muscles and entered the chest. There was a large mass seen. I entered that. It had a fibrous covering and immediately upon entering that, I encountered about 500 mL of purulent material which I sucked out and sent for Gram stain and culture. The mass became more visible at that point in time, and I took successive biopsies of this and sent them for frozen and permanent section. I placed a 19-French Blake drain in the pericardial space and right chest, and then I closed with Vicryl and Monocryl sutures." **39010**

May 2016: A neurofibroma was removed from the esophagus but the surgeon didn't document if he repaired the esophagus or not. He did this via Thoracotomy approach (not sternotomy). Should I code this as Excision Esoophageal lesion with primary repair, thoracic approach (43101), OR Unlisted Procedure, esophagus (43499) - Removal of a Neurofibroma? **43101; had to repair the esophagus**

June 2016: Fifteen months ago pt had RLLobectomy via thoracotomy for lung cancer. New RUL lung primary lung cancer identified by bronchoscopy biopsy in Feb. 2016. Surgeon performed what he termed a 'completion pneumonectomy', removing both RUL and RML via a redo thoracotomy. Do I code this procedure as a pneumonectomy (32440) or a bilobectomy (32482)? **Use 32488 Completion Pneumonectomy.**

June 2016: For a thymectomy, what would be the most appropriate procedure code 60521 or 60522: "...and a J partial sternotomy through the 4th interspace was performed. An Aztec retractor was used and the fat tissue from the left to the right phrenic nerve covering the front of the pericardium and under the innominate vein surrounding the innominate vein, and the 2 tails up into the neck were removed and sent to pathology". **Since radical - 60521**

June 2016: From what I am told by our clinicians, often times when a patient has a lobectomy a thoracotomy is also done as part of the procedure. If this is the case, should both of these procedures be documented on the form? **Use 32480 for lobectomy with thoracotomy and use 32633 for VATS lobectomy. Don't use both codes.**

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June 2016: When a procedure is started as a Laparoscopy, then due to anatomy is converted to a Laparotomy do you code both or only the Laparotomy? You would code both. **Coding both provides justification and the "story" for why the patient was in the OR for an extended period. The primary procedure would be the laparotomy.**

July 2016: If our clinicians document a therapeutic wedge resection; however, they document no lung cancer on page 2, then would we need to change the procedure to a diagnostic procedure rather than a therapeutic procedure? I think what happens is the clinician fills out the form before the pathology comes back so they think the procedure is therapeutic but when the pathology comes back as no cancer does that mean the original procedure really was diagnostic? **The procedure is still Therapeutic, but there is no lung cancer.**

July 2016: Patient had lung nodules and the surgeon did a wedge resection via VATS. Do I code this Thoracoscopy, diagnostic; with biopsy of lung infiltrate [32607] (the example given here is a wedge) OR Thoracoscopy, diagnostic; with biopsy of lung nodule or mass [32608] (the example given is incisional). The diagnosis and operation incorporates both of these definitions. **Code as 32608**

July 2016: Regarding Wedge resection involving multiple lobes same lung, such as right lung upper, middle and lower lobes. What are the correct codes? We code a 32666 for the initial then 32667 for the additional. **Yes** Question; do we code 32667 once for each additional lobe. In the case above do we enter 32667 once for the middle lobe and once for the lower, two separate procedure lines? **There can only be one primary procedure. Use 32666 as the primary procedure, then 32667 for additional.**

July 2016: A patient had a minimally invasive 3-hole esophagectomy, a 32674 & 44015. In the same procedure a stent in the mid-portion of the esophagus had to be removed because it was making the procedure difficult. Do we capture the stent removal as a foreign body removal 43215? **No**

October 2016: If a patient has a rt. lower lobectomy and a therapeutic rt. upper wedge, do I use two separate collection forms, or can I put it all on one? If so, do I list both procedures as Primary? **Use one DCF if the histology is the same for both. In this case the staging would be T4. If histology is different, stage the largest tumor.**

November 2016: Our physicians are now doing a chemotherapy procedure after completing a pleurectomy. The process is called: "hyperthermic intrathoracic extracorporeal chemotherapy (HITEC)". Is there a way to capture in our database? **We will be adding this to the upgrade, but for now you can use Unlisted procedure of the lung - 32999; Chemotherapy in the OR - 96549 (CPT code). The pleurectomy would be your primary procedure.**

December 2016: We have a patient who had a left robotic assisted internal mammary lymph node biopsy. What would be the best procedure code to choose for that? I was looking at both procedures 32606 and 32674 but was not sure if either were correct. **32606 is the better choice.**

December 2016: The surgeons did an Ivor Lewis esophagectomy via laparoscopic abdominal incision and thoracotomy (not thoracoscopy). Do I select 43117 or minimally invasive esophagectomy, Ivor Lewis Approach? **Use the regular Ivor-Lewis code, 43117**

December 2016: Patient with "septic arthritis" of the sternoclavicular joint and infected anterior chest wall not a trauma per se patient developed stretch pain after lifting a heavy object procedures performed: 1) resection partial right clavicle 2) resection of a portion of the manubrium of the sternum 3) debridement of pectoralis muscle on the anterior chest wall 4) and placement of wound vac. The only code I am sure of is 97605 for the wound vac, I was thinking 21630 for resection but not sure about that and don't have anything for the resected clavicle or debridement of muscle. **This is not a radial resection; the resection partial right clavicle is 23120, use unlisted chest wall code.**

December 2016: Our pt had necrotizing pneumonia with resp failure and inanition. He needed a tracheostomy, bronch, EGD, PEG and Partial isthmus thyroidectomy. The initial incision was a cutdown, curvilinear above the sternal notch. When they reached the area of the upper trachea, there was a wide and low riding isthmus from the thyroid. They did a partial thyroidectomy of the isthmus.

Would this not be coded as a major procedure since the Thyroidectomy was done to get access to the trach?

Transthoracic thyroidectomy 60270; Transthoracic thyroidectomy (60270): Removing part or all of the thyroid gland via a thoracic incision. Adding an upper sternal split to facilitate resection of a substernal goiter would not be in this

definition. Removing part or all of the thyroid gland by VATS would also be a transthoracic thyroidectomy. **This would be neck surgery, not a thyroidectomy. The primary procedure would be the trach. This is a non-analyzed case.**

December 2016: What code are we supposed to use for esophageal mucosal resection? I have been using 43239 because it seemed to fit best however on a recent user group call I heard someone say we shouldn't use that code.

43211, Esoph with EMR and 43254, EGD with EMR can be used. 43239 is a biopsy code. If a code is not listed in the procedures document 'unlisted procedure – Esophagus.

January 2017: Laparoscopic closure of gastrocutaneous fistula operation. Post op diagnosis gastrocutaneous fistula after gastrostomy tube placement. Would this be a major procedure and if so what code would I use? **Minor procedure.**

Unlisted Code

January 2017: Pre op dx: left paraesophageal and mediastinal abscess. Procedure left neck exploration and incision and drainage of abscess. Esophagogastrosomy with dobbhoff feeding tube placement. Is this major and what code would I use? **Minor Procedure**

January 2017: procedure is laparoscopic repair of paraesophageal hernia WITHOUT fundoplication, instead surgeon is doing a LINX procedure. I am entering the LINX as "unlisted laparoscopy esophagus (43289)" I am not sure how to code the repair of the paraesophageal hernia the surgeon is saying 43281 but since there is no fundoplication and these are done outpatient I am not convinced it should be considered equivalent procedures. Please advise how to code laparoscopy repair of paraesophageal hernia without fundoplication. **Ask surgeon if LINX procedure included paraesophageal hernia repair or just the band. If just the band use code 43289, Laparoscopic esophageal procedure, unlisted.**

January 2017: For the patients undergoing heart-lung transplants, do we still include them in the STS-Thoracic database? **Just the lung transplants. There is a separate heart transplant database. It is up to each site where to capture heart-lung transplants. Who did the surgery? Is the physician an STS National Database physician? If two surgeons perform the transplant and only one of them is in the registry the transplant should be captured in that database. If both surgeons are in the registry, it is up to the organization/physicians. The site should be consistent in how these are captured.**

February 2017: We have a patient that was admitted for an elective esophagectomy. During the procedure he suffered loss of blood pressure which resulted from an aortic tear (esophagus was fused to aorta) and expired. The esophagectomy was not completed and path was never submitted. Is this entered as an esophagectomy? If so, how is pathology entered? **This should be entered as an esophagectomy with a complication of intraoperative mortality. Path should be left blank because we don't know.**

February 2017: There was a debate on how to code these 2 cases:

- 1) thoracotomy approach- right upper lobectomy with chest wall resection.
- 2) thoracotomy approach- left chest wall resection en bloc with left pneumonectomy

The debate was how to code the chest wall resection portion. Some said to use 19260 or 19271 another person said to use 32503 or 32504 to capture the resection. The debate is because this isn't a chest wall tumor or a pancoast tumor (it is a lung tumor invading the chest wall). **Primary procedure is the lung resection but it includes chest wall – there are codes for them but I don't know them. I also think that we exclude these cases from our modeling results.**

February 2017: We are abstracting a case where the surgeon performed a VATS wedge resection with a mediastinal lymphadenectomy. The path resulted in a granuloma with benign nodes. Do we code this as a non-analyzed procedure based on the (diagnostic) wedge? Or would you consider this a major procedure since they resected several nodes? **We suggest asking the Surgeon if the VATS/wedge resection was performed for diagnostic purposes or if it was therapeutic. If it was a diagnostic procedure then code as a minor procedure for the VATS with wedge resection. If it was a therapeutic procedure then it would be considered a major procedure for the mediastinal lymphadenectomy.**

March 2017: In the following scenario, would I use CPT code 32656 (thoracoscopy, surgical, w parietal pleurectomy or 32310 (pleurectomy, parietal) and why? "Patient is a 79 y.o. with known right lower lobe adenocarcinoma. Pt. was found to have adhesions to the chest wall which were in the area of cancer. The cancer seemed to involve at least the visceral pleura. The parietal pleura in that area was resected." **CPT code 32656 (thoracoscopy, surgical, w parietal**

pleurectomy) uses ports with a scope (VATS). CPT code 32310 (pleurectomy, parietal) is an open procedure using a thoracotomy. Determine the code based on the surgical approach described in the operative note. Please note per the training manual: introduction of a rib spreader during VATS makes the procedure an open procedure.

May 2017: This patient initially had a diag bronch, a VATS conv to open thoracotomy, a decortication, chest tube insertion, and a creation of a pleural flap to close a diaphragmatic fistula. Here is my question. The patient was taken back to OR 6 days later for abnormal radiologic finding:

CXR shows moderate pleural effusion with poor inflation of L lung. This was re-demonstrated on CT chest. The pt had a dx bronch, the thoracotomy site was reopened and only scant blood with a small amount of loculated fluid was found. Extensive irrigation with saline and antibiotic solution with removal of minimal old blood and loculated fluid. Should I fill out another DCF? **Yes** Is it appropriate to use abnormal rad findings as diagnosis or should I use pleural effusion? **Pleural effusion is diagnosis – more pertinent to the procedure performed** Also, please verify that I am using correct procedure codes of diag bronch (31622), thoracotomy major, for post op complications (32120), and unlisted proc of lung (32999) for wash out irrigation. **Code procedures: 31622 (bronchoscopy) and 32120 major thoracotomy for post-op complication. Do not code 32999.**

August 2017: If a patient goes to the OR for joint procedures... for example, a decortication by Thoracic surgeon AND a splenectomy (or other non-thoracic procedure) by a non-thoracic surgeon. Is the non-thoracic procedure included on the GTSD DCF? If so, how? Also, if so, isn't it misleading because there is no way to indicate that it wasn't the thoracic surgeon who performed all of the procedures. If it is not included on the DCF, it is also seems misleading because the op times are often out of proportion for what would be normal. **No, you do not include the other procedure. Yes, the times will be off for this case. All complications arising from this case must be included (even those related to the joint procedure).**

January 2018: Operation was a right thoracotomy with resection of a right PARathyroid intrathoracic adenoma. What code do I use? Procedure code 60270 is a thyroidectomy (not Parathyroid). **Code mediastinal mass resection.**

Trachea, Bronchi, Larynx

Tracheoplasty, cervical (31750): A rarely performed operation for a deformed trachea to restore its normal shape. Tracheoplasty is usually done for tracheomalacia limited to the cervical region.

Tracheoplasty, intrathoracic (31760): An operation performed for a deformed and softened trachea via a right thoracotomy. The posterior membranous wall of the trachea is plicated and fixed to a piece of mesh to restore the normal "C" shaped trachea.

Carinal reconstruction (31766): A complex airway reconstruction for a disease process that involves the carina (the bifurcation of the trachea into the two main bronchi). Usually done for tracheal tumors but (rarely)can be done for benign diagnoses as well. The carina is resected and then the three airway ends (the trachea and the two main bronchi) are reconstructed. This operation can be performed via a right thoracotomy, a sternotomy or a clamshell incision. Institution of cardiopulmonary bypass may be necessary during this operation.

Bronchoplasty, excision stenosis and anastomosis (31775): An operation for a localized stenosis (stricture) of one of the major bronchi. Usually done for a benign process such as histoplasmosis or as a result of a stricture after a sleeve lobectomy. Usually done via a thoracotomy. The stenotic bronchus is resected and the two bronchial ends are then anastomosed together.

Excision tracheal stenosis and anastomosis, cervical (31780): The operation performed for both benign obstructive lesions of the cervical tracheal. The involved trachea is resected and the two normal ends of the trachea are anastomosed together. This code would be used for those procedures conducted via a neck incision.

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Excision tracheal stenosis and anastomosis, cervicothoracic (31781): Another approach to address benign tracheal pathology where, due to disease location, a partial or complete sternotomy is performed in addition to the neck incision.

Excision of tracheal tumor or carcinoma, cervical (31785): Resection of a tracheal tumor via a cervical approach. Involves resecting the section of trachea with the tumor and anastomosing the two divided ends of the trachea together.

Excision of tracheal tumor or carcinoma, thoracic (31786): Resection of an intrathoracic tracheal tumor. Usually done via a complete sternotomy or a right thoracotomy. May include a limited cervical incision as well. Involves resecting the section of trachea with the tumor and anastomosing the two divided ends of the trachea together.

Suture of tracheal wound or injury, cervical (31800): Partial disruption of the tracheal wall often requires direct surgical repair. When this injury is corrected in the neck, this code should be used.

Suture of tracheal wound or injury, intrathoracic (31805): Describes direct surgical repair of the intrathoracic trachea, usually performed via a right thoracotomy.

Tracheostomy, planned (31600): A planned surgical procedure to create a tracheostomy, an opening through the neck into the trachea (windpipe), a tube is usually placed through this opening to provide an airway and to remove secretions from the lungs.

Tracheostomy replacement (tube change) prior to est. of fistula tract (31502): Trach placement involves a fistula tract from the skin of the anterior neck to the trachea. If the trach tube must be changed before the tract is fully established (usually after about seven days), report 31502.

Tracheostomy revision simple, without flap (31613): Surgical procedure to revise an existing tracheostoma, often enlargement

Bronchogenic cyst removal: Bronchogenic cysts are abnormal growths of tissue that are congenital (present from birth). They typically have thin walls and are filled with fluid or mucous. Most bronchogenic cysts are found in the mediastinum. Thoracotomy, VATs or robotic approaches may be used for removal.

Bronchial laceration suture: Surgical repair of laceration of the bronchus using suture

Bronchial sleeve resection: A lung resection in which a section of the proximal bronchus is removed along with diseased lung tissue after which the proximal and distal ends of the bronchus are anastomosed

Bronchoplasty, graft repair (31770): Surgical repair of a defect in the bronchus using tissue or synthetic graft material

Bronchopleural fistula closure (32906): Bronchopleural fistula (BPF) is a communication in the form of a sinus tract between the pleural space and the bronchial tree. BPF carries a high morbidity and mortality and is associated with prolonged hospital stay and thus high resource consumption. Surgical closure may be attempted, although cavernostomy/Eloesser flap may be required.

Partial laryngectomy (31370): Removal of part of the larynx, usually done in conjunction with a tracheal resection and reconstruction

Rigid stent removal: Stents in the trachea or bronchus are often considered permanent but can be removed surgically or via bronchoscopy.

Tracheostomy revision complex, with flap (31614): Revision of the tracheostoma using a tissue flap or pedicle

Tracheostomy mediastinal: An anterior mediastinal tracheostomy involves the construction of a tracheostomy stoma on the anterior chest wall using the intrathoracic trachea when there is insufficient length to reanastomose the remaining trachea or to bring the trachea out of the superior mediastinum for a standard suprasternal stoma. The procedure involves laryngectomy (if not done previously) and resection of the upper sternum, the medial third of the clavicles, and the first and usually second ribs. The primary indications for this operation are mostly limited to advanced cervicothoracic neoplasms in the superior mediastinum, although it is done occasionally for benign disease.

Bronchoscopy

Tracheobronchoscopy through established tracheostomy incision (31615): Airway evaluation with a bronchoscope that is performed through a previously placed tracheostomy tube.

Endobronchial ultrasound (EBUS) during bronchoscopic diagnostic or therapeutic intervention(s) (31620): Describes usage of an endoscopic ultrasound probe to evaluate structures outside of the tracheobronchial tree.

Bronchoscopy, diagnostic, with or without cell washing (31622): Describes endoscopic evaluation of the tracheobronchial tree with or without washing the airway for cytological or microbiologic evaluation. Performed as a matter of routine during a majority of thoracic surgery.

Bronchoscopy, with brushing or protected brushings (31623): Describes endoscopic evaluation of the tracheobronchial tree with the use of a cytological brush to determine the etiology of an endobronchial abnormality.

Bronchoscopy, with bronchial alveolar lavage (BAL) (31624): Describes endoscopic evaluation of the tracheobronchial tree with a thorough lavage of a bronchial tree.

Bronchoscopy, with bronchial or endobronchial biopsy(s), single or multiple sites (31625): Describes endoscopic evaluation of the tracheobronchial tree with forceps biopsy of a directly visualized abnormality. This is done through the working channel of the bronchoscope.

Bronchoscopy, with placement of fiducial markers (31626): Fiducial markers are metallic markers that are implanted in and/or around a soft tissue tumor, or within the bony spine, to act as a radiologic landmark, to define the target lesion's position with millimeter precision. These are placed during bronchoscopy in preparation for radiation therapy.

Bronchoscopy, navigational (31627): Navigational bronchoscopy is used to reach tumors located in the periphery of the lungs, where smaller bronchi are not wide enough to allow passage of a traditional bronchoscope. Navigational bronchoscopy can be used to find lung tumors, take biopsies and administer treatment.

Bronchoscopy, with transbronchial lung biopsy(s), single lobe (31628): Describes endoscopic evaluation of the tracheobronchial tree with forceps biopsy of a lesion outside of the bronchial tree. Often performed with x-ray guidance during the procedure.

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Bronchoscopy, with transbronchial needle aspiration biopsy(s) (31629): Describes endoscopic evaluation of the tracheobronchial tree with a needle biopsy of a lesion outside of the bronchial tree. Often performed with x-ray guidance during the procedure.

Bronchoscopy, with tracheal/bronchial dilation or closed reduction of fracture (31630): Describes endoscopic evaluation of the tracheobronchial tree with dilatation of an airway stenosis.

Bronchoscopy, with placement of tracheal stent(s) (includes tracheal/bronchial dilation as required) (31631): Describes endoscopic evaluation of the tracheobronchial tree with dilatation of a stenotic tracheal lesion with placement of a tracheal stent.

Bronchoscopy, with transbronchial lung biopsy(s), each additional lobe (31632): Code use for each additional lobe in which a transbronchial biopsy is performed.

Bronchoscopy, with transbronchial needle aspiration biopsy(s), each additional lobe (31633): Code use for each additional lobe in which a transbronchial needle aspiration biopsy is performed.

Bronchoscopy, with removal of foreign body (31635): Describes endoscopic evaluation of the tracheobronchial tree with removal of a foreign body within the airway.

Bronchoscopy, with placement of bronchial stent(s) (includes tracheal/bronchial dilation as required), initial bronchus (31636): Describes endoscopic evaluation of the tracheobronchial tree with dilatation of a stenotic bronchial lesion with placement of a bronchial stent.

Bronchoscopy, each additional major bronchus stented (31637): Code use for each additional major bronchus in which a stent is placed.

Bronchoscopy, with revision of tracheal or bronchial stent inserted at previous session (31638): Describes endoscopic evaluation of the tracheobronchial tree with revision of a previously placed airway stent.

Bronchoscopy, with excision of tumor (31640): Describes endoscopic evaluation of the tracheobronchial tree with destruction of an airway tumor by direct excision either by forceps or with rigid bronchoscopic techniques.

Bronchoscopy, with destruction of tumor or relief of stenosis by any method other than excision (e.g., laser therapy) (31641): Describes endoscopic evaluation of the tracheobronchial tree with laser or photodynamic therapy treatment of an airway obstruction.

Bronchoscopy, with placement of catheter(s) for intracavitary radioelement application (31643): Describes endoscopic evaluation of the tracheobronchial tree with placement of a catheter to deliver endobronchial radiation therapy (brachytherapy).

Bronchoscopy, with therapeutic aspiration of tracheobronchial tree, initial (e.g., drainage of lung abscess) (31645): Describes endoscopic evaluation of the tracheobronchial tree with the establishment of drainage of a lung abscess within the bronchia tree.

Bronchoscopy, with therapeutic aspiration of tracheobronchial tree, subsequent (31646): Describes endoscopic evaluation of the tracheobronchial tree for any other repeat lung abscess drainage procedures on the same patient.

Pleural Space & Lung

Thoracostomy; with rib resection for empyema (32035): This refers to opening the chest and removal of one or more ribs to drain an infected, intrapleural infection. It may be performed either when the lung is fixed to the chest wall or over a chest tube that is left in until pleural space stabilization has occurred. The goal is progressive obliteration of the space over time with granulation tissue formation.

Thoracostomy; with open flap drainage for empyema (32036): This describes the classic Eloesser flap, an open drainage of intrapleural infection with removal of several ribs and sewing of the skin and subcutaneous tissue to the endothoracic fascia in order to maintain long-term patency of the defect. This is typically performed in the setting of any large infected space, particularly following pneumonectomy.

Thoracotomy biopsy of pleura (i.e., open lung biopsy) (32098): Synonymous with open lung biopsy, this is usually performed via a small anterior incision with the patient in the prone position. A small representative portion of lung is removed by wedge resection.

Thoracotomy, with exploration (32100): Opening of the chest with rib spreading for the purposes of performing biopsies of either the lung or pleura. This is usually performed in anticipation of more extensive resection.

Thoracotomy, major; with control of traumatic hemorrhage and/or repair of lung tear (32110): Refers to opening the chest with rib spreading following traumatic injury in order to ascertain any sites of vascular injury for repair either by primary repair or resection. Concomitant parenchymal lung injury may also be sutured or resected either by wedge or larger anatomic resection.

Thoracotomy, major; for postoperative complications (32120): Describes opening the chest in order to address complications from a previous surgical procedure. It can be performed any time after the initial procedure depending on the nature of the complication (hemorrhage, infection, fistula, chyle leak, etc.)

*09/15: Patient came in 9/4 for a right posterolateral thoracotomy with esophagogastrectomy. They were discharged on 9/9. They were then readmitted 9/11 for a suspected anastomotic leak and underwent a redo right thoracotomy, was out of right chest and repair of anastomotic leak with biologic mesh and omental reinforcement. The clinicians filled out a 2nd DCF for the readmission procedure and marked "other" as the procedure and wrote in the procedure. Is that the appropriate way to document this case. I see there is not CPT code for the redo right thoracotomy. I also see that other is not listed as a minor procedure so it looks like we should be capturing this second case....what is the best way? **Put in Thoracotomy, major for post op complication, 32120 OR suture of esophagus wound or injury; trans thoracic or transabdominal approach, 43415. Also, put as category of disease – Acquired absence of esophagus, V45.79***

Thoracotomy, major; with cyst(s) removal, with or without a pleural procedure (32140): Open removal of a congenital cyst, either bronchogenic, esophageal or pericardial with or without pleural flap reinforcement.

Thoracotomy, major; with excision-plication of bullae, with or without any pleural procedure (32141): Open removal of bullae, air spaces whose walls are made up of destroyed lung, in order to re-establish ventilation and perfusion of the adjacent, normal, compressed lung. The bulla is opened, and the fibrous area resected using the walls to reinforce the staple line.

Thoracotomy, major; with removal of intrapleural foreign body or hematoma (32150): Refers to opening the chest for evacuation of a large hematoma or removal of a retained foreign body, either traumatic or iatrogenic.

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Thoracotomy with cardiac massage (32160): This is a left-sided, anterolateral, rib-spreading incision usually performed in the setting of a traumatic arrest. The pericardial is opened for manual cardiac massage and placement of a large-bore right atrial catheter for rapid infusion. The descending aorta may also be clamped from the left chest incision.

Pleural scarification for repeat pneumothorax (32215): This describes mechanical abrasion of the parietal pleura in order to induce pleurodesis (adhesion formation and obliteration of the pleural space). It is most commonly performed for recurrent, spontaneous pneumothorax, but may be done for other indications, such as recurrent pleural effusion or for treatment of chylothorax. It may be done via video-assisted thoracic surgery (VATS) or thoracotomy.

Decortication, pulmonary-total (32220): Refers to removal of fibrous scar tissue from the entire surface of the lung, typically in the setting of a chronic empyema and trapped lung. The goal is to expand the entire lung. This is typically performed through a thoracotomy.

Decortication, pulmonary, partial (32225): Removal of fibrous scar tissue from a localized portion of the lung. This is usually done in the setting of less extensive empyema, chronic pleural effusion or organized hemothorax. This may be done via VATS or thoracotomy.

Pleurectomy, parietal (32310): Describes removal of the parietal pleura, usually through a thoracotomy. It is most commonly performed for malignant pleural mesothelioma, although it is still occasionally performed as prophylaxis for malignant pleural effusion in the setting of incidental metastatic pleural disease.

Decortication and parietal pleurectomy (32320): This refers to removal of the entire parietal and visceral pleural surfaces most commonly for malignant pleural mesothelioma. It is performed via thoracotomy.

Removal of lung, total pneumonectomy (32440): Resection of the entire lung most commonly for primary lung cancer, although there are other indications such as metastatic or inflammatory disease. Intrapericardial pneumonectomy describes when the major blood vessels are isolated and divided within the pericardial sac. The procedures may be performed by VATS, thoracotomy or sternotomy.

Removal of lung, sleeve (carinal) pneumonectomy (32442): Pneumonectomy with removal of both main stem bronchi with reconstruction of the remaining bronchus to the trachea by sutured anastomosis. This is usually done for primary airway tumors, such as adenoid cystic or mucoepidermoid carcinomas. Right-sided resection is performed through a right thoracotomy, and left-sided resection requires bilateral thoracotomies. Less commonly, a sternotomy may give access for either side.

Removal of lung, total pneumonectomy; extrapleural (32445): This describes pneumonectomy coupled with resection of the visceral and parietal pleura. It is typically done for malignant pleural mesothelioma and occasionally for other cancers with isolated pleural metastases (lung, thymoma). If performed for neoplastic disease, it may involve diaphragm and/or pericardial resection and reconstruction using prosthetic material. The procedure is usually performed via thoracotomy or sternotomy.

Removal of lung, single lobe (lobectomy) (32480): Resection of a lobe of the lung most commonly for primary lung cancer. It can be performed by VATS, thoracotomy or sternotomy.

09/15: If the procedure starts as a lobectomy, but the margins come back positive and procedure progresses to pneumonectomy would you code both the Lobectomy and the pneumonectomy or just the pneumonectomy?

Both, but primary is pneumonectomy. Gives a better picture why the patient is in the OR so long.

09/15: for the average thoracotomy with lobectomy do I include 32100 'thoracotomy with exploration' or just 'removal of lung, single lobe'? **Just 'removal of lung, single lobe'**

Removal of lung, two lobes (bilobectomy) (32482): Removal of either the right upper and middle or the middle and lower lobes of the lung typically for lung cancer involving both adjacent lobes. It may be performed by VATS, thoracotomy or sternotomy.

Removal of lung, single segment (segmentectomy) (32484): Describes resection of an anatomic segment within a lobe. It is performed for lesions occupying a segment as defined by a separate pulmonary artery, bronchus and segmental venous drainage that follows the fissures between segments. The indications also include benign tumors, metastatic and primary lung cancers. It can be performed by VATS, thoracotomy or sternotomy.

Removal of lung, sleeve lobectomy (32486): Defined as a lobectomy with removal of additional airway supplying a neighboring segment or lobe of the lung or the entire lung and reconstruction of the airway by direct suturing. It is usually performed when a tumor or disease process is involving only a portion of the adjacent airway while sparing the lung parenchyma, as in squamous cell lung cancer and primary airway tumors such as carcinoids or mucoepidermoid carcinoma. This is typically performed via thoracotomy.

Removal of lung, completion pneumonectomy (32488): Resection of the entire lung in a re-operative setting following a previous lung resection, usually a lobectomy. It is performed most commonly for primary lung cancer, although there are other indications such as metastatic or inflammatory disease.

Removal of lung, excision-plication of emphysematous lung(s) for lung volume reduction (LVRS) (32491): Resection of the most severely emphysematous lung in patients with heterogenous disease distribution and evidence of severe airflow obstruction and hyperinflation of the lungs despite optimal medical management. This is usually performed bilaterally by VATS or sternotomy for upper lobe predominant disease.

Resection and repair of portion of bronchus (bronchoplasty) when performed at time of lobectomy or segmentectomy (32501): This refers to removal of a portion of the airway beyond the anatomic confines of either a lobe or segment during anatomic resection followed by primary repair of the airway in order to preserve lung tissue unaffected by the disease process. Bronchoplasty is typically performed through a thoracotomy.

Resection of apical lung tumor (e.g. Pancoast tumor), including chest wall resection, without chest wall reconstruction (32503): Describes resection of a primary lung tumor, usually NSCLC, located in the superior sulcus (anterior or posterior) with simultaneous removal of the involved ribs without prosthetic reconstruction. The lung resection is usually a lobectomy, but may also be a segmentectomy or wedge resection depending on the size of the lesion and respiratory capacity of the patient.

Resection of apical lung tumor (e.g. Pancoast tumor), including chest wall resection, with chest wall reconstruction (32504): Describes resection of a primary lung tumor, usually NSCLC, located in the superior sulcus (anterior or posterior) with simultaneous removal of the involved ribs with prosthetic reconstruction. The lung resection is usually a lobectomy, but may also be a segmentectomy or wedge resection depending on the size of the lesion and respiratory capacity of the patient.

Thoracoscopy, diagnostic lungs and pleural space, without biopsy (32601): Examination of pleural space and/or lungs with a thoracoscope through a small incision between the ribs. No biopsy specimens are obtained.

Thoracoscopy, surgical; with pleurodesis (e.g., mechanical or chemical) (32650): This is a therapeutic procedure to promote the sealing (desis) of the lungs and chest wall (pleurodesis). It is performed through small incisions using a thoracoscope and an abrasive or irritating agent. Common abrasives are Bovie scratch pads or gauze pads. Common irritants are sterile talc or doxycycline. Bleomycin could be used but would be rare for a surgical procedure. A chest tube is left to evacuate any residual air or fluid. This is usually done under a general anesthetic. It is done for either air or fluid problems within the pleural space.

Thoracoscopy, surgical; with partial pulmonary decortication (32651): This is therapeutic procedure to re-expand a part of one lung done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments to remove a fibrous peel from the surface of the lung. This peel initially restricts the expansion of lung. Its removal allows the lung to re-expand and fill the pleural space. One or more chest tubes are placed at the end of the procedure to drain fluid and air. Common indications for this procedure are chronic pleural effusions, parapneumonic effusions and malignant effusions.

Thoracoscopy, surgical; with total pulmonary decortication (32652): This is therapeutic procedure to re-expand a complete lung on one side done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments to remove a fibrous peel from the surface of the lung. This peel initially restricts the expansion of lung. Its removal allows the lung to re-expand and fill the pleural space. One or more chest tubes are placed at the end of the procedure to drain fluid and air. Common reasons to do this procedure are chronic pleural effusions, parapneumonic effusions and malignant effusions. The complete lung needs to be freed.

Thoracoscopy, surgical; with removal of intrapleural foreign body or fibrin deposit (32653): This is therapeutic procedure to re-expand the lung done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments to remove a gelatinous or fibrinous deposit from within the pleural space. The surface of the lung is not or only slightly involved and can spontaneously expand once the deposit is removed from the pleural space. This deposit initially restricts the expansion of lung. Its removal allows the lung to re-expand and fill the pleural space. One or more chest tubes are placed at the end of the procedure to drain fluid and air. Common reasons to do this procedure are chronic pleural effusions, parapneumonic effusions and malignant effusions.

09/15: Surgery 1 is VATS pleural biopsy and Talc pleurodesis. Postop hemorrhage with return to OR for VATS evacuation of hematoma. Would the procedure be collected as 32654 Evacuation of hematoma- since this is a complication? Is this old blood or new blood? If not active bleeding, the unexpected, other: 32653-Thoracoscopy, surgical; with removal of intrapleural foreign body or fibrin deposit.

9/15: For a patient with a diagnosis of Hemothorax and a procedure listed as 1. Flexible bronchoscopy, left video-assisted thoracoscopy, evacuation of hemothorax, intercostal nerve block. 2. Right video-assisted thoracoscopy, evacuation of hemothorax, and intercostal nerve block, position of chest tubes. Should that be collected as a Major procedure?

Minor: 32653-Thoracoscopy, surgical; with removal of intrapleural foreign body or fibrin deposit.

Thoracoscopy, surgical; with control of traumatic hemorrhage (32654): This is therapeutic procedure done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments to control bleeding from within the thoracic cavity. This typically involves clipping, suturing, ligating or cauterizing the lung or chest wall.

Thoracoscopy, surgical; with excision-plication of bullae, including any pleural procedure (32655): This is therapeutic procedure to remove a bullae or blister from the surface of the lung done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments to remove a portion of the lung containing the bullae. Often times at the completion of this procedure, a technique to affect pleurodesis via mechanical abrasion, talc insufflation, or installation of doxycycline is commonly done.

Thoracoscopy, surgical; with parietal pleurectomy (32656): This is therapeutic procedure to remove the pleural lining from the surface of the chest wall done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments. The goal of this technique is to have the lung form adhesions to the chest wall to prevent further collapse of the lung, pneumothorax or pleural effusion.

Thoracoscopy, surgical; with lobectomy, total or segmental (32663): This is therapeutic procedure to remove an anatomic lobe or segment of the lung requiring vascular and bronchial dissection done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments. A rib spreader is not used.

Insertion of indwelling pleural catheter (32550): Usually done for malignant pleural effusions under local anesthesia. Using a seldinger technique (a needle and a guide wire placed thru the needle) a small plastic tube is inserted into the pleural space and is anchored with a cuff in the subcutaneous tissue. It is then connected to a vacuum drainage bottle to collect the pleural fluid. Often left in for weeks to months. The most common trade name of the catheter used is the Pleurx catheter.

Repair lung hernia through chest wall (32800): An uncommon operation usually done after trauma and more rarely after a previous thoracotomy. The procedure addresses lung tissue which protrudes between missing or separated ribs. An incision is made over the defect which is then repaired. It usually involves reconstructing the missing ribs with mesh material.

Closure of chest wall following open flap drainage for empyema (Claggett type procedure) (32810): This procedure is performed for patients with a preexisting open window thoracostomy (a surgically created defect in the chest wall to allow open drainage of an empyema) that is ready for closure. The soft tissues around the site are mobilized, the cavity is washed out and filled with antibiotic solution, and then the wound is closed in layers.

Total lung lavage (for alveolar proteinosis) (32997): An uncommon procedure for a rare medical condition (alveolar proteinosis) in which a large amount of abnormal protein is deposited in the alveoli of the lung impairing lung function. Using general anesthesia and a double lumen endotracheal tube, the lungs are washed until no more protein comes out of the lungs. Usually 2-5 liters of saline are used for each lung. Can be performed on one or both lungs.

Radiofrequency ablation (RFA) lung tumor (32998): This procedure can be done by either radiologists or thoracic surgeons. Usually done under local anesthesia using CT scan guidance. Using image guidance a long needle is placed in a lung tumor (either lung cancer or a lung metastasis) and then energy is transmitted to the tip of the needle which makes the tip hot. The transmitted heat kills the tumor. Can also be done via VATS or open thoracotomy.

Thoracoscopy, diagnostic; with biopsy(s) of lung infiltrate(s) (eg wedge), unilateral (32607): Minimally invasive retrieval of lung tissue sample from one side for diagnostic evaluation of a lung infiltrate. Thoracoscopy, sometimes abbreviated as 'VATS' (video assisted thoracoscopy) is performed through several small openings rather than a large chest wall incision.

09/15: How is a left upper lobe radiotracer guided wedge biopsy with one mediastinal lymph node collected? **32607**

Thoracoscopy, diagnostic; with biopsy(s) of lung nodule(s) or mass(es) (eg incisional), unilateral (32608): Minimally invasive retrieval of lung mass or nodule tissue sample from one side for diagnostic purposes. Thoracoscopy, sometimes abbreviated as 'VATS' (video assisted thoracoscopy) is performed through several small openings rather than a large chest wall incision.

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Thoracoscopy, diagnostic; with biopsy(s) of pleura (32609): Minimally invasive retrieval of a pleural tissue sample from one side for diagnostic purposes. Thoracoscopy, sometimes abbreviated as 'VATS' (video assisted thoracoscopy) is performed through several small openings rather than a large chest wall incision

Thoracotomy with biopsy(s) lung infiltrate(s) (e.g. wedge), unilateral (32096): Retrieval of lung tissue for diagnostic assessment of a lung infiltrate via surgical incision, unilateral= one side

Thoracotomy with biopsy(s) lung nodule(s) or masses (e.g. incisional), unilateral (32097): Retrieval of lung mass or nodule for diagnostic purposes via surgical incision, unilateral= one side

09/15: The lung mass has been noted on CT since January 2014 along with the Rt mass.

If I need to do clinical staging on this do I include all tests done since 1st mass appeared on Lt side even though treatment was focused on Rt lung mass? The path on this was positive with tumor size 4.2 cm and invasion of visceral pleura. The Cancer staging form indicates T2b NO for both clinical and pathological. Not conclusive whether this is metastatic. Do I need to stage this - there is a cancer staging form completed.

- 1. Is this diagnostic wedge resection: **yes***
- 2. Is a diagnostic wedge resection considered a lung resection? **no***
- 3. Since this may be metastatic do I need to stage? **no***

Thoracoscopy with therapeutic wedge resection (e.g. mass or nodule, initial, unilateral (32666): Minimally invasive removal of a section of diseased (typically cancerous) lung tissue. Thoracoscopy, sometimes abbreviated as 'VATS' (video assisted thoracoscopy) is performed through several small openings rather than a large chest wall incision

9/15: A pt has diagnosis of metastatic NSCLC-Non small cell lung cancer. Rt lung for which she has received radiation and chemotherapy. CT shows growing mass on Lt side. FNA negative.

She is taken for Lt VATS wedge resection for tissue diagnosis. So I believe this would be diagnostic wedge resection. Is this collected as a major lung resection?

This is diagnostic. Only collect if your institution collects non-analyzed.

Thoracoscopy with therapeutic wedge resection (e.g. mass or nodule) each additional resection, ipsilateral (32667) List separately in addition to primary procedure code: Minimally invasive removal of additional lung tissue wedges on the same side as the initial wedge resection

Thoracoscopy with diagnostic wedge resection followed by anatomic lung resection (32668), List separately in addition to primary procedure code: Minimally invasive removal of a lung tissue sample for biopsy/diagnosis prior to therapeutic resection (do not code this as primary procedure)

Thoracoscopy with removal of a single lung segment (segmentectomy) (32669): Minimally invasive removal of a segment of lung tissue, larger than a wedge but smaller than a lobe, with segmental bronchus and pulmonary artery division

Thoracoscopy with removal of two lobes (bilobectomy) (32670): Minimally invasive excision of two lobes of the right lung, either right upper and middle or right lower and middle lobes

Thoracoscopy with removal of lung, pneumonectomy (32671): Minimally invasive excision of one lung

Thoracoscopy with resection-plication for emphysematous lung (bullous or non-bullous) for lung volume reduction-LVRS, unilateral including any pleural procedure (32672): In lung volume reduction surgery (LVRS), a large area of

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damaged lung is removed to allow the remaining lung tissue to expand. This surgery is done only for people with severe chronic obstructive pulmonary disease (COPD) or with certain types of emphysema. Unilateral = one side

Thoracotomy with therapeutic wedge resection (e.g. mass nodule) initial (32505): Removal of a wedge of lung tissue with pathology (typically cancer) using an open surgical approach. These patients generally do not subsequently undergo lobectomy.

08/15: Is this code for acceptable for wedge resections done via sternotomy? **YES, this is an 'open surgical approach'**

08/15: A frozen section biopsy indicated "malignant spindle cell neoplasm" so the surgeon resected the entire mass without taking the whole lobe. Final pathology was benign. Since it started as a diagnostic procedure, but was eventually therapeutic, should I use this code? **YES**

09/15: How is right lower lobe wedge resection (sternotomy approach) coded? **Thoracotomy with therapeutic resection, 32505, (thoracotomy covers stenotomy – it just means open, not thorascopic.**

Thoracotomy with therapeutic wedge resection (e.g. mass nodule) each additional resection, ipsilateral (+32506) List separately in addition to primary procedure code: Removal of multiple wedges of lung tissue with pathology (typically cancer) using an open surgical approach Ipsilateral = same side as primary resection. Do not code this as a primary procedure.

Thoracotomy with diagnostic wedge resection followed by anatomic lung resection (+32507), List separately in addition to primary procedure code: Open surgical removal of a lung tissue sample for biopsy/diagnosis prior to therapeutic resection (do not code this as primary procedure)

Thoracotomy with open intrapleural pneumolysis (32124): Open surgical lysis of adhesions in the pleural space. Surgical separation of the lung and costal pleura from the endothoracic fascia; formerly used in collapse therapy for tuberculosis.

Unlisted procedure lung (32999): Use for novel operations that do not fit in other lung codes.

09/15: Would a thoracotomy with ventricular lead placement be included in the general thoracic data base? **No**

Lung, other

Open closure of major bronchial fistula (32815): Usually performed for a postoperative bronchopleural fistula (BPF) after a pulmonary resection but it can also be done for rare cases of cancer or infections causing a BPF. The BPF must involve a major bronchus (i.e.; the main bronchus after pneumonectomy or the right lower lobe bronchus after lower lobectomy). This code should not be used to close a lung parenchymal air leak after a previous pulmonary resection (not a major bronchus). The bronchus can be sutured or stapled. A muscle or omental flap may be used to buttress the repair (code that as a secondary procedure).

Thoracoplasty with closure of bronchopleural fistula (32906): Refers to a major resection of a large number of ribs in order to reduce the amount of existing pleural space. Additionally, closure of a communication between a bronchus or lung tissue and the pleura is performed during this procedure.

Single lung transplant (32851): Involves excision of poorly functioning lung and implantation of a new donor lung (do not code for the pneumonectomy). Usually done for emphysema or interstitial lung disease.

09/15: Do "Single Right Lobar Lung Transplants" get entered into the database? If they do, what primary procedure code is used? **Single lung transplant, 32851 or the closest; as the surgeon.**

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Single lung transplant with CPB (32852): A single lung transplant done with the aid of cardiopulmonary bypass (do not code for the pneumonectomy).

Double lung transplant (32853): Excision of both lungs and replacement with two new donor lungs (do not code for the bilateral pneumonectomies). Usually done for cystic fibrosis, emphysema, bronchiectasis, interstitial lung disease.

09/15: Lung transplants being done with ECMO for circ/oxygenation support instead of CPB. Would that be CPT 32853 instead of 32854? ECMO is not listed as an option.

No, ECMO is life support.

Double lung transplant with CPB (32854): Excision of both lungs and replacement with two new donor lungs (do not code for the bilateral pneumonectomies) with the aid of cardiopulmonary bypass. Usually done for cystic fibrosis, emphysema, bronchiectasis, interstitial lung disease.

Mediastinum and Diaphragm

Thoracoscopy, surgical; with excision of mediastinal cyst, tumor, or mass (32662): This is a procedure to remove a cyst, tumor or mass from the mediastinum done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments.

Thoracoscopy, diagnostic; mediastinal space, with biopsy (32606): Examination of the mediastinum, the space between the lungs/pleural space containing lymph nodes, adipose tissue, thymus, great vessels, heart from the pleural space. Access is via small incisions between the ribs. Specifically this is not a midline or subxiphoid approach. Specimens of lymph nodes, adipose tissue and/or thymus are obtained.

Thoracic lymphadenectomy, regional, including mediastinal and peritracheal nodes (38746): This is an add-on procedure that must be accompanied by a lung resection (usually lobectomy/pneumonectomy) for cancer. It denotes a systematic mediastinal lymph node dissection that is in addition to the lung resection and removal of hilar nodes with the lung specimen. Use this code to report systemic sampling of or subtotal resection of thoracic lymph nodes when done in conjunction with thoracic procedure. Do not use this code for excision of a single lymph node. (Do not use this code for VATS- use 32674)

08/15 *If only mediastinal or only peritracheal nodes are sampled, can this code be used?* **YES**

09/15: *If only 1 lymph node is taken, or not mediastinal AND peritracheal, how should we code that procedure? Do we still use 3170 Thoracic lymphadenectomy?*

38746=No + 32674=No; Needs to be more than one lymph node.

09/15: *If the nodes collected for Bx were just eh mediastinal or just the peritracheal and not both, how do I collect it?*

38746 as long as multiple nodes

Mediastinotomy with exploration or biopsy; cervical approach (39000): A rarely used procedure to approach the superior mediastinum either for lymph nodes or anterior mass that was not diagnosed. If a resection such as thymectomy or substernal thyroid goiter is performed than this code should not be used.

Mediastinotomy with exploration or biopsy; transthoracic approach (39010): Often this is referred to as a Chamberlain Procedure or anterior mediastinotomy. It is usually performed through the 2nd or 3rd interspace just lateral to the sternum. It is used to approach anterior mediastinal masses or aortopulmonary window adenopathy on the left side. It typically involved use of a mediastinoscope to biopsy through the lighted channel. Many surgeons perform VATS or thoracoscopy for this type of biopsy because of the superior visualization offered with thoracoscopy.

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Excision of mediastinal cyst (39200): These cysts can originate from the thymus, pericardium, bronchogenic or esophageal duplication cysts. All of these are mediastinal and the common element of a cyst is it is fluid filled and lined with an epithelial wall (almost always benign). These also are frequently removed using VATS.

Excision of mediastinal tumor (39220): most commonly these refer to Schwannomas, teratomas, or other types of malignancies (thymectomy for Thymoma or thymic carcinoma has separate codes). These are almost always solid in nature and may require VATS or open technique for complete resection.

09/15: How is median sternotomy with mediastinal mass coded? **Mediastinal tumor, excision – open, #39220**

Mediastinoscopy, with or without biopsy (39400): This refers to a commonly performed cervical mediastinoscopy (video-assisted also being performed). This procedure is used to sample/biopsy mediastinal lymph nodes most frequently to stage lung cancer but also to diagnose conditions with enlarged mediastinal lymph nodes both benign (histoplasmosis / sarcoidosis) and malignant (Lymphoma / Metastatic cancer from other sites than lung).

Unlisted procedure, mediastinum (39499): Any mediastinal procedure not fitting into a described category).

Repair, laceration of diaphragm, any approach (39501): A procedure usually performed in the setting of trauma, can be performed through the chest (thoracotomy/thoracoscopic) or the abdomen (laparotomy/laparoscopy. This refers to an acute injury that is amenable to primary suture repair. If a prosthetic patch is necessary, refer to 39540 (repair of diaphragmatic hernia – traumatic).

Repair, diaphragmatic hernia (other than neonatal), traumatic; acute (39540): Almost always associated with blunt trauma and may be approached through the abdomen or chest. Can be a simple repair with sutures or with a patch as needed.

Repair, diaphragmatic hernia (other than neonatal), traumatic; chronic (39541): Same as above except that the traumatic incident occurred in the past. A patch is more frequently required.

Imbrication (i.e., plication) of diaphragm (39545): This is a procedure that is performed for diaphragmatic paralysis that can result in an elevated diaphragm that may impair lung function. The procedure can be performed via Thoracotomy or VATS or laparoscopy. The principle is to reef or plicate the flaccid diaphragmatic muscle stretching it flat to lower it and allow the lung to expand and ventilate better

Resection, diaphragm; with simple repair (e.g., primary suture) (39560): Usually performed for cancer or malignant involvement. Primary tumors of the diaphragm are very rare. More frequently lung cancer surgery is being performed and the diaphragm must be removed for a complete enbloc resection. As a side note – removal of the diaphragm and reconstruction during an extrapleural pneumonectomy (as for mesothelioma) is not considered a separate procedure but part of the extrapleural pneumonectomy.

Resection, diaphragm; with complex repair (e.g., prosthetic material, local muscle flap) (39561): Same as 39560 but requiring a reconstruction with a patch instead of just primary repair with sutures.

Unlisted procedure, diaphragm (39599): Diaphragmatic procedures in and of themselves are rare. This should be used for any surgeries involving the diaphragm not covered above.

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Thymectomy, transcervical approach (60520): This approach uses a collar incision and a retracting arm to gain access to the anterior mediastinum dissecting the thymus up and removing through this neck incision. It is more frequently used for “normal” thymus glands and not for thymomas or tumors.

09/15: Pt had a thymectomy. Path is positive for neoplasm of thymus. Where do these results get placed?

Not collected for STS Thoracic

Thymectomy, transthoracic approach (60521): Almost always refers to a sternotomy and approach similar to a heart surgery with removal of the thymus via this wide exposure. Most frequent approach for larger tumors.

Thymectomy, transthoracic approach, with radical mediastinal dissection (60522): Same as 60521 but with additional resection of pericardium, innominate vein, phrenic nerve and lymph nodes.

Thoracoscopy with mediastinal and regional lymphadenectomy (+32674) List separately in addition to primary procedure code: Removal of lymph nodes using a minimally invasive approach from the mediastinum.

Lymphadenectomy or lymph node dissection is the surgical removal of one or more groups of lymph nodes. Do not code for removal of one lymph node. It is almost always performed as part of the surgical management of cancer. Do not code as primary procedure.

Do not use for thoracotomy (use 38746)

09/15: If only 1 lymph node is taken, or not mediastinal AND peritracheal, how should we code that procedure? Do we still use 3170 Thoracic lymphadenectomy?

38746=No + 32674=No; Needs to be more than one lymph node.

Thymus, resection via Thoracoscopy unilateral or bilateral (32673): Minimally invasive approach to resection of the thymus gland (one or both sides)

Esophagoscopy

Esophagoscopy (43200): Use of a flexible or rigid esophagoscope to examine the internal lumen of the esophagus.

Esophagoscopy with biopsy (43202): Use of a flexible or rigid esophagoscope to obtain a biopsy of the esophageal mucosa or of an esophageal lesion.

Esophagoscopy with removal of foreign body (43215): Use of a flexible or rigid esophagoscope to remove a foreign body from the internal lumen of the esophagus.

Esophagoscopy with insertion of stent (43219): Use of a flexible or rigid esophagoscope to place a stent to allow the passage of oral intake through a benign or malignant esophageal stenosis or obstruction.

Esophagoscopy with balloon dilation (43220): Use of a flexible or rigid esophagoscope with a balloon dilator to address a benign or malignant stenosis or obstruction.

Esophagoscopy with insertion of guide wire followed by dilation over guide wire (43226): Use of a flexible or rigid esophagoscope with guide wire placement which enables progressive esophageal dilatation with the use of enlarging rubber dilating instruments.

Esophagoscopy with ablation of tumor (43228): Use of a flexible or rigid esophagoscope and a device to locally destroy an esophageal malignancy. Types include: photodynamic therapy (PDT), Nd-Yag laser, and radiofrequency ablation.

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Esophagoscopy with endoscopic ultrasound examination (EUS) (43231): Use of a flexible or rigid esophagoscope with an endoscopic ultrasound probe. This is used to determine the depth of tumor invasion and to assess the presence of paraesophageal lymph nodes with both enable the proper staging of esophageal cancer.

Esophagoscopy with transendoscopic ultrasound-guided fine needle aspiration (43232): Real-time fine-needle aspiration (FNA) may be performed with ultrasound guidance to prove the presence or absence of cancer within paraesophageal lymph nodes.

Upper gastrointestinal endoscopy, diagnostic (43235): Use of a flexible endoscope to examine the esophagus, stomach, pylorus and proximal duodenum. This differs from Esophagoscopy (43200) which involves examination of the esophagus alone.

Upper gastrointestinal endoscopy with endoscopic ultrasound examination limited to the esophagus (43237): Same as esophagoscopy with EUS, except entire upper GI tract is evaluated with endoscope.

Upper gastrointestinal endoscopy with transendoscopic ultrasound-guided FNA (43238): same as Esophagoscopy with transendoscopic ultrasound-guided fine needle aspiration, except entire upper GI tract is evaluated with endoscope.

Upper gastrointestinal endoscopy with biopsy (43239): Same as Esophagoscopy with biopsy, except entire upper GI tract is evaluated with endoscope.

Upper gastrointestinal endoscopy with dilation of gastric outlet for obstruction (43245): Use of a flexible endoscope to examine the esophagus, stomach, pylorus and proximal duodenum with pyloric dilatation for obstruction of the stomach. May be performed after esophagectomy in patients with gastric emptying problems.

Upper gastrointestinal endoscopy with directed placement of percutaneous gastrostomy tube (43246): Use of a flexible endoscope to examine the esophagus, stomach, pylorus and proximal duodenum and then to place a percutaneous feeding tube into the stomach with endoscopic guidance.

Upper gastrointestinal endoscopy with removal of foreign body (43247): Same as Esophagoscopy with removal of foreign body, except entire upper GI tract is evaluated with endoscope.

Upper gastrointestinal endoscopy with insertion of guide wire followed by dilation of esophagus (43248): Same as Esophagoscopy with insertion of guide wire followed by dilation over guide wire, except entire upper GI tract is evaluated with endoscope.

Upper gastrointestinal endoscopy with balloon dilation of esophagus (43249): Same as Esophagoscopy with balloon dilation, except entire upper GI tract is evaluated with endoscope.

Upper gastrointestinal endoscopy with transendoscopic stent placement (43256): Same as Esophagoscopy with insertion of stent, except entire upper GI tract is evaluated with endoscope.

Upper gastrointestinal endoscopy with ablation of tumor (43258): Same as Esophagoscopy with ablation of tumor, except entire upper GI tract is evaluated with endoscope.

Esophagus Resection

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Transhiatal - total Esophagectomy, without thoracotomy with cervical esophagogastrostomy (43107): Removal of the esophagus through an upper midline laparotomy and a neck incision. Intestinal continuity is restored by the formation of a gastric tube with an anastomosis between the gastric tube and remaining cervical esophagus.

Three hole - total Esophagectomy with thoracotomy; with cervical esophagogastrostomy (43112): Removal of the esophagus through an upper midline laparotomy, a right thoracotomy and a neck incision. Intestinal continuity is restored by the formation of a gastric tube with an anastomosis between the gastric tube and remaining cervical esophagus.

Ivor-Lewis - partial esophagectomy, distal two thirds, with thoracotomy and separate abdominal incision (43117): Removal of the distal two thirds of the esophagus through an upper midline laparotomy and a right thoracotomy. Intestinal continuity is restored by the formation of a gastric tube with an anastomosis between the gastric tube and remaining esophagus within the right chest.

Thoracoabdominal-partial esophagectomy, thoracoabdominal approach (43122): Removal of the distal esophagus through a left thoracoabdominal approach with anastomosis of the stomach to the distal esophagus in the left chest.

Minimally invasive esophagectomy: Removal of the esophagus via minimally invasive technique.

Minimally invasive esophagectomy, Ivor Lewis approach: Removal of the distal two thirds of the esophagus by laparoscopy and a right thoracoscopy. Intestinal continuity is restored by the formation of a gastric tube with an anastomosis between the gastric tube and remaining esophagus within the right chest.

Minimally invasive esophagectomy, abdominal and neck approach: Removal of the entire esophagus laparoscopy and a left neck incision. Intestinal continuity is restored by the formation of a gastric tube with an anastomosis between the gastric tube and remaining cervical esophagus within the neck.

Total esophagectomy without thoracotomy; with colonic interposition or small intestine reconstruction (43108): Removal of the esophagus through an upper midline laparotomy and a neck incision. Intestinal continuity is restored by the formation of a colonic or small bowel conduit with an anastomosis between the conduit and the remaining cervical esophagus.

Total esophagectomy with thoracotomy; with colonic interposition or small intestine reconstruction (43113): Removal of the esophagus through an upper midline laparotomy, a right thoracotomy and a neck incision. Intestinal continuity is restored by the formation of a colonic or small intestine tube with an anastomosis between the gastric tube and remaining cervical esophagus.

Partial esophagectomy, cervical with free intestinal graft, including microvascular anastomosis (43116): Removal of a short segment of cervical esophagus through a neck incision with or without sternal extension. Intestinal continuity is restored by the free transfer of small bowel requiring anastomosis between the conduit and the remaining proximal and distal esophagus. Blood flow must also be established to the small bowel segment by arterial and venous micro-anastomoses.

Partial esophagectomy, with thoracotomy and separate abdominal incision with colon interposition or small intestine (43118): Removal of the distal two thirds of the esophagus through an upper midline laparotomy and a thoracotomy. Intestinal continuity is restored by the formation of a colon or small intestine conduit with anastomosis between the conduit and remaining esophagus within the chest.

Partial esophagectomy, distal two thirds, with thoracotomy only (43121): Removal of the distal esophagus through a left thoracotomy approach with anastomosis of the stomach to the distal esophagus in the left chest.

Partial Esophagectomy, thoracoabdominal with colon interposition or small intestine (43123): Removal of the distal esophagus through a left thoracoabdominal approach. Intestinal continuity is restored by the formation of a colonic or small intestine tube with an anastomosis between the conduit and remaining esophagus within the left chest.

Total or partial esophagectomy, without reconstruction with cervical esophagostomy (43124): Removal of the esophagus without re-establishment of intestinal continuity. An end cervical esophagostomy or “spit fistulae” is created.

Minimally invasive three hole esophagectomy: The three hole technique consists of thoracic mobilization of the esophagus, laparoscopic construction of a gastric conduit and a cervical esophagogastrostomy via minimally invasive approach.

Conduit revision s/p esophagectomy: Reoperation on a patient with a previous esophagectomy to revise the conduit

Esophagus-other procedures

Thoracoscopy, surgical; with esophagomyotomy (Heller type) (32665): This is therapeutic procedure to dissect and split the muscle of the distal esophagus to treat achalasia done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments. This is done between the ribs.

Cricopharyngeal myotomy (43030): Surgical division of the cricopharyngeal muscle which is also referred to as the “upper esophageal sphincter.”

Diverticulectomy of hypopharynx or esophagus with or without myotomy; cervical approach (43130): Removal of a diverticulum through a neck incision. The procedure most commonly includes a cricopharyngeal myotomy and is usually performed for a Zenker’s diverticulum of the esophagus.

Diverticulectomy of hypopharynx or esophagus with or without myotomy; thoracic approach (43135): Removal of an esophageal diverticulum through a chest incision.

Laparoscopy, surgical, esophagogastric fundoplasty (e.g., Nissen, Toupet procedures) (43280): Use of laparoscopy to create a full or partial wrap of stomach around the distal esophagus. The procedure is usually performed for reflux.

Laparoscopic esophageal myotomy (43279): Use of laparoscopy to perform an esophageal myotomy (longitudinal division of the esophageal wall muscle while leaving the underlying esophageal mucosa intact). The procedure is done for esophageal motility disorders including achalasia.

Esophagomyotomy (Heller type); thoracic approach (43331): Longitudinal division of the esophageal wall muscle while preserving the underlying esophageal mucosa performed thru a thoracotomy.

Esophagostomy, fistulization of esophagus, external, cervical approach (43352): This refers to the creation of a “spit fistula”, where either the end or side of the esophagus is brought out to exit on the skin of the neck. A drainage bag is often placed to drain saliva that is swallowed and exits onto the skin.

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Gastrointestinal reconstruction for previous esophagectomy with stomach (43360): In patients who undergo esophagectomy, delayed restoration of gastrointestinal continuity may be performed. Reasons for not undergoing immediate reconstruction include mediastinal contamination from a perforation and hemodynamic instability. This code should be used when the stomach is utilized as the conduit for reconstruction.

Gastrointestinal reconstruction for previous esophagectomy with colon interposition or small intestine (43361): In patients who undergo esophagectomy, delayed restoration of gastrointestinal continuity may be performed. Reasons for not undergoing immediate reconstruction include mediastinal contamination from a perforation and hemodynamic instability. This code should be used when either the colon or small intestine is utilized as the conduit for reconstruction. Here, the blood vessels supplying either the colon or small bowel are left attached in their normal location within the abdomen.

Ligation or stapling at gastroesophageal junction for pre-existing esophageal perforation (43405): This procedure describes the division of the esophagus at the gastroesophageal junction to address an esophageal perforation. The esophagus is typically resected and a cervical esophagostomy is created. Often, tubes are placed within the stomach and small bowel to drain and enable enteral nutrition, respectively.

Suture of esophageal wound or injury, cervical approach (43410): Traumatic injuries to the esophagus may be addressed through direct suture repair. This code should be used when the esophageal injury is located within the neck.

Suture of esophageal wound or injury, transthoracic or transabdominal approach (43415): Traumatic injuries to the esophagus may be addressed through direct suture repair. This code should be used when the esophageal injury is located within the chest or abdomen.

*09/15: Patient came in 9/4 for a right posterolateral thoracotomy with esophagogastrectomy. They were discharged on 9/9. They were then readmitted 9/11 for a suspected anastomotic leak and underwent a redo right thoracotomy, was out of right chest and repair of anastomotic leak with biologic mesh and omental reinforcement. The clinicians filled out a 2nd DCF for the readmission procedure and marked "other" as the procedure and wrote in the procedure. Is that the appropriate way to document this case. I see there is not CPT code for the redo right thoracotomy. I also see that other is not listed as a minor procedure so it looks like we should be capturing this second case....what is the best way? **Put in Thoracotomy, major for post op complication, 32120 OR suture of esophagus wound or injury; trans thoracic or transabdominal approach, 43415. Also, put as category of disease – Acquired absence of esophagus, V45.79***

Closure of esophagostomy or fistula, cervical approach (43420): This describes a local closure of a previously placed loop cervical esophagostomy which was created to divert oral secretions onto the neck and away from the distal esophagus.

Free jejunum transfer with microvascular anastomosis (43496): This refers to utilizing a piece of small bowel as a "free flap" to restore gastrointestinal continuity after esophagectomy. This code should be used when the vascular supply of the small bowel conduit is divided in the abdomen and then recreated utilizing blood vessels within the neck or chest.

Total gastrectomy with esophagoenterostomy (43620): Refers to total resection of the stomach with gastrointestinal continuity restored with the remaining small bowel in an end-to-end fashion.

Total gastrectomy with Roux-en-Y reconstruction (43621): Refers to total resection of the stomach with reconstruction performed different than 43620 (above). In this operation, a distal portion of small bowel is used for the anastomosis with the esophagus. This prevents more proximal small bowel contents, which contain significant quantities of digestive enzymes and bile, from refluxing up to the esophagoenteric anastomosis.

Excision esophageal lesion with primary repair, cervical approach (43100): Removal of a proximal esophageal lesion via cervical (neck) approach as opposed to a thoracic approach

Transoral fundoplication: Transoral incisionless fundoplication (TIF) is an endoscopic approach to reflux performed through the esophagus. TIF creates a wrap of stomach around the end of the esophagus creating a 240 degree partial wrap from the inside of the stomach.

Per oral endoscopic myotomy (POEM): Endoscopic technique to treat achalasia, using a submucosal tunnel to perform myotomy on circular muscle bundles in the esophagus

Laparoscopy, surgical with repair of paraesophageal hernia (fundoplasty) without mesh (43281): Minimally invasive abdominal approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using sutures, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms.

Laparoscopy, surgical with repair of paraesophageal hernia (fundoplasty) with mesh (43282): Minimally invasive abdominal approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using mesh, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms.

Laparoscopy, surgical, esophageal lengthening procedure (Collis) (43283): Secondary Procedure code: Collis gastroplasty is a technique for lengthening a "shortened" esophagus, a condition that often results from gastroesophageal reflux disease (GERD). The stomach acid that flows back into the esophagus in GERD causes tissue changes, inflammation and scarring that can sometimes shorten the esophageal size. It is typically done in conjunction with a fundoplication procedure to prevent reflux. Laparoscopy is a minimally invasive abdominal approach.

Nissen fundoplasty- laparotomy (includes partial fundoplication/wrap) (43327): Nissen fundoplication is a surgical procedure to treat gastroesophageal reflux disease (GERD). In GERD it is usually performed when medical therapy has failed. With a *paraesophageal* hernia, it is often used as component of the repair to prevent reflux. Laparotomy = open abdominal approach

Transthoracic Fundoplication- open thoracotomy (includes Belsey/Nissen) (43328): Open surgical approach to treat reflux where part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux.

Repair, paraesophageal hiatal hernia via laparotomy without mesh (43332): Open surgical abdominal approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using sutures, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms

Repair, paraesophageal hiatal hernia via laparotomy with mesh (43333): Open surgical abdominal approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using mesh either instead of sutures or to augment a suture repair, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms

09/15: How do I code a laparotomy with reduction and repair Morgagni hernia with Goretex mesh? **43333; lap with mesh.**

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Repair, paraesophageal hiatal hernia via thoracotomy without mesh (43334): Open surgical thoracic approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using sutures, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms

Repair, paraesophageal hiatal hernia via thoracotomy with mesh (43335): Open surgical thoracic approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using mesh, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms

Repair, paraesophageal hiatal hernia via thoracoabdominal approach without mesh (43336): Open surgical thoracoabdominal approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using sutures, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms

Repair, paraesophageal hiatal hernia via thoracoabdominal approach with mesh (43337): Open surgical abdominal approach to move the organs that have herniated into the chest back into the abdomen. The diaphragm is repaired using mesh, and part of the stomach is wrapped partially or completely around the esophagus in order to prevent further reflux symptoms

Esophageal lengthening procedure - open (Collis) Secondary Procedure code (43338): Collis gastroplasty is a technique for lengthening a "shortened" esophagus, a condition that often results from gastroesophageal reflux disease (GERD). The stomach acid that flows back into the esophagus in GERD causes tissue changes, inflammation and scarring that can sometimes shorten the esophageal size. It is typically done in conjunction with a fundoplication procedure to prevent reflux. Code the fundoplasty/fundoplication as primary. "Open" refers to a traditional surgical incision on the abdomen rather than a minimally invasive approach.

Excision Esophageal lesion with primary repair, thoracic approach (eg: leiomyoma) (43101): Removal of an esophageal lesion and repair of the esophagus using a thoracic (chest) approach

Esophagoplasty with repair of TEF, cervical approach (43305): Esophageal reconstruction/repair as part of repair of a tracheoesophageal fistula via cervical (neck) approach

Esophagoplasty with repair TEF, thoracic approach (43312): Esophageal reconstruction/repair as part of a repair of a tracheoesophageal fistula via thoracic (chest) approach

Unlisted laparoscopy, esophagus (43289): Minimally invasive abdominal procedure of the esophagus, not covered above

Unlisted procedure, esophagus (43499): Any surgery involving the esophagus not covered above.

Chest Wall & Neck

Major resection of chest wall (posttraumatic) (32820): An operation conducted for the reconstruction of a large (greater than two ribs) posttraumatic defect in the chest wall. The ribs are usually replaced with mesh or PTFE, although metallic rib struts or fasteners can be used as well.

Muscle flap, neck (15732): Surgeon rotates a neck muscle flap as an adjunct to surgery, typically used to buttress or augment a suture line, anastomosis or fill a space. Commonly used neck muscles are strap muscles, sternocleidomastoid muscle, levator scapulae.

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Muscle flap, trunk (i.e., intercostal, pectoralis or serratus muscle) (15734): Used where a surgeon rotates a neck muscle flap as an adjunct to surgery, typically used to buttress or augment a suture line, anastomosis or fill the pleural space. Commonly used trunk muscles are the intercostal, serratus, pectoralis, or latissimus dorsi.

Excision of chest wall tumor including ribs (19260): Excision of ribs and attached muscles for a benign or malignant tumor of the chest wall. When three or less ribs are taken or if the defect is covered by the scapula, reconstruction may not be necessary.

Excision of chest wall tumor including ribs, with reconstruction (19271): Resection of the chest wall tumor with reconstruction of the defect, usually with plastic mesh (marlex, prolene), methylmethacrylate/mesh sandwich or a muscle flap. Usually used for larger resections.

Excision of tumor, soft tissue of neck or thorax, subcutaneous (21555): Excision of a tumor in the skin/fat of the chest wall-typically a lipoma.

Excision of a tumor, soft tissue of neck or thorax, deep, subfascial, intramuscular (21556): Excision of a deep chest wall tumor that involves the muscles but not the ribs. These would usually be benign tumors such as a fibroma or a deep lipoma.

Radical resection of a tumor (e.g., malignant neoplasm), soft tissue of neck or thorax (21557): En-bloc, radical excision of a cancer of the chest wall muscles, involving the skin, fat and muscles. Typically it would be a desmoid tumor or a sarcoma (MFH-malignant fibrous histiocytoma, rhabdomyosarcoma).

Excision of rib, partial (21600): Removal of a part of a rib (but not the first for thoracic outlet syndrome), usually for a small tumor.

Excision of first and/or cervical rib (21615): Removal of the first rib or a cervical rib for TOS (Thoracic Outlet Syndrome)

Excision of first and/or cervical rib, with sympathectomy (21616): Rarely done now. Usually for Thoracic Outlet Syndrome with chronic arm pain from RSD (Reflex Sympathetic Dystrophy).

Radical resection of sternum (21630): Involves radical removal of the sternum for either a tumor or severe sternal infection.

Radical resection of sternum, with mediastinal lymphadenectomy (21632): Involves resection of the sternum and mediastinal lymph node dissection.

Hyoid myotomy and suspension (21685): Typically done as a suprahyoid laryngeal release to reduce tension on a cervical tracheal resection anastomosis. The hyoid bone is cut laterally on both sides to allow it to drop down and thus lower the larynx and trachea.

Division of scalene anticus, without resection of a cervical rib (21700): Usually done for a Thoracic Outlet Syndrome (TOS) variant where the muscle or a band from it impinges on the brachial plexus.

Division of scalene anticus, with resection of a cervical rib (21705): Usually done for a TOS variant where the muscle or a band from it impinges on the brachial plexus along with resection of the abnormal cervical rib.

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Reconstructive repair of pectus excavatum or carinatum, open (21740): Repair of either of these two congenital chest wall deformities. Usually involves resecting several costal cartilages, a partial osteotomy of the sternum, and often placement of a temporary bar for stabilization (also known as a Ravitch repair.)

Reconstructive repair of pectus, minimally invasive approach (Nuss procedure), without thoracoscopy (21742): Placement of a Nuss transverse chest wall bar to push the sternum forward to repair a pectus excavatum.

Reconstructive repair of pectus, minimally invasive approach (Nuss procedure), with thoracoscopy (21743): Placement of a Nuss transverse chest wall bar to push the sternum forward to repair a pectus excavatum with the visual aid of thoracoscopy

Open treatment of sternum fracture with or without skeletal fixation (21825): Repair of a sternal fracture with sutures, wires, plates or bars.

Removal of sternal wire: Sternotomy incisions are typically closed with a series of wires to support the bone during healing. These are left in place unless the patient experiences irritation or infection

Unlisted procedure, neck or chest wall (21899): Unlisted procedure not described above.

09/15: Does this case belong in the general thoracic database: CERVICOTHORACIC APPROACH WITH REDUCTION AND FIXATION RIGHT CLAVICLE. **No**

Miscellaneous

Thoracoscopy, surgical; with removal of clot or foreign body from pericardial sac (32658): This is a therapeutic procedure to remove clot or a foreign object (such as a bullet) from the pericardium done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments. A drain is commonly left.

Thoracoscopy, surgical; with creation of pericardial window or partial resection of pericardial sac for drainage (32659): This is therapeutic procedure to drain fluid from the pericardium and remove a segment of the pericardium done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments. A drain is commonly left.

Thoracoscopy, diagnostic pericardial sac, with biopsy (32604): Minimally invasive approach to remove a sample of pericardial tissue for diagnostic purposes

Thoracoscopy, surgical; with total pericardiectomy (32660): This is an uncommon therapeutic procedure to remove the entire pericardium done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments.

Thoracoscopy, surgical; with excision of pericardial cyst, tumor, or mass (32661): This is a procedure to remove a cyst, tumor or mass from the pericardium done via small incisions (approximately 1 to 3 cm.) with a scope and other instruments. The important distinction is the complete removal of abnormal tissue.

Thoracoscopy, surgical; with thoracic sympathectomy (32664): This is therapeutic procedure to divide or interrupt the sympathetic chain in the chest. It is commonly done to treat hyperhidrosis. The technique involves using small incisions (approximately 1 to 3 cm.) with a scope and other instruments.

Ligation thoracic duct (38381): Tying off or clipping the main lymph channel in the chest. Usually performed at a level just above the diaphragm on the right side and is commonly done for a chyle leak (chylothorax); can be approached by VATS or open methods. Also includes obliterating or ligating the cisterna chyli.

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Intraoperative jejunostomy (44015): Placement of a tube in the jejunum during the course of another operation, usually an esophagectomy, gastrectomy or repair of a gastrointestinal perforation. Used for drainage, decompression or instillation of tube feedings.

Omental flap (49904): Omentum (usually the greater omentum) is brought through a subcutaneous tunnel or the diaphragm to a cover soft tissue defect, bronchial stump or other structure to stimulate granulation and promote healing.

Transthoracic thyroidectomy (60270): Removing part or all of the thyroid gland via a thoracic incision. Adding an upper sternal split to facilitate resection of a substernal goiter would not be in this definition (see below). Removing part or all of the thyroid gland by VATS would also be a transthoracic thyroidectomy.

Removal substernal thyroid, cervical approach (60271): Removal of part or all of the thyroid gland via a cervical incision. The use of an upper sternal split to facilitate a thyroidectomy which is partially substernal would still be considered a cervical approach, since this is the dominant incision.

Tube pericardiostomy (33015): This involves opening the pericardium and placing a tube into the pericardial space for drainage - may be placed percutaneously via needle and guide wire, via thoracoscopy or thoracotomy or subxiphoid. If no tube placed in the pericardial space, see: Thoracoscopy (VATS), surgical; with creation of pericardial window or partial resection of pericardial sac for drainage.

Pericardial window (33025): Opening a draining the pericardial space by making a small (usually 1 to 4 cm in diameter) hole in the pericardium. Done via thoracotomy or subxiphoid approach; if VATS used see: Thoracoscopy (VATS), surgical; with creation of pericardial window or partial resection of pericardial sac for drainage. If a tube is placed see: Tube pericardiostomy above.

09/15: Could you give me a guide as to when pericardial windows should be collected in Adult Cardiac and when it should be collected in Thoracic Database.

If you collect in adult cardiac then it would be a non-analyzed procedure in thoracic

SVC resection and reconstruction (34502): Removal of part or all of the superior vena cava with or without reconstruction.

Application of wound vac (97605, 97606): Negative-pressure wound therapy (NPWT) is a therapeutic technique using a vacuum dressing to promote healing in acute or chronic wounds. The therapy involves the controlled application of sub-atmospheric pressure to the local wound environment, using a sealed wound dressing connected to a vacuum pump. The continued vacuum draws out fluid from the wound and increases blood flow to the area. The vacuum may be applied continuously or intermittently, depending on the type of wound being treated and the clinical objectives.

Stereotactic radiosurgery (SRS) and stereotactic body radiotherapy (SBRT), surgeon participation (32701): Stereotactic radiosurgery (SRS) is a highly precise form of radiation therapy initially developed to treat small brain tumors and functional abnormalities of the brain. The principles of cranial SRS, namely high precision radiation where delivery is accurate to within one to two millimeters, are now being applied to the treatment of body tumors with a procedure known as stereotactic body radiotherapy (SBRT). Despite its name, SRS is a non-surgical procedure that delivers precisely-targeted radiation at much higher doses, in only a single or few treatments, as compared to traditional radiation therapy. This treatment is only possible due to the development of highly advanced radiation technologies that permit maximum dose delivery within the target while minimizing dose to the surrounding healthy tissue. The goal is to deliver doses that will destroy the tumor and achieve permanent local control.

Other Minor Procedure: Unlisted minor procedure

Other: Any procedure not covered by any of the above descriptions.

Seq. #: 1490

Long Name: Procedure Unlisted - Specify

Short Name: ProcOth

Definition: Indicate the general thoracic procedure(s) not listed being performed during this operating room visit, free text up to 150 characters.

Intent/Clarification:

Please check the list carefully.

Seq. #: 1491

Long Name: Procedure Unlisted - CPT

Short Name: ProcOthCPT

Definition: Indicate 5 digit CPT code(s) of unlisted procedure(s).

Intent/Clarification:

April 2016: Patient underwent Left VATS, wedge resection of Right upper lobe apex, and mechanical pleurodesis. Is it appropriate to capture CPT code 32666 for the VATS + wedge resection and CPT code 32650 for the pleurodesis? **Yes**

January 2017: Patient underwent emergency right exploratory thoracotomy, evacuation of hemothorax, and video thoracoscopic evaluation of the thoracic cavity due to traumatic hemothorax. During procedure, 2-3 L of blood and hematoma were evacuated from chest. Patient was s/p right pneumonectomy, experienced fall at home with supratherapeutic INR. For purposes of the General Thoracic Surgery Database, is this a major procedure and what CPT code should be indicated for the primary procedure? Does code 32110 apply d/t the bleeding? Or do we apply code 32100 d/t the exploratory thoracotomy? **Major Procedure. 32110. This will identify the patient as a trauma case for the fall. You can also code 32150, as secondary removal of intrapleural fibrosis, hematoma.**

Seq. #: 1500

Long Name: Primary Procedure

Short Name: Primary

Definition: Indicate whether this is the primary surgical procedure.

Intent/Clarification:

08/15 How should a modified McKeown minimally invasive esophagectomy (5 ports) be coded?

Choose: Minimally invasive three hole, it is the closest option.

11/15 - My surgeons have performed a thoracoscopic upper lobectomy, sparing the lingula When choosing the appropriate procedure My choices are: Thoracoscopy, surgical: with lobectomy and Thoracoscopy with removal of a single lung segment (segmentectomy). Which procedure should I pick? The procedure done has more than one segments removed.

Primary-lobectomy, then list others

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12/15: What is the correct procedure to capture a "lingulectomy"? Would a wedge or segmentectomy be appropriate?

Wedge

12/15: Operations Performed: 1. Robotic-assisted wedge resection, left upper lobe/lingula. 2. Radical lymphadenectomy. PREOPERATIVE DIAGNOSIS: Pulmonary nodule. POSTOPERATIVE DIAGNOSIS: Pulmonary nodule. The surgeon states, 'Initially, the lung was inspected. The area where the nodule was suspected was visualized, there was no discrete nodule. There was an excellent fissure. This area was then grasped and wedge excised with a Covidien black stapler. This was placed in a small specimen bag and externalized. This was sent to Pathology. There was no palpable nodule and no nodule could be seen by Pathology. More tissue then was obtained, which essentially was the lingula. This also was externalized and sent to Pathology. A small nodule could be palpated. This later returned ossification. The inferior pulmonary ligament was mobilized. There was a station 9 and station 8 lymph node in this area. Anterior mediastinum was then dissected, and then along the apex, station 5 and station 6 lymph nodes were removed. Posterior mediastinum was dissected. There was a station 10 lymph node on the pulmonary artery and deeper was a station 7 lymph node. The fissure was entered. The calcified nodule could be visualized, and it was excised. It was adjacent to, but not invading, the posterior segmental artery of the right upper lobe.'

After reading this Op note and reviewing the options many, many times, my initial thought is to go with one of two options, 1. 32096 - Thoracotomy with biopsy lung infiltrate, unilateral or 2. 32097 - Thoracotomy with biopsy lung nodule or masses, unilateral. But then, i question how i would capture the radical lymphadenectomy. The patient did not have cancer. I apologize if this is a very elementary question, but want to be sure i get it right. **Use VATS wedge = 32666 for robot assisted and check robot assisted field; use 32674 for lymph node dissection.**

12/15: The patient has a thoracotomy for a metastatic pleural tumor. He has an open radical parietal pleurectomy and later in the procedure there is an air leak detected where a limited wedge resection is done. Which of these will be the principal procedure for this surgery? And will the wedge be coded as 32505? Thank you. **Primary is the pleurectomy and 32505 is correct.**

12/15: Pt. had a dx of R upper lobe bronchopleural fistula. Procedure: Flexible bronchoscopy, R upper lobe anterior and apical segment and placement intrabronchial valve. 6mm valve to Apical Segment & 7mm valve to Anterior Segment. How would I code this procedure? **This is not a major procedure. Code as a bronchoscopy, minor branch procedure. Minor procedures arenot analyzed**

April 2016: How do I code a thorascopic lingulectomy? It was the primary procedure. **Code as a Segmentectomy, #32669.**

April 2016: Patient had diagnostic Brochoscopy, wedges, & lobectomy. I coded the 2 major procedures 32663 & 32668 as PRIMARY, and the minor procedure (Bronchoscopy) as NOT PRIMARY. Was that correct? **One primary procedure which is the Lobectomy.**

May 2016: Could you please tell me how to code the intrabronchial valve placement and removal. It seems that this is frequent thoracic procedure, but I do not see the codes (31647, 31651 & 31648, 31649) listed on the thoracic data collection form. **This is investigational so no ICD9 or CPT codes. Write it in.**

May 2016: Would this case be collected and if so what codes would I use? Debridement of anterior chest wall, Debridement and partial resection of sternoclavicular joint, drainage of mediastinal fluid collection, vacuum assisted closure of the wound. **Did a thoracic surgeon do the case? Put under 'unlisted' if you want to capture it**

May 2016: Pre op diagnosis recurring chest wall abcess , osteomyelitis. Procedure: partial chest wall reconstruction, left anterior fifth rib. Would I enter this case as major and if so what codes would be used? **32820.**

October 2016: Per my operative notes, patient had a Trisegmentectomy. How do I code this since the STS code 32484 is for single segment? What is the best code to use for bilateral lung wedge resections? Is it 32505 and 32096? or 32096 and 32097? How do I code Wedge resections in right upper, middle and lower lobes? Is it okay to use 32505+32506? **The trisegmentectomy should be coded as a segmentectomy. Trisegmentectomy will be added in the upgrade.**

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August 2017: In regards to cases completed for palliative services, ie a pleurex catheter alone or a pleurex catheter with a partial decortication, do we collect these cases as major procedures or as the case is being completed for palliative reasons do we exclude? **Do not exclude any major procedure; even if they are done for palliative reasons.**

January 2018: Surgery: right video assisted thorascopic surgery decortication, right video assisted thorascopic surgery, right lower lobectomy and chest wall resection. Question: use procedure codes: 32652, 32663, but how to code chest wall resection? 19271 reads 'involving ribs', however, training manual 10/17 reads excision of ribs and reconstruction with mesh or flap. Per OP report, mass was attached (firmly adhered) to chest wall, involved 7th & 8th ribs. Tissue was dissected around ribs, ribs were divided proximally and distally (but not excised). What would be the appropriate procedure codes for this surgery? **There is no code for this. Code lobectomy, as primary procedure, and unlisted chest wall procedure.**

Seq. #: 1510

Long Name: Lung Resection Performed

Short Name: LungResect

Definition: Indicate whether a lung resection procedure was performed during this procedure.

Intent/Clarification:

For lung resections, including wedge resections that are listed as “major” procedure, code yes.

08/15: Is it correct that when a diagnostic wedge resection is done we collect "yes" for "lung resection performed"?

No, a diagnostic wedge is not a major procedure. This field is intended for therapeutic resections. Major procedures are not highlighted on the data collection form.

08/15: Define “major lung resection.” Is it lobectomy or greater- segmentectomy or greater?

Minor procedures are highlighted in blue. Lung resections that are not highlighted are considered major, should be collected on the Major Procedure DCF, and should have PFTs. If done for lung cancer, staging should be documented.

12/15: Can you explain when I would say "no" to a lung resection performed? I understand that a diagnostic wedge is not a lung resection, but this patient had an open parietal pleurectomy for malignant pleural tumor. (She was s/p esophagectomy in 201). An air leak was noted in the lower lobe of the lung, so a "limited wedge excision" was done to seal the air leak. Is this considered a lung resection? **Yes**

July 2016: The patient had Bilateral Thorascopic surgeries, with bleb resections and pleurodesis. Recovery is more involved than single side thorascopic surgery, and I do not know how to enter the procedures to reflect the dyadic nature of the surgeries. **You would indicate 'Yes' in field 1510 and 'Bilateral' in field 1520.**

July 2016: We only submit Major Procedures. I have a patient who underwent bronch with biopsy and showed well-differentiated, neuroendocrine neoplasm, in the RUL lymph node. Patient presented for mediastinoscopy followed by R VATS and removal of Right Middle lobe nodule. When the pathology came back, the nodule was not cancer. Should I put this case in the database? If so, what would the Procedure code be? **This would be a lobectomy wedge resection, therapeutic.**

February 2017: Does "resection" definition include pneumonectomy and explant of lungs(s) for transplant? **No – this is a lung transplant which includes recipient pneumonectomy and then suturing of donor graft. It should not be counted as a lung resection.**

June 2017: Patient had a procedure with CTP code 32655 (thorascopy, surgical; w/ excision-plication of bullae). It is a major procedure but does it count as a wedge resection if they excised the apex? **Yes.**

Seq. #: 1520

Long Name: Laterality

Short Name: Laterality

Definition: For lung resections only, indicate the laterality of the primary surgical procedure.

Intent/Clarification:

- Right
 - Left
 - Bilateral
-

Seq. #: 1521

Long Name: Bronchus Covered With Tissue

Short Name: BronCovTis

Definition: Indicate whether the bronchus was covered with vascularized tissue.

Intent/Clarification:

Vascularized tissue could include: muscle flap, pericardial fat, azygous vein, pleura, pericardium or other vascularized tissue.

Code no for wedge resections since the bronchus is not involved.

12/15: What is the significance of the bronchus being covered with vascularized tissue? I cannot find mention in either the surgeon's operative report or the pathology report of any vascularized tissue associated with the bronchus (e.g., muscle flap, pericardial fat, azygous vein, pleura, pericardium tissue, etc.). **Not every case will have a wrap. It's significant to protect the bronchus. If it is not in the Op Note it was probably not done. So the answer is No.**

Seq. #: 1522

Long Name: Esophagectomy Performed

Short Name: Esophag

Definition: Indicate whether an esophagectomy was performed.

Intent/Clarification:

April 2016: How should we handle two Thoracic Surgeons that participate in our Thoracic Data Base when one does the general abdominal portion of the IVOR Lewis Esophagectomy procedure. Currently we enter it as one thoracic event. **It is entered as one thoracic event.**

Seq. #: 1523

Long Name: Gastric Emptying Intervention

Short Name: GasEmpty

Definition: Indicate which, if any, gastric emptying intervention was performed.

Intent/Clarification:

- Pyloroplasty
 - Pyloromyotomy
 - Botox injection
 - Other
 - None
-

Seq. #: 1530

Long Name: Patient Disposition

Short Name: PatDisp

Definition: Indicate the location to where the patient was transferred after leaving the OR and/or PACU for routine recovery.

Intent/Clarification:

ICU level of care counts as ICU day - ex. PACU used for ICU overflow. Do not include PACU stay unless patient was kept beyond the recovery phase as described above. If kept in PACU beyond recovery for extended care (not ICU overflow) choose intermediate care.

- ICU
- Intermediate Care Unit
- Regular floor bed
- Not applicable (expired in OR)

This field is Required for Record Inclusion. If missing data, the entire record will be excluded from the analysis.

08/15: We do not have an intermediate care unit at our hospital. If a patient returns from the OR and goes to a telemetry bed, is this a regular floor bed or is this an intermediate care bed because of the telemetry? **This depends on the level of care in your telemetry unit. If it is the same nurse/pt ratio as a regular floor with monitored beds, code as regular floor. If there are more nurses and a higher level of care, code as intermediate.**

08/15: If a patient goes to the ICU for 2 hours for recovery and then moves to a telemetry bed, how do I capture this?

Capture ICU as yes

09/15: Patient was admitted 12/29/14, had LINX procedure on 12/29/14, was sent to 'Extended Recovery'; was discharged from the hospital from there on 12/30/14. What do I pick for Patient Disposition? **Intermediate Care Unit**

February 2017: If a patient is in an ICU unit in one of six beds designated as intermediate care unit beds, do I collect these patients as intermediate care unit? **Yes, as long as it is designated as an intermediate care bed in the ADT system.**

September 2017: I have a patient who died in the PACU. What is my patient disposition?

Expired in the OR? The patient bled out from the brachiocephalic vein/PEA arrest. Are these post op events if this literally happened on arrival to PACU? **The patient died outside of the OR. Use ICU as the patient disposition since that is closest to the PACU level of care. Also, capture Other, CV event.**

Seq. #: 1532

Long Name: Initial Visit To ICU

Short Name: ICUVisitInit

Definition: Indicate whether the patient was taken to the ICU at any time during this admission; **post operatively. Any portion of a day in the ICU counts as a day.**

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Intent/Clarification:

All ICU days should be included on first procedure.

January 2017: Admitted 12/10/2016 to progressive care, first surgery 12/13/2016 ICU postop and remained in ICU until second surgery 12/15/2016, remained in ICU until 12/17/2016 then progressive care, sent back to ICU 12/24/2016 until 12/31/2016 when pt. expired. How is this recorded in EACH record?

12/13-12/15 ICU days: 3 (1st DCF)

12/15-12/17 ICU days: 2 (2nd DCF)

Return to ICU: 8 Days (1st or 2nd DCF, but only one not both)

You can also put all the ICU days on the 1st DCF. It is a matter of consistency. Always chart your ICU days the same way.

February 2017 - I have a patient admitted to the hospital on 6/29/16 and goes to the ICU. They remain in the ICU until 7/13/16. This patient had thoracic surgery on 7/11/16 and returned to the ICU until moved to the regular floor on 7/13/16. How do I capture Initial ICU days? **The patient was in the ICU for 3 days; 7/11, 7/12 and 7/13. ICU days are counted post-operatively.**

July 2017: With having the option to put all ICU days on the 1st DCF (as long we remain consistent in our process), for the 2nd DCF, do we answer No to Initial Visit to ICU if the Patient Disposition is ICU for the 2nd DCF? We have all of the Initial Visit to ICU Days and Additional ICU Days on the 1st DCF. **Yes, you can list disposition as ICU for the second procedure and mark NO to 1532**

January 2018: Patient is s/p lobectomy went to general floor postop. Developed ETOH withdraw and was sent to PCU (step down/intermediate care Unit) for ETOH infusion. There was no deterioration in patient physically, only hallucinations etc. so I did not code 2180 unexpected transfer to ICU. Does transfer to intermediate care for infusion count as ICU days? **An intermediate care unit is not the same as an intensive care unit, so, no, you do not count the days the patient was in the PCU.**

Seq. #: 1533

Long Name: Initial ICU Visit Days

Short Name: ICUVisitInitDays

Definition: Indicate the number of days the patient spent in their initial visit to the ICU; **post-operatively.**

Intent/Clarification:

09/15: Patient has four surgical procedures during the same admission. After procedure #1 patient goes to Progressive Unit, after the 3rd procedure the patient goes to the ICU. I understand for the 1st procedure I should include all ICU hours. For the 2nd procedure do I also collect the same total number of hours or say no to ICU since she did not have any ICU hours between #2 and #3? Then do I include the total ICU hours after procedure #3? **Put the ICU hours on the procedure # 3 form. Make sure the ICU hours add up correctly.**

July 2016: If the surgeon documents that a patient has to stay in the ICU only because there is no bed available on the regular floor, do I still count this as an ICU day because that's where the patient is physically? **Yes, you count it as an ICU day.**

11/16: Count only post-operative days in the ICU.

November 2017: For institutions that have single stay units – the patient stays in the ICU the entire hospital stay - use the date and time that they patient's level of care changes in the ADT system to determine ICU days.

Seq. #: 1534

1/2018

Long Name: Additional Visit To ICU

Short Name: ICUVisitAdd

Definition: Indicate whether the patient was readmitted to the ICU following the initial ICU stay and prior to any subsequent procedures during this admission.

Intent/Clarification:

Seq. #: 1535

Long Name: Additional Visit To ICU Days

Short Name: ICUVisitAddDays

Definition: Indicate the total number of additional days the patient spent in the ICU.

Intent/Clarification:

Seq. #: 1540

Long Name: Pathologic Staging - Lung Cancer - T

Short Name: PathStageLungT

Definition: Indicate the appropriate descriptor for the lung cancer primary tumor based on final pathology report.

Intent/Clarification:

- TX = Tumor cannot be assessed
- TO = No evidence of primary tumor
- Tis = Carcinoma in situ
- T1a = Tumor <= 2cm
- T1b = Tumor >2cm but <= 3cm
- T2a = Tumor >3cm but <= 5 cm
- T2b = Tumor >5 cm but <=7 cm
- T3 = Tumor > 7 cm or one that invades pleura, chest wall, diaphragm, phrenic nerve, pericardium, main bronchus (not involving carina), causes obstructive atelectasis or pneumonitis or a separate tumor in the same lobe.
- T4 = Tumor of any size that invades mediastinum, heart, great vessels, trachea, recurrent laryngeal nerve, esophagus, vertebral body, carina or separate tumor in a different ipsilateral lobe.

February 2017: What do I put for Lung Cancer, yes or no, when it is a patient with Mesothelioma or a patient that has a decortication and it comes back positive for cancer, but hepatic in origin? **Code "no" for both instances.**

June 2017: A patient was diagnosed with lung cancer (T3) prior to surgery and was treated with chemo and radiation. Once the tumor shrank and a lobectomy was performed, the tumor came back as negative for cancer. Would I still put T3 for original tumor or T0? **T0; the patient had pre-operative chemo and radiation.**

August 2017: Pt has wedge resec, comes back Adenocarcinoma. Returns 1 week later for lobectomy. Has lobectomy with nodes. No pos nodes, lung tissue free of malignancy (was all removed with Prior wedge resec). For staging (for the lobectomy procedure) do we use the original dx with that tumor size and pathology? **Use the original tumor size for clinical staging. Path - TONOMO.**

GENERAL THORACIC SURGERY DATABASE v.2.3

TRAINING MANUAL

January 2018

December 2017: Pre op staging showed non-small cell carcinoma, underwent chemo & radiation. After 6 months tumor had decreased & a VATS w/wedge was performed. Final path showed Adenocarcinoma. How do I stage this? **The staging will be on the final pathology report.**

December 2017: Preop dx of adenocarcinoma, treated with adjuvant chemo, then a vats wedge was performed. Path report confirmed adenocarcinoma after wedge. No path staging done since it was just a wedge. I'm analyzing this as a major because I had a preop dx of cancer. Seq 1540 is on staging if dx of cancer & lung resection performed, so do I leave this section blank because a lung resection wasn't performed & no staging but I have a dx of lung cancer? **A wedge resection is a lung resection. Need to capture the staging. The pathology may be negative since patient had chemo and radiation prior and/or it may all have been captured in the surgery.**

Seq. #: 1550

Long Name: Pathologic Staging - Lung Cancer - N

Short Name: PathStageLungN

Definition: Indicate the appropriate descriptor for the lung cancer regional nodes based on final pathology report.

Intent/Clarification:

- NX = Regional lymph nodes cannot be assessed
- N0 = No regional lymph node metastasis
- N1 = Metastasis in ipsilateral peribronchial and/or ipsilateral hilar nodes, intrapulmonary nodes, includes direct extension
- N2 = Metastasis in ipsilateral mediastinal and/or subcarinal lymph node(s)
- N3 = Metastasis in contralateral mediastinal, contralateral hilar, ipsilateral or contralateral scalene or supraclavicular lymph node(s)

09/15: Our Cancer Staging form contains "NX" as a choice under Regional Lymph Nodes for both clinical and pathologic staging. There is no choice for this for pre-clinical staging (only N0, N1, N2, or N3). How would / should we report this for Clinical Staging?

NX means a full assessment was not completed. If truly not assessed, then NX would be marked. You should look for a source that assessed lymph nodes. It would be unusual if not assessed.

October 2017: A patient has surgery for a suspected metastatic cancer to the lung and has limited lymph node dissection. The path comes back a primary lung cancer with N1 disease. The surgeon then decides to bring the patient back to the OR a month later to perform a more extensive lymphadenectomy. The path from that case shows N2 disease. Should I mark the original case N1 or N2 for the path? **The original should be marked as N1.**

Seq. #: 1560

Long Name: Pathologic Staging - Lung Cancer -M

Short Name: PathStageLungM

Definition: Indicate the appropriate descriptor for the lung cancer metastases based on final pathology report.

Intent/Clarification:

- M0 = No distant metastasis
- M1 = Distant metastasis

GENERAL THORACIC SURGERY DATABASE v.2.3

TRAINING MANUAL

January 2018

June 2016: Path Report reads: "Distant Metastasis (pM): Not Applicable". Do I leave this element blank or check off MO on the Procedure Data Collection Form? MO. **Unless the physician or the scans say otherwise always assume distant metastasis is M0.**

January 2017: Patient with clinical stage IIB lung cancer; no brain imaging was done. Had lobectomy; pathologic stage per path report was pT3pN0. Within 30 days of lobectomy was found to have brain metastasis. How should I code surgical pathologic M stage: M0 or M1b? **M0, pathological staging is coded at time of surgery.**

Seq. #: 1561

Long Name: Lung Cancer Histology

Short Name: LungCAHist

Definition: Indicate the appropriate descriptor for the lung cancer histology based on final pathology report.

Intent/Clarification:

- Carcinoma in situ - Bronchioalveolar (BAC)
- Adenocarcinoma
- Squamous cell
- Large cell
- Small cell
- Neuroendocrine
- Mixed

08/15: The patient Pathology Report states "Non-small cell carcinoma, nos." This is not an option for Lung CA Histology in Pathological Staging of the Lung, Element 1561. Which would be the appropriate choice from the available options?

There should be a final pathology report with histology. Check the clinical pathology reports to see if there is a more complete report.

08/15: The patient had chemo and radiation for a nodal biopsy, 'NSCLC favoring adenocarcinoma', and had a RUL mass (not biopsied.) He then had a bilobectomy with path report of T0N0M0. How should I answer histology?

Code: adenocarcinoma as indicated in pre-chemo/radiation therapy biopsy.

09/15: Which of the categories does "typical CARCINOID Tumor" fit into? **Neuroendocrine**

09/15: Are all BAC considered to be in situ? What about/what do we do with invasive BAC? **Get histology from Path**

09/15: Patient had neoadjuvant chemo/radiation treatment for 4R nodal biopsy proven NSCLC favoring adenocarcinoma. 3.1 cm RUL lung mass was not biopsied. Post chemo/rad patient underwent bilobectomy. Per path report, pathologic stage is T0N0M0. For histologic type, the path report states "no residual tumor identified." How should I answer Lung Cancer Histology? **Adeno**

11/15 - Path Report states Histology as "Carcinosarcoma," which is not an option for this field. It is apparently a rare histology type. What would be the correct choice for this field? **Code as 'Mixed'.**

April 2016: Our patient had path report of Adenoid Cystic disease in a bi-lobectomy. What should I check off for Lung Cancer Histology? **Leave it blank.**

April 2016: The pathology report came back as "Histologic Type: Adenoid cystic carcinoma". The patient did not have a previous cancer. The admitting diagnosis per MD is malignant neoplasm of the bronchus or lung. What do I mark for the histology type? **'Mix'**

May 2016: The most detailed pathology note and all other notes from MDs state histology only as non small cell carcinoma. So what do I select under the histology tab? **Leave the field blank if you can't get more detailed information.**

GENERAL THORACIC SURGERY DATABASE v.2.3

TRAINING MANUAL

January 2018

May 2016: The final pathology report states "Monophasic synovial sarcoma", deep, LUL. Pathological staging is pT2b, N0. Three pathologists concur. There is no other report forthcoming. How should I code this for Histology? **Leave blank.**

This is very rare; read thru the pathology report to assure the lung is primary.

May 2016: The final pathology report states "Adenoid Cystic Carcinoma". Pathological staging is pT1b,pN0. There will be no further reports. How do I code this for Histology? **Leave blank. This is very rare; read thru the pathology report to assure the lung is primary.**

June 2016: What histology should I utilize in the situation of a Malignant Melanoma of the lung that is pathologically stated as a lung cancer? Melanoma is not an option, nor is there an "Other". My first instinct is to leave it blank. Yes, leave it blank.

June 2016: There was a scenario where the patient had 3 types of cancer cells in the Histology staging report from the same specimen but I could only choose one option. My surgeon champion wants to know the criteria STS would want us to use to make a data entry decision. **When there is more than one listed use the cancer that is most predominant; has the largest percentage. If there is still a question you should ask the physician.**

April 2017: Path report has: Among the differential diagnoses considered are mucoepidermoid and adenosquamous carcinoma. The morphologic appearances are best interpreted as those of mucoepidermoid carcinoma. Histologic Type: mucoepidermoid carcinoma. How would this be coded or is it left blank? **Leave blank**

December 2017: Final path report showed histologic type as Adenosquamous Carcinoma. Would this be coded as mixed? **Yes.**

January 2018: The pathology report read "mucoepidermoid carcinoma." How should this be coded? Mixed? **No, it is not mixed. Leave this field blank. Mucoepidermoid carcinoma is rare.**

Seq. #: 1562

Long Name: Lung Cancer Histology Grade

Short Name: LungCAHistGrade

Definition: Indicate the grade of the neuroendocrine lung cancer histology based on final pathology report.

Intent/Clarification:

- Low grade
- Intermediate grade
- High grade

January 2017: Histology per path report is large cell neuroendocrine carcinoma. Per pathologist, this is a neuroendocrine tumor. Database requires grade for all neuroendocrine tumors, however, no grade was reported in the pathology report. I asked pathologist for grade. Her response "Technically, large cell neuroendocrine carcinoma is not given a grade, but if you have to have one, use the one for small cell, which is high grade." My question is whether we should code large cell neuroendocrine tumors as high grade if no grade is documented in pathology report? **All neuroendocrine tumors should NOT be graded high grade. However, if a grade isn't given for a large cell - agree it could be high grade. A carcinoid is a low grade neuroendocrine cancer.**

Seq. #: 1570

Long Name: Lung Cancer - Number of Nodes

Short Name: LungCANodes

Definition: Indicate the total number of nodes sampled/harvested.

Intent/Clarification:

Range is 0-50, usual is 5-15

08/15: Do we capture the total number of nodes (clinical staging and operative) or only nodes harvested during surgery?

Only capture the number of nodes harvested during the surgery

March 2017: I am new to the thoracic surgery registry and I have a question surrounding the pathology report in relation to the questions surrounding lymph nodes. I have seen the nodal station diagram that is a part of the manual but I would like some clarification. For example, this patient's patho report includes the following submitted sources: 1. Right upper and middle lobes 2. Interlobar lymph node and 3. Right paratracheal lymph node. For #1. 15 lymph nodes are also included within these specimen; #2. 2 lymph nodes (LN); and #3. 2 LN. What would be the total # of LNs submitted and what is the total # of nodal stations? **19 lymph nodes were collected from at least 2 stations, however, it is essential to communicate with the surgeon about this case and inquire which stations were sampled. The surgeon should indicate station location in the samples sent and in the op note.**

April 2017: Path Report identifies Lymph Nodes from Station Level 5 and Level 7. Station 5 Lymph Node is Negative 0/1 Station 7 Lymph Node - Fragments are negative. How do we collect fragment(s) of a lymph node? **Count fragments as they are listed on the path report. Ask your surgeon and pathologist to work together to address the fragments as coming from one (or more) lymph node. Total number of nodes you list for your case should match up with the total number of nodes listed on the final pathology report.**

September 2017: Final path report states # of lymph nodes cannot be determined: some specimens were fragmented & the # of lymph nodes was not noted on the specimen. Do I leave seq#1570 blank? **Read the Op Report and / or talk with the surgeon. Often the surgeon will document in the Op Report the number of nodes harvested and the stations. If the number of nodes can't be determine then leave the field blank.**

Seq. #: 1571

Long Name: Total Number of Nodal Stations

Short Name: LungCANodStat

Definition: Indicate the total number of nodal stations sampled / harvested.

Intent/Clarification:

Remember that the number of nodes sampled and the number of nodal stations will not necessarily match.

Only count the number of nodes that were actually harvested. If nodes examined but not harvested or not found, do not count.

09/15: For the total # of nodal stations are you looking for the total number that were harvested during the lymphadenectomy or are we to include ALL nodal stations that show up in our final path report, including those that come when the lung itself is removed (peripheral nodes)? **ALL**

09/15: Thirteen nodes were harvested but there is no mention of the # of nodal stations. All nodes were negative. Is there a way to determine this if not included in the path report? **No, they should be included in the Path Report. Also check dictation or ask the surgeon.**

09/15: Number of lymph nodes and stations are required for major procedures only, i.e., lung resections. **Yes.**

The minor procedures, mediastinoscopies, are not reported to the STS database nor are the number of nodes and stations collected. **Correct.**

If a patient had a mediastinoscopy and all nodes accessible were removed by the surgeon then the patient returned for a lung resection and there were no nodes to be removed, reporting this event will only include the number of nodes harvested from the major procedure – correct? And there will be no link to the number of nodes harvested from the mediastinoscopy. **Correct.**

09/15: When capturing the number of nodal stations sampled does that only include the stations captured for that particular procedure or the nodal stations sampled when they had the mediastinoscopy a few weeks prior to the resection? **Just the procedure**

June 2016: The surgeon does a lymph node dissection during a lung resection. For one of the nodal stations sampled, the pathologist cannot identify any nodal tissue. For example, the path report notes "Benign fibrous soft tissue; no lymph node identified." Do we count that nodal station for this data element? **No, since no lymph nodes were identified.**

May 2017: Last AQO Conference, I thought I heard that # of peribronchial Lymph nodes are counted with the total of LN, but not as a station. That was also the answer with our monthly teleconference last March 2016. I was reading the transcript for the teleconference for March 2017 and now it is counted as a station. Is this the latest? Do I have to go back and change all my answers? **Clarify with your surgeon and pathologist how they want you to handle it.**

Technically, surgeon should specify which stations he is taking and submitting. For example, if lobar is stated as a station on path report, would not double count peribronchial as another station.

Seq. #: 1580

Long Name: Lung Cancer - Pathology Margins

Short Name: LungCAPathMarg

Definition: Indicate whether pathology report indicated positive surgical margins.

Intent/Clarification:

This indicates the presence of cancerous cells at the edges of resected tissue, potentially signaling incomplete resection

Seq. #: 1590

Long Name: Pathologic Staging - Esophageal Cancer - T

Short Name: PathStageEsophT

Definition: Indicate the appropriate descriptor for the esophageal cancer primary tumor based on final pathology report.

Intent/Clarification:

- TX = Tumor cannot be assessed
- T0 = No evidence of primary tumor
- Tis = High Grade Dysplasia
- T1a = Tumor invades lamina propria or muscularis mucosa
- T1b = Tumor invades submucosa
- T2 = Tumor invades muscularis propria
- T3 = Tumor invades adventitia
- T4a= Resectable tumor invades pleura, pericardium or diaphragm
- T4b = Unresectable tumor invading other adjacent structures such as aorta, vertebral body, trachea, etc.

09/15: Patient had esophageal cancer - had chemo and radiation prior to Ivor Lewis procedure - lung wedge resection. Pathology shows No residual adenocarcinoma - treatment effect is evident surgical resections negative for tumor all 33 regional lymph nodes negative for metastatic carcinoma. Do I answer Esoph CA as NO? If I answer yes how do I fill out the pathology?

Yes, T0-N0-M0-H2-GX

Seq. #: 1600

Long Name: Pathologic Staging - Esophageal Cancer - N

Short Name: PathStageEsophN

Definition: Indicate the appropriate descriptor for the esophageal cancer regional lymph nodes based on final pathology report.

Intent/Clarification:

- NX = Regional lymph nodes cannot be assessed
 - N0 = No regional lymph node metastasis
 - N1 = Metastasis in 1-2 regional nodes
 - N2 = Metastasis in 3-6 regional lymph nodes
 - N3 = Metastasis in 7 or more regional lymph nodes
-

Seq. #: 1610

Long Name: Pathologic Staging - Esophageal Cancer - M

Short Name: PathStageEspohM

Definition: Indicate the appropriate descriptor for the esophageal cancer distant metastases based on final pathology report.

Intent/Clarification:

- M0 = No distant metastasis
 - M1 = Distant metastasis
-

Seq. #: 1620

Long Name: Pathologic Staging - Esophageal Cancer - H

Short Name: PathStageEsophH

Definition: Indicate the appropriate descriptor for the esophageal cancer histopathologic type based on final pathology report.

Intent/Clarification:

- H1 = Squamous Carcinoma
- H2 = Adenocarcinoma
- Other = Other

08/15 The patient had a biopsy for esophageal cancer which indicated 'ulcerated, poorly differentiated adenocarcinoma' and he has Barrett's esophagus. He underwent preop radiation and chemotherapy prior to esophagectomy. His surgical pathology indicated no tumor, only Barrett's esophagus. How to I code histology?

Code: adenocarcinoma. The pre-op chemo and radiation treatments did what was intended, but you know the initial underlying histology from the initial biopsy.

09/15: Mid Esophageal squamous cancer clinically staged T3N1MO after chemo and radiation and surgery pathology shows no residual Carcinoma - I answered TONOMO but how do I answer Grade and Histopathologic type-cannot be assessed if not addressed in Pathology? Is missing the correct choice for this?

Histopathologic type H1

Grade GX

09/15: Patient has pre-surgical dx of esophageal adenocarcinoma by endoscopic biopsy T3N2 disease, has chemo and radiation therapy prior to surgery. After surgery pathology is PTO. How do I answer the Histopathologic and histologic grades? **H2 – still adeno, GX – can't be assessed**

March 2017: Our General Thoracic Surgeon, requested to have H1(Squamous Carcinoma) and H2(Adenocarcinoma) names instead of H1/H2. When staging a tumor size would this be captured before the induction of the tumor (ex.; before pre-op)? **Tumor histology is collected in pathological staging which reflects the tumor submitted from surgical excision after treatment.**

Seq. #: 1630

Long Name: Pathologic Staging - Esophageal Cancer - G

Short Name: PathStageEsophG

Definition: Indicate the appropriate descriptor for the esophageal cancer histologic grade based on final pathology report. If a range of differentiation is reported, choose the worst differentiation.

Intent/Clarification:

- GX = Grade cannot be assessed
- G1 = Well differentiated
- G2 = Moderately differentiated
- G3 = Poorly differentiated
- G4 = Undifferentiated

09/15: Mid Esophageal squamous cancer clinically staged T3N1MO after chemo and radiation and surgery pathology shows no residual Carcinoma - I answered TONOMO but how do I answer Grade and Histopathologic type-cannot be assessed if not addressed in Pathology? Is missing the correct choice for this?

Histopathologic type H1

Grade GX

09/15: What should be entered in the Histologic Grade for a pathology post radiation? Prior to treatment the patient had a well differentiated squamous esophageal Ca. The surgical path states not applicable under the histological grade related to post treatment. **GX, squamous**

Seq. #: 1640

Long Name: Esophageal Cancer - Number of Nodes

Short Name: EsophCANodes

Definition: Indicate the total number of nodes sampled/harvested.

Intent/Clarification:

Limits are 0-80; usual range is 5-15

Seq. #: 1650

Long Name: Esophageal Cancer Pathology Margins

Short Name: EsophCAPathMarg

Definition: Indicate whether pathology report indicated positive surgical margins?

Intent/Clarification:

Margins, also known as "margins of resection," refer to the distance between a tumor and the edge of the surrounding tissue that's removed along with it. "Positive margins" indicate cancer cells extend to the edge of resected tissue.

7. Post-Operative Events

Seq. #: 1710

Long Name: Postoperative Events Occurred

Short Name: POEvents

Definition: Indicate whether the patient experienced a postoperative event at any time during this hospital visit regardless of length of stay, and/or events that occur within 30 days of surgery if discharged from the hospital.

Intent/Clarification:

This field is meant to capture any instance of postoperative events listed below that the patient developed due to the operation for which you are recording a Data Collection Sheet. These need to have occurred anytime during the patient's entire hospital stay or until 30 days post-op if they were discharged.

This does not include events that occur during the operation or were present preoperatively, such as atrial fibrillation. 09/15: If two thoracic surgeons complete a surgery – one surgeon completing a lung procedure (decortication) and one surgeon completing an insertion of esophageal stent + jejunostomy tube insertion, is this captured on one or two DCFs? If you do it on two DCFs, which one does the complications go under? The main surgery or both?

Complete one DCF for each trip to the OR. Use the major surgery as the primary. Complications go with the primary surgery.

Scenario: Patient was admitted from ER for esophageal leak and empyema. He was taken to surgery and surgeon completes a decortication and suture of esophageal tear. Eight days later he goes back for decortication and esophageal stent. Then patient returns to the OR 10 days later for decortication and esophageal stent removal and replacement. Do I count the empyema and anastomotic leak as return to OR even though it was an underlying diagnosis from admission? And if the CT is leaking for more than 5 days due to esophageal perforation do I mark air leak > 5 days? Or is this only for lung procedures? **Yes, mark air leak > 5 days.**

April 2016: Pt. has Thoracic procedure done, discharged from hospital returns 3 days later with aspiration PNA. After further studies pt has esophageal fistula, returns to OR for repair including esophageal stent. After second procedure pt. has several complications including ed vent etc. Do you mark all the post-op events on the first case? Or would you mark return to OR and PNA on first case and other events on the second case? **Indicate this as a readmission and other events requiring anesthesia. This is not a return to OR.**

April 2016: I have a patient who came in with endocarditis, septic shock. She was found to have vegetation attached to the aortic and tricuspid valves with significant regurgitation. She also had a mature empyema and underwent a VATS decortication on 2/5/16. On 2/11/16 she underwent an aortic valve replacement. I have captured any postoperative events up until the Aortic valve replacement. She will now also be on our cardiac registry so do I continue to capture post op events or does that just get captured on the Cardiac database? **Include all post op events within 30 days; can't separate what caused what.**

GENERAL THORACIC SURGERY DATABASE v.2.3

TRAINING MANUAL

January 2018

April 2016: pt. initially admitted/surgery for spontaneous L pneumothorax and bullous lung disease readm within 30 days for a R spontaneous pneumothorax and returned to OR. Is the readm related to first operative procedure? And is this a post Op Event? **No, this is not related to the first event. It is a readmit within 30 days but not a post op event.**

July 2016: If a patient is readmitted within 30 days, has major procedures during the 3 different admissions (all within 30 days of original admit), are post op events that occur in each admission ONLY captured on the first major procedure DCF? **You can capture all the events on the index case or collect them on the each following case. Either way is acceptable, just be consistent in how you do it.**

July 2016: Had a pt with upper therapeutic lobectomy. Discharged and returned for a prolonged readmission w/in 30 days. He was found at home with cardiac arrest and had massive GI bleed-duodenal ulcer, NSTEMI and hemorrhagic shock. Had a VIR coil embolization. Am I correct to code Other Cardiovascular Event for Cardiac Arrest, Other GI Event for GI bleed, Renal Failure since baseline creatinine prior to original sx was 1.0 and went up during readmission to 3.9 (never dialyzed)? Regarding Packed RBC's if there are no RBC's in initial surgery but pt is readmitted and gets multiple blood products during the 30 day readmit, we still put only the RBC product totals in 1991 # RBC Units, correct? The pt never went back for Gen Thoracic Surgery or to OR for General Anesthesia, just had EGD and VIR coil embolization for GI Bleed from Ulcer. **RBCs are only counted on the initial surgery so you do not need to count the RBCs from the readmit. You are correct for the other events; Other Cardiovascular Event, Other GI Event and, Renal Failure**

July 2016: Patient is discharged home. Readmitted with extensive subcutaneous emphysema. I know it is a post-op event & readmission. What event do I code it as? Pulmonary, other? **This would be an air leak if greater than 5 days. If it is less than 5 days then use Pulmonary, other.**

August 2016: A pt has an esophagectomy and d/c home. They return for emergent surgery within 30 days of d/c due to anastomatic leak and empyema. As I am new to the registry, please confirm. The first DCF gets marked as Other Events req OR gen. anesthesia, Empyema req txmt and of course readmit to any hsp and readmit related to op procedure. A new DCF is created for the 2nd surgery due to emergent sx for anastomotic leak and empyema. Is the Disease coding: Esophageal perforation 530.4, K22.3 and Empyema without fistula? **Empyema without fistula.** Pt gets a total lung decortication and esophageal stent placement 43219. During the 2nd admission only the pt goes to the ICU, gets reintubated for sx and receives blood. These only are put on the 2nd DCF, correct? **Yes.** This is not a resp failure because they were intubated for 2nd sx, correct? **Yes** Unexpected Admission to the ICU would not be coded on either form because the pt went to ICU after 2nd surgery, correct? **Yes.** During the 2nd sx in the OR, the pt has a burst of AFib, goes back into ST and was treated with metoprolol x2 and mag sulfate. Is this a postop event on 2nd DCF? **No, this is not a post op event as this occurred during OR.** Pt has 2 Chest tubes after 2nd sx and the last one removed 9 days after surgery due to CT drainage, with no mention of airleak, so this is not coded as Air leak>5 days, correct? **Yes.**

October 2016: This patient had an uncomplicated VATS Lobectomy, was discharged home on POD 4 with no events until 1 week after discharge. At this time she was dyspneic at home, EMS was called and she was intubated and coded in the field. Her cardiac rhythm was documented as "asystole with occasional agonal rhythm". She was transported to the ED and the code was briefly continued. The patient expired in the ED. Do I capture this as a POE, and how would I document it? Would it be "Other Cardiac Event"? **Yes, this would be captured as Other Cardiac Event and Respiratory Failure.**

November 2016: The patient had Right VATS upper lobectomy and was taken to PACU postop. While the patient is in PACU, the surgeon received the pathology result that the bronchial margin is positive. From PACU, the patient returned to OR for Excision of bronchial stump and primary repair with azygous buttress. How do I capture this? Is this a postop complication? Do I abstract another DCF? **Yes, this would be a post-operative event and 'return to OR'. The 'return to OR' reason would be 'other' unless there is another reason. A new DCF is completed for major procedures. In this situation the approach would determine if it is a major procedure or a minor procedure. If major, then complete a new DCF.**

January 2017: The patient developed significant SQE. This did not resolve with continued suction to the chest tube and blow holes were placed. How do I capture this procedure as a POE? Would this be captured under "other pulmonary event"? **If greater than five days, capture as an "Air Leak > 5 days duration". If less than five days, it is not a post op event.**

GENERAL THORACIC SURGERY DATABASE v.2.3

TRAINING MANUAL

January 2018

February 2017: The manual notes (page 103) suggests we code "other cardiac" for a Code Blue event. Is this true if the code was caused by administration of a pain medication (successfully reversed with Narcan) just after surgery? If not, how / should this event be captured? **Code this as "other cardiac"**

May 2017: Pt had thoracotomy with wedge resection on 3/8/17. Discharged on 3/23/17 with Heimlich valve. Readmitted on 3/29/17. Pigtail chest tube placed with talc by radiologist on 3/31/17. Had a heart stent placed to LAD on 4/3/17. Underwent a thoracotomy with exploration on 4/10/17 & was transferred to ICU after surgery. I have captured this as a readmit (2230), (1830), & (1920). I know that I will have a new database for the thoracotomy with exploration. My question is since he was admitted within 30 days but the surgery occurred after the 30 days do I capture (2170) **No, beyond 30 days from initial surgery & (1534) No, put on 2nd DCF; count ICU days following 4/10 thoracotomy (count of ICU days does not cross from initial admit to readmission).**

July 2017: Our pt had a VATS lobectomy that converted to an open thoracotomy. He is discharged home and returns with a splenic hemorrhage. He was transfused 4 units of RBCs after readmission. During readmission the pt had a VIR coil embolization with anesthesia: IV sedation. The blood does not get counted in postop events, correct? What postop events are coded for the splenic hemorrhage? **Correct, do not count the blood as a post-op event because it was administered after the patient was discharged. No other events apply. Just code readmission and that it's related to the primary procedure.**

October 2017: Should we capture adverse events following other entries in the other STS registries. I have a case where the patient needed a decortication and then went to OHS for Tricuspid Valve endocarditis a few days later and had numerous complications post op. Should those all be capture in GTS and ACS? **Yes, you capture the post op events.**

November 2017: I have a patient that went back to the OR three times after the initial surgery. I have captured all post events on the original surgery form including unexpected return to the OR and Other events requiring OR with general anesthesia. Since I am capturing all events on one form, as long as I answer one of the events about returning to the OR does that cover all visits regardless of how many times they went to the OR? **Yes, it covers all returns.**

December 2017: I has a patient who 10/16/2017 underwent wedge excision of a left upper lobe nodule. She was determined to have severe COPD with preoperative PFTs which were felt to not allow a formal lobectomy. At the time of the surgery, she was noted to have positive staple line margins; however, there was no further available space for resection. Postoperatively, she initially did well and then had apparent bleed into the parenchyma left upper lobe with increasing consolidation requiring reintubation and support. Ultimately, it was elected to proceed with left upper lobectomy on 10/20/17 in hoping to relieve her respiratory distress and allow recovery. She did not receive any blood products until surgery number 2 of the same admission. Both are considered major cases where do the post-op blood products and complications get documented? **You can decide how to report post-operative events, all to the first (index) operation or assigning the post-operative events to each case. However you decide to do it just be consistent. Were the blood products the patient received given intra-operatively? If so, you want to code the blood as intraop, not post op.**

December 2017: A major case being reviewed went back for additional interventions post-operatively. This patient received a chest tube for pleural effusion, then returned again for a VATS with decortication a few days later (all within the same visit). I know that the decortication will need its own DCF completed, however, I am uncertain if both of these issues should be reflected as a "yes" for pleural effusion, and then ALSO a "yes" for Other pulmonary event? Would both be covered under pleural effusion alone? There is nothing to mark for empyema yielding a need for a VATS with decortication (after the previous intervention for the chest tube). **Only capture 'unexpected return to OR' for empyema. There is no need to also capture Other Pulmonary Events.**

January 2018: "Post op events" (1710) Pt is in Hospital for 2 weeks, and has already been intubated and on the vent for a couple days before the VATS decort/pleurodesis is done. Post op he does goes back to OR for a trach. Is this captured as both "Tracheostomy"(1860) and also "Unexpected return to OR (1720)", or it is collected just as the "Tracheostomy"(1860)? **Just capture tracheostomy, not both.** Pt eventually is DC, still on Vent to long term facility. Pt is never weaned off vent post op, so is this collected as "Initial vent Support > than 48 hours (1840)"? **Yes.** Also since

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pt leaves on vent, is this also "other Pulm Event (1870)" and "Respiratory failure (1800)?" **No, you do not capture either of these.**

Seq. #: 1720

Long Name: Unexpected Return To The OR

Short Name: ReturnOR

Definition: Indicate whether the patient was unexpectedly returned to the OR during this hospital visit.

Intent/Clarification:

Do not capture planned (scheduled) or staged reoperations. This includes OR visits for surveillance bronchs or additional OR trips to assess the original surgery.

A second DCF should be completed for major procedures or if your surgeon(s) collect non-analyzed procedures.

09/15: If patient was discharged and then had an unexpected event leading to return to OR, unexpected return to OR would be indicated. Would the return be a new case and, therefore, complete a new abstraction form based on the second surgery. **Yes.**

09/15: If the patient returns to the OR for a PEG after fundoplication, and the physician knew this may happen prior to the surgery, but did not document it, is this still considered and "unexpected return to OR"? **Yes.**

April 2016: I have a patient that completed her surgery in the OR- a left thoracotomy, lymph nodes, and left pneumonectomy. The patient was extubated in the OR- doing well. Remained stable while she was transferred to stretcher and waited for chest x-ray, conversant and pain free. Obtained CXR. Patient became pale, stopped respiratory effort, no palpable pulse, Code called- Chest compressions began. Patient back to the OR table from stretcher. Patient never left the OR. Re-intubated, re-prepped, re-opened. Does this count as Unexpected return to OR? Or does it count as an extension of the original surgery? **Does not count as return to OR since pt. never left the OR.**

July 2016: We have a patient who had an esophagectomy with thoracotomy on 5/4, had a thoracentesis on 5/7, and then on 5/11 went back to the OR for a J tube obstruction and had an upper endoscopy, bronchoscopy, exploratory laparotomy with takedown and revision of jejunostomy, and adhesiolysis. My questions are as follows:

1. Would we need to enter a second form for the 5/11 procedure? **Yes**

2. For the 5/4 procedure, would it be appropriate to document under postop events unexpected return to the OR - **Yes**, pleural effusion req drainage - **Yes**, and also under the miscellaneous section other events req OR with gen anesthesia? **No**

June 2017: I have a patient who underwent a VATS segmentectomy. The wound started to dehiscence. They took her to the OR but only gave monitored anesthesia and washed the area out and closed. The dehiscence was superficial. They didn't take any cultures, they didn't give general anesthesia. So would this be counted as an unexpected return to the operating room, other, or would it not be counted as it is an OR trip to assess the original surgery? **Yes, this is an unexpected return to the OR. It is not part of the original surgery.**

August 2017: Patient admitted for a therapeutic wedge resection. On the day of planned discharge the patient had acute abdominal pain and was taken to the OR by a general surgeon for abdominal exploration, appendectomy, and lysis of adhesions from previous a pre-existing abdominal condition. Can you please clarify for the surgeon if return to OR is only related to the lung/thoracic procedure the patient was admitted for or if this applies to any return to the OR?

Capture return to the OR for any reason. Not just related to the lung or thoracic procedure.

December 2017: Patient original surgery was open thymectomy. Six days later the patient underwent sternal debridement, rib plating and pectoral muscle flap due to sternal dehiscence. The patient was not discharged in between surgical cases. Is this considered other events requiring surgery or should it be entered as a new thoracic case? **Yes, this would be collected on a new data collection form. It would also be a post-op event on the original surgery. It would be Unexpected Return to the OR (1720); not 'other Events requiring surgery' #2170, since it is during the initial hospitalization.**

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January 2018: I understand that you wouldn't capture a planned return or staged procedure within the same hospital visit here. My question is, if a patient is bleeding from the initial procedure, would you capture it here? You are entering the same cavity. Second, if a patient returns for a planned post operative appendectomy, would this be captured here or other events requiring OR with general anesthesia (#2170) or both? Is the intent under #1720 to capture any unexpected (general or thoracic) procedure here, with or without general anesthesia? Or is the intent to capture unexpected thoracic returns primarily? **Planned OR procedures should be captured in #2170 – Other events requiring OR with general anesthesia. The intent of this field is to capture any unexpected return to the OR, not just thoracic procedures. The bleeding would be concerned an unexpected return to the OR.**

Seq. #: 1730

Long Name: Reason for Unexpected Return to the OR

Short Name: ReturnORRsn

Definition: Indicate the primary reason the patient returned to the OR.

Intent/Clarification:

- Bleeding
- Anastomotic Leak following esophageal surgery
- Bronchopleural Fistula
- Empyema
- Chylothorax, reoperation requiring surgical ligation of thoracic duct
- Conduit necrosis/failure following esophageal surgery
- Other

August 2016: Per OP note of second procedure: pt had a RUL lobectomy 7/5/2016 for RUL CA complicated by dense infiltrate in RML secondary suggestive of hemorrhage. questionable patency of RML vein, opacification in the RML likely in the event of poor venous drainage. Pt was bronched several times, R main stem totally occluded. On 07/12/16 pt returned to OR for a RML lobectomy secondary to consolidation. Would this be captured as Re-Op other, or does another DCF need to be completed? **Complete another DCF for the second surgery and indicate the re-operation on the first DCF. A DCF is completed for each surgery.**

Seq. #: 1750

Long Name: Air Leak Greater Than Five Days

Short Name: AirLeak5

Definition: Indicate whether the patient experienced a postoperative air leak from the lung for more than five days.

Intent/Clarification:

08/15: A patient has a lobectomy with an air leak for 4 days. The CT is removed day 5 but patient develops sub q emphysema and has CT inserted- remains for 8 days. Do I code this as air leak greater than 5 days? **YES**

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09/15: Pt is transferred here from referring facility with a chest tube that is leaking. Pt goes to OR a total of 3 times at our facility for closure of air leak, blebs. Do we capture "air leak > 5 days" for any of the surgeries since the air leak was there from admission? Surgery #1 done on 4/10; surgery #2 on 4/13; surgery #3 is 4/14.

No, this is why they were admitted.

09/15: Pt has LVATs with lobectomy. Has air leak for 4 days, then on the 5th day, no air leak, CT out. Next AM Subq emphysema, CT put back in, no air leak and removed 8 days later. Is this collected on Air Leak > 5 Days due to second CT? **Yes.**

11/15 – I want to clarify under what circumstances the patient after a lobectomy is considered to have a prolonged air leak. If the patient is discharged home on postoperative day #2 with a chest tube attached to a Heimlich valve for an air leak and then the chest tube is removed in the office on postoperative day 6. Is this considered to be a prolonged air leak. **Air leak must be greater than 5 days. When was the air leak discovered? When was chest tube put in? Count from the day the air leak was documented to when the chest tube comes out, even if the patient went home. If air leak is greater than 5 days, then 'yes'.**

12/15: Please review the surgeon's statement below regarding his interpretation of the air leak > 5 days duration. I did send him the updated information in the training manual. I would appreciate your suggestions.

The key lies in documentation of when the air leak stopped. If a patient had an air leak at discharge and comes back to the clinic (5- 7 days) for follow up but has no air leak we do not know when the air leak stopped: it could have been day 2, 3, 4 etc. If you can find documentation in the clinic follow up note that there is still an air leak and the tube needs to stay in place then code YES if past 5 days. If you cannot find documentation of a persistent air leak and the tube was removed then I would code NO. **Someone needs to assess the air leak on day 5 or day 6, you cannot just assume that it stopped. You must make contact with the patient. May be a good idea change your practice's follow-up process and bring the patient in on day 5 to check it.**

November 2016: Do the number of days have to be consecutive? **Yes.**

May 2017: If a patient has an effusion, receives pleurx catheter and develops postop air leak > 5 days do you code this as a post op complication? **YES**

If patient has pneumothorax preop gets a chest tube, has preop air leak then a blebectomy and still has air leak postop I would not capture prolonged air leak because it was present preop? **CORRECT**

So then do all pneumothorax patients who develop air leak postop not count because it was preop or only if they have Chest tube with air leak preop? *If an air leak was present pre-op, then it isn't a po-event. Post-op Air leak days should be counted after new chest tubes are inserted in surgery. Nothing pre-op should count toward the 5 day limit.*

July 2017: Pt has VATS wedge bx X3. Chest from next evening on reports "subcutaneous air overlying right lateral chest wall" Progress note states "no air leak" 6 days later pt back to surgery due to "persistent pneumothorax" (chest tubes had not been removed) In OR removed previous chest tube and 2 new chest tubes in place. "There were trace bubbles from the right middle lobe and right upper lobe staple lines, which also had a small adherent clot"... "Progel was applied to the previous staple lines" Would #1750 AirLeak5 be collected? **If documentation of continued air leak or subcutaneous air is present for > 5 consecutive days, then you would mark Yes to 1750. This is a minor procedure however and you do not need to collect post op events**

Seq. #: 1760

Long Name: Atelectasis Requiring Bronchoscopy

Short Name: Atelectasis

Definition: Indicate whether the patient experienced atelectasis requiring a bronchoscopy in the postoperative period.

Intent/Clarification:

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Atelectasis is collapse of lung tissue that is often diagnosed on chest x-ray.

July 2016: When a patient comes in and has multiple analyzed procedures are we to count all the complications under the initial analyzed procedure? For example-Atelectasis requiring Bronchoscopy occurs after the second procedure. Do we answer yes to 1760 under the initial procedure only? **You can capture all the events on the index case or collect them on the each following case. Either way is acceptable, just be consistent in how you do it.**

Seq. #: 1770

Long Name: Post-op-Pleural Effusion Requiring Drainage

Short Name: CPiEff

Definition: Indicate whether a postoperative pleural effusion required drainage via thoracentesis or chest tube insertion.

Intent/Clarification:

Include only effusions requiring drainage with thoracentesis or chest tube. Do not code medically managed effusions.

April 2016: Patient has noted on CT scan insignificant small RIGHT pleural effusion 2 days before surgery. Patient has decortication for LEFT empyema. Patient has pleural effusion req. drainage post operatively on the RIGHT. Should this count for post-op event? **Yes, this required a chest tube.**

January 2017: Patient presents with pneumothorax and ruptured bullae. Patient has wedge resection, bronch, chest tube placement and pluerex catheter placement in the OR. Chest tube is pulled POD #3 but is sent home with the pleurex since it was still draining. Should this be coded as a complication? **No, condition existed preoperatively.**

July 2017: The patient has a post-op chest tube in place and functional. He develops a pleural effusion. The physician does a 3-day TpA instillation to facilitate drainage of the pleural effusion. To capture this as a POE, would I select "pleural effusion req drainage", even though there is currently a chest tube? **NO. Chest tube insertion or thoracentesis has to be done to meet criteria. If it extended the length of stay significantly, you could mark Other Pulm.**

Seq. #: 1780

Long Name: Pneumonia

Short Name: Pneumonia

Definition: Indicate if the patient experienced pneumonia in the postoperative period. Pneumonia is defined as meeting three of five characteristics: fever, leukocytosis, CXR with infiltrate, positive culture from sputum, or treatment with antibiotics.

Intent/Clarification:

Note: atelectasis and effusions do not necessarily indicate pneumonia, and neither does a single positive sputum culture without the other criteria/clinical findings documented.

Code yes if three of the criteria are met.

April 2016: If the patient had pneumonia preop and developed again post-op, do I code it as a complication? **Yes**

Seq. #: 1790

Long Name: Adult Respiratory Distress Syndrome

Short Name: ARDS

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Definition: Indicate whether the patient has evidence of ARDS (Adult respiratory distress syndrome). According to the American-European consensus conference, a diagnosis of ARDS is assigned if all of the following criteria are present:

1. Acute onset
2. Arterial hypoxemia with PaO₂/FIO₂ lower than 200 (regardless of PEEP level)
3. Bilateral infiltrates seen on chest radiograph or CT scan
4. Pulmonary artery occlusive pressure lower than 18 mm Hg or no clinical evidence of left atrial hypertension
5. Compatible risk factors

Intent/Clarification:

Code yes if ARDS is documented in the record or if the above criteria are met.

Seq. #: 1800

Long Name: Respiratory Failure

Short Name: RespFail

Definition: Indicate whether the patient experienced respiratory failure in the postoperative period requiring mechanical ventilation and/or reintubation.

Intent/Clarification:

Inadequate gas exchange resulting in hypoxia and or hypercarbia.

REMEMBER to collect reintubation here Do not count BiPAP as reintubation

12/15: Documentation of respiratory distress and intubation pre-procedure(9/24/15). Thoracic procedure performed on 10/2/15. Pt extubated and re-intubated on 10/7/15, dx hypoxia. Documentation that pt was intubated on arrival to our facility on 9/20/15. Do I collect respiratory failure (#1800) as a post-op event? **Yes**

April 2016: After reviewing post-op events and compilations, my surgeon would like clarification. The patient underwent a therapeutic wedge, and did NOT require re-intubation. She was dc'd home 2 days post-op and was extubated on post-op day 1 (unable to wean in OR; intubation kept due to high O₂ requirements per notes (pt was on home O₂ prior). Just after surgery she was very slightly hypercapnic with low tidal volumes. We also have 1 MD note that states pt suffered from post-op respiratory insufficiency. Pt was not coded as Resp Failure. We are unsure if this is Resp Failure, Pulm Other, or nothing (esp given she was able to go home so soon after the operation). **This is "Nothing".**

April 2016: If a patient arrives to next level of care (example: ICU), vented and intubated after their procedure, would this be considered Respiratory Failure? **No, the patient was not re-intubated.**

April 2016: We have a patient who was coded as a Resp Failure complication due to a several mentions of post-op Resp Failure in MD documentation, low P_{O2} on the day after surgery, and a brief period of apnea just after surgery treated with a 30 minute re-intubation (for SpO₂ of 91%, poor ventilatory effort and minimal breath sounds). Pt was able to go home 3 days after surgery. Is this an appropriate use of this complication / event? **Yes, the patient was re-intubated, this is Respiratory Failure.**

April 2016: For a patient who met basic indicators for the Resp Failure post-comp (per blood gases and MD documentation of post-op resp failure, but who was not re-intubated) which was expected due to the severity of the

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pt's pre-existing illness and indications for surgery and who was made DNR several weeks after the initial surgery, is this an appropriate application of the Resp Failure complication / event? **No, the patient was not re-intubated.**

April 2016: Can you provide additional information on an issue which would impact many cases? There is significant concern with collecting "respiratory failure" events in highly acute patients with long term histories of respiratory issues, including patients for which the indication for surgery was "respiratory failure". Is it appropriate to code Resp Failure for an immediate re-intubation just after surgery which was then removed the day after surgery? **Yes it is appropriate to document Respiratory Failure since the patient was re-intubated. This meets the definition of Respiratory Failure.**

April 2016: We need to clarify a rule which was mentioned on one of the phone calls, which is causing some disagreement between reviewers. Can you please confirm or deny that the following application of a post-op complication of Resp Failure is correct or not: Code as a Resp Failure Event if the pt leaves the OR intubated (at all, even if extubated in PACU) and in this particular case, the pt was extubated the next day. The context is in a pt with chronic resp failure who had a trach in place well prior to this procedure. **This is not a Respiratory Failure.**

April 2016: "There is a question about the "pre-existing" and "related to the surgery", esp. as it applies to a finding of post-op Respiratory Failure in patients' seriously ill prior to surgery (and in this case, was admitted for acute resp failure). Given Resp Failure was the indication for surgery, is it also reasonable to be a complication of the same surgery? In this case, the pt left the OR intubated and was not extubated until several days later, and did have serious post-surgical resp issues unable to be fixed by the surgery and eventually expired. Is this an appropriate finding of post-operative Respiratory failure, per STS?" **No**

April 2016: Does specific physician documentation of "hypoxic respiratory failure" count as the post-op event respiratory failure; or are mechanical ventilation and/or reintubation the only circumstances which qualify as respiratory failure? **This is hypoxia. Must have mechanical ventilation and / or reintubation.**

July 2016: The patient was extubated in the OR. Immediately upon arrival to the PACU post anesthesia care unit, the patient was re-intubated due to "an inability to protect his airway secondary to hypercapnia and delirium" because of "postoperative anesthesia emergence confusion". Do I code respiratory failure (because patient did require reintubation)? **Yes** Do I code delirium? **Yes** Do I code unexpected admission to ICU? **Yes** Questioning because I take this to mean it is directly related to anesthesia and not to the actual procedure.

November 2017: This patient was trached prior to surgery. Post-op the patient was kept on the vent >48hr. (Initial Vent Support >48h-YES), but weaning trials began. The patient is on a trach collar during the day, but returned to vent support (pressure support) overnight. Does this qualify as Respiratory Failure? **Yes.** Similar to this situation, if efforts are made to wean the patient from the vent, but intermittent use of vent support continues during the weaning process, does is also qualify as a yes to Respiratory Failure? **Yes. Until the patient is breathing fully on their own any use of ventilator support is considered respiratory failure.**

Seq. #: 1810

Long Name: Bronchopleural Fistula

Short Name: Bronchopleural

Definition: Indicate if the patient experienced a documented bronchopleural fistula in the postoperative period.

Bronchopleural fistula is defined as a major bronchial air leak requiring intervention such as a chest tube, operation, or other procedure.

Intent/Clarification:

There may be a complete or partial dehiscence of the bronchial stump in the postoperative period.

Seq. #: 1820

Long Name: Pulmonary Embolus

Short Name: PE

Definition: Indicate whether the patient experienced a Pulmonary Embolus in the postoperative period as experienced by a V/Q scan, angiogram or spiral CT.

Intent/Clarification:

Seq. #: 1830

Long Name: Pneumothorax

Short Name: Pneumo

Definition: Indicate whether the patient experienced a postoperative pneumothorax requiring chest tube reinsertion.

Intent/Clarification:

Only code a pneumothorax that required reinsertion of a chest tube. Do not code pneumothorax mentioned on CXR but not treated.

Example:

Patient went home with Heimlich Valve due to "small apical pneumothorax." The definition for Post-op events states: "pneumothorax requiring chest tube reinsertion." This patient never had his removed, they just left it in. Does this count as a post op event or not? Code this as air leak >5 days, not pneumothorax.

November 2016: Patient had their chest tube removed. The next day, the patient developed a pneumothorax and had a '8Fr tube thoracostomy - air evacuated without persistent air leak.' Would this be captured as 'Pneumothorax requiring CT reinsertion' or 'other pulmonary event?' **This would be pneumothorax requiring CT reinsertion.**

August 2017: Since pt went to back to OR due to continued pneumo (chest tube had not been removed) where the original chest tube was removed and 2 new chest tubes inserted. Does this qualify as chest tube reinsertion since the first one was not removed until the new tubes were inserted? **Yes, because a new CT was inserted. Any new CT meets the criteria.**

Seq. #: 1840

Long Name: Initial Vent Support >48 Hours

Short Name: Vent

Definition: Indicate if the patient initially was ventilated greater than 48 hours in the postoperative period.

If the patient is reintubated, select the postoperative event "Respiratory failure" and do not select this element even if the reintubation ventilator support is > 48 hours. Ventilator support ends with the initial removal of the endotracheal

tube or if the patient has a tracheostomy tube, until no longer ventilator dependent. Unanticipated extubation or tube dislodgement with reintubation should be considered ongoing ventilator support and not reintubation.

Intent/Clarification:

The length of initial ventilatory support should be noted once the patient has the endotracheal tube removed after the operative procedure. For patients that are re-intubated in the operating room at the conclusion of the operation, this should still be considered initial ventilator support and not re-intubation.

11/15 - Do we capture Seq 1840 Vent Support >48 hours as "yes" for patients on preoperative ventilator support? **No because #1840 is capturing new post op events.**

12/15: For the following definition my understanding is that it is for initial vent only. If the patient is extubated and re-intubated post procedure and exceeds, 48 hrs do we capture this as initial vent support >48 hrs? **Yes, In this case put Respiratory Failure**

November 2016: A patient has a lobectomy is extubated and then is taken back to surgery (that is not analyzed). The patient is then left intubated for a few days after the second procedure. Would you mark respiratory failure or prolonged intubation? **This situation would be respiratory failure based on the definition above.**

September 2017: Our pt had a trach placed during their surgery for an Esophagectomy. They are on and off the vent with trials that takes longer than 48 hours before the vent is removed. If I read the definition correctly, Ventilator support ends with the initial removal of the endotracheal tube or if the patient has a tracheostomy tube, until no longer ventilator dependent. Also please clarify, if a pt is taken off the vent for trach trials and put back on the vent for rest or at night for >48 hrs, is this coded as initial vent support >48hrs. Does this include being put back on for rest, at night or not? **Yes, initial ventilator support > 48 hours should be coded in this situation. The patient had vent support for more than 48 hours even though they were removed for short periods of time.**

December 2017: Patient ETT is switched at end of case to single lung ventilation. in calculating the 48hrs of intubation, do you count initial intubation times at beginning of case until extubation?. or is it from time out of OR until Extubation? and in this case is it time of tube switch at end of case in OR until extubation. My patient initial intubation at beginning of case is 0750 extubation is 2 days later at 0947. (I would code intubated >48hrs) but tube changed at 1624 in OR and time leaving OR is 1632 and two days later extubated at 0947. (I would not code intubated >48hrs). **Use the time the patient left the OR to the time of extubation.**

Seq. #: 1860

Long Name: Tracheostomy

Short Name: Trach

Definition: Indicate whether the patient required a tracheostomy in the postoperative period whether performed in the ICU or the OR.

Intent/Clarification:

Do not include changing out a tracheostomy tube that was present preoperatively or tracheostomy done intraoperatively, during the initial operation.

Prophylactic mini-tracheostomy performed during surgery should not be considered a complication.

12/15: Arrived at our facility on 10/4/15, respiratory failure intubated on 10/9/15. Had thoracic procedure FFB, R VATS decortication 10/12/15. Unable to wean from vent, trach done 10/21/15. Would this be considered a post-op event for this case, since the pt was intubated pre-proc? **Yes**

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Seq. #: 1861

Long Name: Tracheobronchial Injury

Short Name: TrachbronchInj

Definition: Indicate whether a tracheobronchial injury occurred.

Intent/Clarification:

Seq. #: 1870

Long Name: Other Pulmonary Event

Short Name: OtherPul

Definition: Indicate whether another pulmonary event occurred in the postoperative period.

Intent/Clarification:

Pulmonary events not listed that extend the length of stay or impact the patient's outcome.

Example: BiPap

09/15: Would a diagnosis of "re-expansion edema" or "reperfusion injury" qualify for Other Pulmonary Event?

If treated and extended length of stay, then yes.

09/15: Patient was sent home on O2. The patient was not previously on home O2. Should this be captured as a post op event under "Other Pulmonary"? The patient was sent home on O2 for use during recovery period. It was not unanticipated. **Yes, it should be captured. It doesn't matter if it was anticipated. This is an event, not a complication.**

April 2016: We would like some guidance regarding a potential "post op complication". In this case, the patient had "new onset left-sided atelectasis/effusion" in the pre-op period. After surgery this complication required continued medical management and pt did experience pulmonary distress that extended the stay somewhat (increasing SOB, etc). Is this a valid "pulm other" event because it impacted the LOS and was treated, or should it be removed b/c it began in the pre-op period and was an indication for surgery? **No, do not include this as a post-operative event. It was the indication for surgery.**

June 2017: If a patient comes in with an empyema and then goes home with an empyema drain is that a post op event or not? **No, this is not a post-operative event.**

September 2017: Would Hydropneumothorax with CT insertion be recorded here? Also, I can no longer find any sort of FAQs for thoracic. Do they exist beyond 2011??? **No, this would be PTX requiring CT or you could use pleural effusion requiring drainage, whichever is greater (air or fluid). All FAQs can be found in the GTSD Training Manual.**

January 2018: Pt came in for reoccurring ptx. Chest tube placed in the ED and had a VATS with explication of bullae the following day. This chest tube was d/ced on POD #3. In the evening, on POD#4 patient complained of some new abdominal pain, and bruising on his right flank, and a CT thorax was ordered which showed a new large right hydropneumothorax with some shift of the heart to the left. A 14F Wayne cook catheter was placed and placed to LWS and was eventually d/ced on POD#10. Do I code this as a post op event with #1870? Or 1830? Or 1770? Or nothing at all as this is a pre-existing condition? It is just that it was an 11 day hospitalization for a bleb resection and or maybe I am just over coding this? **Code 1770, post op pleural effusion requiring drainage.**

Seq. #: 1880

Long Name: Atrial Arrhythmia Requiring Treatment

Short Name: AtrialArryth

1/2018

Definition: Indicate whether the patient had a **new onset** of atrial fibrillation/flutter (AF) **requiring treatment**. Does not include recurrence of AF which had been present preoperatively.

Intent/Clarification:

This field is intended to capture **new onset of atrial arrhythmias that requires treatment**. Treatment may include medications to slow the heart rate, increase the blood pressure, or any anti-coagulation administered for embolic prophylaxis. This does not include those patients with a preoperative history of atrial arrhythmias.

Seq. #: 1890

Long Name: Ventricular Arrhythmia Requiring Treatment

Short Name: VentArryth

Definition: Indicate whether the patient, in the postoperative period, experienced sustained ventricular tachycardia and/or ventricular fibrillation that has been clinically documented and treated with any of the following treatment modalities:

1. ablation therapy
2. AICD
3. Permanent pacemaker
4. Pharmacologic treatment
5. Cardioversion

Intent/Clarification:

Atrial fibrillation with rapid ventricular response (RVR) is not a ventricular arrhythmia.

Seq. #: 1900

Long Name: Myocardial Infarct

Short Name: MI

Definition: Indicate if the patient experienced a MI postoperatively as evidenced by:

1. Transmural infarction: Defined by the appearance of a new Q wave in two or more contiguous leads on ECG, or
2. Subendocardial infarction: (non-Q wave) Infarction, which is considered present in a patient having clinical, angiographic, electrocardiographic, and/or
3. Laboratory biomarker (CPK, Troponin) evidence of myocardial necrosis with an ECG showing no new Q waves

Intent/Clarification:

Seq. #: 1910

Long Name: DVT Requiring Treatment

Short Name: DVT

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Definition: Indicate whether the patient has experienced a deep venous thrombosis (DVT) confirmed by doppler study, contrast study, or other study that required treatment.

Intent/Clarification:

Patients who have a "follow up" for a DVT, confirmed in the postoperative phase as "chronic" or dictation states "no significant interval change" should not be counted, even if the patient requires anticoagulation.

July 2016: Our question concerns the "DVT requiring treatment" comp. Should this be assigned in the following circumstance: 1 day prior to surgery, pt was dx'd with a PE (in fact, PE was an indication for this surgery) and was on prophylaxis anticoagulants while hospitalized. After surgery a, "nonDVT of the left basilic vein and left arm" is documented (ie a thrombus was noted, but not in a "deep" area). Would the DVT complication apply? **It would not apply; it is not a DVT.**

November 2017: Patient required Intraoperative VV ECMO with cannulation in the IVC prior to thoracic procedure but within the same operation. Post-operative has clot in IVC. Is this coded as Deep Vein thrombosis as a postoperative complication? **Yes, this is coded as a DVT.**

Seq. #: 1920

Long Name: Other Cardiovascular Event

Short Name: OtherCV

Definition: Indicate whether any other CV event occurred including distal arterial embolism in the postoperative period.

Intent/Clarification:

Cardiovascular events not listed that extend the length of stay or affected the patient's outcome.

Example: Pericardial effusion, pericarditis, etc.

09/15: Patient had profound hypertension post-op and received IV nicardipine. This extended her hospital stay. She had known HBP and an aortic dissection prior to surgery. Where is this captured as a post-op event? **Other Cardiovascular Event.**

11/15 - A patient sustains a cardiac arrest (asystole) in the recovery area following surgery. Should this be entered in "Other Cardiovascular event" or "Ventricular Arrhythmia". **If the asystole was preceded by VT, then yes. Otherwise code "other cardiovascular event"**

April 2016: We would like a ruling on a case. The only somewhat cardiac related event is a run of tachycardia (up to 130) which began after (and quickly resolved) once nebulizers were dc'd. Is this truly a cardio other comp? Our Surgeon vehemently believes it is not. It does not seem to be reasonably grouped in the items listed in this field, although the pt was kept for 1 additional day to observe. **The tachycardia was not treated so this is not a post-operative event.**

July 2016: Is the "other cardiac" comp appropriate in the following case: On the first post-op day, the pt begins to c/o of hypotension and low urine output which is treated with albumin and fluid resuscitation, and eventually attributed to hypovolemia. Do not believe it actually extended the stay and was definitely resolved by DC, although it was an issue for several post-op days. Pt is normally hypertensive. **No, hypotension is not 'cardiac, other'.**

October 2016: We have a pt who had new post op sinus bradycardia, which was treated and likely extended the stay by 1 day. However, this pt was also under the care of a Cardiologist and has a hx of significant cardiac issues pre-dating the thoracic surgery. Is this CV other, even though it seems unlikely to be associated with the thoracic surgery itself as determined by the thoracic Surgeon? **Yes, this is a post op event; 'Cardiac, other'.**

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December 2016: Patient had a segmentectomy, came back as an OBS patient with chest pain, cardiac work up was negative for cardiac ischemia, did not capture readmit, but since cardiac work up is negative- do I still capture this as a post op event under CV. **No, this is not a post op event.**

December 2016: If a patient has severe symptomatic bradycardia due to medications and required transfer to ICU overnight but did not prolong hospital stay, would I capture this as Other CV event? **No, this is not a CV event. The additional ICU day would be captured, though.**

June 2017: Would you collect Other cardiovascular event with the documentation stated below:

1. Hypertension: She was noted to have hypertension in the immediate postoperative period. She was started on Lopressor 25 mg BID. She continued to have elevated blood pressures, her Lopressor was increased to 50 mg BID. With the increase in Lopressor her blood pressure normalized. She will be discharged home with Lopressor 50 mg BID. She met all requirements for safe discharge to home. **No**

July 2017: Would it be appropriate to assign a Cardiac, Other complication for a pt who had previously converted to palliative care status and expired while hospitalized (already accounted as death at DC)? The MD stated respiratory failure was cause of death, but initial reviewer assumed cardiac arrest also occurred. But would that not mean every pt who dies in-house should have this comp applied? **If the patient had a cardiac arrest, you can code Other CV. Other CV does not apply to every death.**

July 2017: Please help rule on the following: Pt has a known history of AFIB, so that comp is not assigned. However, the pt experienced enough issues related to AFIB after the thoracic surgery that they required a transfer to a cardiac specialty unit (but not ICU level) in order to effectively manage. Would a comp of "cardiac other" be appropriate in this circumstance? **Transferring to a telemetry unit alone would not necessitate Other CV event. If it significantly extended the patient's length of stay, or other interventions were required, then you could mark Other CV.**

Seq. #: 1940

Long Name: Ileus

Short Name: Ileus

Definition: Indicate whether the patient experienced an ileus lasting > 3 days as defined by limited GI motility requiring treatment (e.g., nasogastric tube insertion for decompression, etc.) in the postoperative period.

Intent/Clarification:

April 2016: We would like clarification regarding a complication finding of GI Ileus. This patient, while he did receive the dx of GI ileus for the first time after the surgery (was considered pre-existing but made worse by narcotics given post-op), has a many year hx of SBO and a colostomy, and was followed by a specialist for all of the above. In addition, Diagnostic Imaging showed that a GI obstruction "could not be excluded" which doesn't mean it is definitely present either. Given this significant history, should the GI comp apply? The thoracic surgery was a therapeutic wedge. **Yes, count the ileus.**

Seq. #: 1950

Long Name: Anastomosis Requiring Medical Treatment Only

Short Name: AnastoMed

Definition: Indicate whether the patient experienced an esophageal anastomosis leak that required medical management only (i.e., interventional radiation (IR) drainage, NPO, antibiotics, etc.) If a leak occurs on Barium Swallow only and does not require surgical intervention/drainage, (i.e., treated with NPO and delay in oral intake), then code this element as "Yes".

Intent/Clarification:

Placement of a drain under image guidance (CT scan or ultrasound) is considered medical treatment of an anastomotic leak.

October 2016: The manual has example of IR drainage as a medical treatment. We have patient who had small delayed leak was treated with EGD and stent. Would it be appropriate to code this post op event here (1950) vs. return to OR (1720) since technically the patient is not surgically re-opened although the EGD takes place in an OR. **The EGD and stent would be considered medical treatment; not surgical.**

February 2017: if a patient has an anastomotic leak post esophagectomy, and requires a stent (done in the endoscopy lab) post procedure, how is this best coded? Should I code 'yes' to seq # 1950 or should I code yes seq # 1980? **Code 'yes' to 1950; it required treatment.**

December 2017: Patient has an esophagectomy. Post op leak with pleural effusion. Antibiotics started, NPO, CT placed draining bilious fluid, no fever, no increase in WBC. Pleural fluid with positive culture. I captured #1950 anastomotic leak for postop complication. Would you also capture #2060 for Organ space SSI or is infection part of Leak sequela? **The infection is part of the leak. Just capture the leak.**

Seq. #: 1970

Long Name: Dilation Of The Esophagus

Short Name: DilationEsoph

Definition: Indicate whether the patient required dilation of the esophagus within the postoperative period.

Intent/Clarification:

This includes the entire 30-day post-op period.

Seq. #: 1971

Long Name: Conduit Necrosis Requiring Surgery

Short Name: CondNecSurg

Definition: Indicate whether a conduit necrosis/failure occurred requiring surgery.

Intent/Clarification:

Seq. #: 1972

Long Name: Delayed Conduit Emptying Requiring Intervention

Short Name: DelayCondEmp

Definition: Indicate whether delayed conduit emptying required intervention such as pyloric dilation, botox injection, and/or maintenance of NG drainage for more than seven days.

Intent/Clarification:

08/15: Does 'maintenance of NG drainage for more than 7 days' as a post-op event apply only to patients who had some type of conduit procedure? **No, capture this for all patients.**

Seq. #: 1973

Long Name: Clostridium Difficile Infection

Short Name: CDiff

Definition: Indicate whether a clostridium difficile infection developed in the postoperative period.

Intent/Clarification:

September 2017: The patient has CDiff; you indicated "Yes". My thoracic team has documented; "Stool + for Cdiff , but on Flagyl." So I go to the lab results and there is a stool for Cdiff positive and a Cdiff strain negative. "A positive result on a patient with no prior antibiotic exposure likely represents colonization" The patient is on antibiotics so for the database do I capture this one as Seq1973 Cdiff infection yes or no? The training manual gives no exceptions. They either have c dif and we mark YES or they don't have it and we mark NO. **The patient has CDiff; you indicated "Yes".**

Seq. #: 1980

Long Name: Any Other GI Event

Short Name: OtherGI

Definition: Indicate if the patient experienced any other GI events in the postoperative period.

Intent/Clarification:

Gastrointestinal events not listed that extended the length of stay or affected the patient's outcome.

09/15: If patient has pre-operative history of recurrent SBO and is readmitted with SBO post-op, is this counted as a post-op event – history is dictated? **Yes, this is a post-op event.**

June 2016: A pt has repair of a paraesophageal hernia and is discharged. They return within 30 days for a redo. I answered yes to Postop Events, Other events requiring OR with general anesthesia. Should I also say yes to Other GI Events since there was a recurrence of the hernia requiring the redo? What are other examples for this field? **No, just use the OR with general anesthesia. 'Other GI' are GI events that impact recovery and LOS such as intractable nausea.**

February 2017: Patient had repair of perforated esophagus. Patient was found to have persistent leak on esophagram and eventually had a stent placed. How do I capture this? **Other GI Events**

July 2017: Patient had Ivor-Lewis esophagogastrectomy and placement of J-tube. 3 weeks after discharge, went to other hospital ER for nausea/vomiting and abdominal pain and received Potassium tabs via J-tube. Thereafter came to our ER w/ clogged J-tube which was successfully replaced by Interventional Radiology. Would this be considered "other GI event"? Different circumstances, would fecal impaction be "other GI event"? What about nausea/vomiting after esophagectomy? **Would not count N/V as an event. Collecting Other GI is fine for j tube replacement**

Seq. #: 1990

Long Name: Postoperative Packed Red Blood Cells

Short Name: PostopPRBC

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Definition: Indicate whether the patient received packed Red Blood Cells (RBC) postoperatively.

Intent/Clarification:

Do not count packed cells given or started in the OR during the initial operation.

April 2016: Our MD has a question on several post-op events. In this case, the patient arrived due with a very significant trauma, and first underwent the thoracic procedure, then in the next few days had a very large ortho surgery to deal with many broken bones. Because the thoracic surgery was first, we coded "other OR" (even though it has no relation to the initial surgery), PRBC's (given day of 2nd surgery but before the operation), and the pt experienced delirium in rehab (within the 30 days) related to a medication. Our question is, are these correct since it is highly unlikely any of these comps arose from the first surgery? Delirium was associated with a medication this surgeon never even ordered. **This is correct. All the post op events must be captured. If a thoracic surgeon operates on a patient all events that occur within the 30 day window belong to the surgeon.**

Seq. #: 2000

Long Name: Postoperative Packed Red Blood Cells - Units

Short Name: PostopPRBCUnits

Definition: Indicate the number of packed RBC units the patient received postoperatively prior to discharge.

Intent/Clarification:

Seq. #: 2010

Long Name: Urinary Tract Infection

Short Name: UTI

Definition: Indicate if the patient experienced a urinary tract infection (with positive urine cultures postoperatively) requiring treatment.

Intent/Clarification:

Positive urine culture and treatment required. Do not code based on urinalysis results only.

September 2017: Regarding the UTI comp: Pt has a hx of recurrent UTI (5 episodes in 3 months prior

to admission; had surgery to attempt to decrease incidence and takes daily UTI preventative meds). Had UTI prior to surgery and the UTI script ended the day of the STS procedure. Pt develops yet another UTI approx a week after DC (in "post-op period" of thoracic procedure). Do we need to apply UTI comp or can we not apply due to pre-existence?

Check the patient's UA prior to surgery. If there was no indication of a UTI prior to surgery then the UTI one week post - op is a post - op event you must capture this as a UTI post - operative complication.

November 2017: Patient was started on Cipro for assumed UTI (based on UA only) & Dr. documented that in chart. Do I code this as a post-op complication? **No, this is not documented as a UTI. Urine culture was no done.**

Seq. #: 2020

Long Name: Urinary Retention

Short Name: UrinRetent

Definition: Indicate whether the patient experienced urinary retention requiring catheterization.

Intent/Clarification:

Patient's requiring a straight cath count as a catheterization and should be captured unless this condition existed prior to surgery.

09/15: If patient has pre-operative BPH and history of urinary retention, and has to have an I/O cath post-op for retention, is this counted as a post-op event if there is no dictation of history? **Yes, it is a post-op event.**

July 2016: Is this only captured if re-insertion of foley? Surgeon would like to know if we need to capture this event if patient did not have a foley placed intra-operatively. They are NOT routinely placing foley catheter in the intra-operative period in an effort to avoid CAUTI. They feel they should not then be penalized for the few patients who may need foley post-operative. **Yes, you must capture this. The patient is requiring catheterization due to urinary retention.**

Seq. #: 2030

Long Name: Discharged With Foley Catheter

Short Name: DischFoley

Definition: Indicate whether the patient was discharged with a Foley catheter in place.

Intent/Clarification:

09/15: Does this apply to all patients, without regard to whether their discharge status is alive or dead? **Do not capture unless patient went home alive with catheter.**

Seq. #: 2040

Long Name: Empyema Requiring Treatment

Short Name: Empyema

Definition: Indicate whether the patient experienced an empyema requiring treatment in the postoperative period (i.e., chest tube drainage by interventional radiology, etc.).

Intent/Clarification:

Empyema refers to an infected pleural space requiring additional antibiotic coverage or placement of additional chest tubes/drains.

Diagnosis of empyema should be confirmed by thoracentesis: frank pus or cloudy fluid may be aspirated from the pleural space. The fluid typically has leukocytosis, low pH (<7.2), low glucose (<60 mg/dl) high LDH, elevated protein and may contain infectious organisms.

09/15: A patient was readmitted to the hospital within 30 days of discharge, treated for empyema with CT and antibiotics. When the cultures returned as negative treatment was stopped. Is this still considered empyema as a complication? **Why did they think it was an empyema initially? Need more information. Capture readmission and whatever the final diagnosis was.**

August 2016: When a patient has a post-op Empyema, does it also count as an Organ Space SSI? The thoracic cavity is manipulated in surgery for both esophageal and lung resections. Many of our patients that are diagnosed with

empyema meet criteria with the presence of purulence from the CT along with diagnostic imaging. **Only capture one. The empyema covers the SSI.**

December 2017: Patient had an esophageal perforation with stent and VATS washout. Pleural fluid culture from OR is positive. Is this empyema or Organ space Infection? Patient is readmitted with posterior fluid collection, pigtail is placed put on antibiotics- Is this empyema or organ space infection? **Every empyema is an organ space infection. It is not necessary to capture it twice. Empyema is more specific than SSI.**

Seq. #: 2060

Long Name: Surgical Site Infection

Short Name: SurgSiteInfect

Definition: Indicate the extent of surgical site infection if one was present within 30 days of surgery.

Intent/Clarification:

Refer to the most current CDC definition for SSI which can be found in the training manual.

- None

No evidence of surgical site infection

- Superficial

Must meet the following criteria: Infection occurs within 30 days **and** involves only skin and subcutaneous tissue of the incision **and** patient has at least one of the following:

- purulent drainage from the superficial incision.
- organisms isolated from an aseptically-obtained culture of fluid or tissue from the superficial incision.
- superficial incision that is deliberately opened by a surgeon, attending physician or other designee and is culture positive or not cultured **and** patient has at least one of the following signs or symptoms: pain or tenderness; localized swelling; redness; or heat. A culture negative finding does not meet this criterion.
- diagnosis of a superficial incisional SSI by the surgeon or attending physician or other designee.

There are two specific types of superficial incisional SSIs:

- Superficial Incisional Primary (SIP) – a superficial incisional SSI that is identified in the primary incision in a patient that has had an operation with one or more incisions
- Superficial Incisional Secondary (SIS) – a superficial incisional SSI that is identified in the secondary incision in a Patient that has had an operation with more than one incision

Do not include:

A stitch abscess alone (minimal inflammation and discharge confined to the points of suture penetration)

A localized stab wound or pin site infection.

Diagnosis of “cellulitis” by itself

09/15: Patient had a neck exploration with resection of tracheocutaneous fistula and primary repair with reconstruction using a sternohyoid muscle flap. A penrose drain and JP drain were placed. Four days after surgery the patient had erythema and purulent drainage at the penrose site. A culture was obtained which was + for MRSA. The drain was pulled and bactroban was ordered for the area. The patient did not have any fever or leukocytosis. Would this be counted as a superficial SSI? **Yes.**

- Deep incisional SSI

Must meet the following criteria: Infection occurs within 30 days after the operative procedure **and** involves deep soft tissues of the incision (e.g., fascial and muscle layers) **and** patient has at least one of the following:

- a. purulent drainage from the deep incision.
- b. a deep incision that spontaneously dehisces or is deliberately opened by a surgeon, attending physician or other designee and is culture-positive or not cultured **and** patient has at least one of the following signs or symptoms: fever ($>38^{\circ}\text{C}$); localized pain or tenderness. A culture negative finding does not meet this criterion.
- c. an abscess or other evidence of infection involving the deep incision that is detected on direct examination, during invasive procedure, or by histopathologic examination or imaging test.

There are two specific types of deep incisional SSIs:

1. Deep Incisional Primary (DIP) – a deep incisional SSI that is identified in a primary incision in a patient that has had an operation with one or more incisions
2. Deep Incisional Secondary (DIS) – a deep incisional SSI that is identified in the secondary incision in a patient that has had an operation with more than one incision

- Organ/Space SSI

Must meet the following criteria: Infection occurs within 30 days after the operative procedure **and** infection involves any part of the body, excluding the skin incision, fascia, or muscle layers, that is opened or manipulated during the operative procedure **and** patient has at least one of the following:

- a. purulent drainage from a drain that is placed into the organ/space (intra-abdominal abscess)
- b. organisms isolated from an aseptically-obtained culture of fluid or tissue in the organ/space
- c. an abscess or other evidence of infection involving the organ/space that is detected on direct examination, during invasive procedure, or by histopathologic examination or imaging test **and** meets at least one criterion for a specific organ/space infection of mediastinitis below

MED-Mediastinitis

Mediastinitis must meet at least 1 of the following criteria:

1. Patient has organisms cultured from mediastinal tissue or fluid obtained during an invasive procedure.
2. Patient has evidence of mediastinitis seen during an invasive procedure or histopathologic examination.
3. Patient has at least 1 of the following signs or symptoms: fever ($>38^{\circ}\text{C}$), chest pain*, or sternal instability* **and** at least 1 of the following:
 - a. purulent discharge from mediastinal area
 - b. organisms cultured from blood or discharge from mediastinal area
 - c. mediastinal widening on imaging test.

* With no other recognized cause

Report mediastinitis following cardiac surgery that is accompanied by osteomyelitis as SSI-MED rather than SSI-BONE

October 2016: The training manual does not specify but is the Surgical Site Infection variable limited to the thoracic surgery site? For example, if a patient has a PEG site infection postoperatively does this count for surgical site infection? A patient has had this occur along with an unplanned return to OR for this issue and Other Infection req. Antibiotics for this issue marked as postop events. Would this case also get marked as surgical site infection? **Yes. Any surgical site infection counts.**

December 2017: Patient has an esophagectomy. Post op leak with pleural effusion. Antibiotics started, NPO, CT placed draining bilious fluid, no fever, no increase in WBC. Pleural fluid with positive culture. I captured #1950 anastomotic leak for postop complication. Would you also capture #2060 for Organ space SSI or is infection part of Leak sequela? **The infection is part of the leak. Just capture the leak.**

January 2018: Patient is S/P total gastrectomy the midline laparotomy incision is opened and packed by surgeon for concerns of infection. The JP drain is also cultured and is positive. There is evidence of a superficial SSI and also an Organ space SSI. Which would you choose on the Data collection form? **Choose the Organ space SSI because it is worse.**

Seq. #: 2070**Long Name:** Sepsis**Short Name:** Sepsis**Definition:** Indicate whether the patient experienced sepsis (septicemia) requiring positive blood cultures in the postoperative period.**Intent/Clarification:**

Sepsis is defined as evidence of serious infection accompanied by a deleterious systemic response. In the time period of the first 48 postoperative or post procedural hours, the diagnosis of sepsis requires the presence of a Systemic Inflammatory Response Syndrome (SIRS) resulting from a proven infection (such as bacteremia, fungemia or urinary tract infection). In the time period after the first 48 postoperative or post procedural hours, sepsis may be diagnosed by the presence of a SIRS resulting from suspected or proven infection. During the first 48 hours, a SIRS may result from the stress associated with surgery and/or cardiopulmonary bypass. Thus, the clinical criteria for sepsis during this time period should be more stringent. A systemic inflammatory response syndrome (SIRS) is present when at least two of the following criteria are present: hypo- or hyperthermia (>38.5 or <36.0), tachycardia or bradycardia, tachypnea, leukocytosis or leukopenia, or thrombocytopenia.

Indicate whether sepsis was diagnosed within 30 days of surgery.

July 2017: If a patient has sepsis before surgery and has it again post op do I count it as a post op event?

If a patient has a pre-existing anemia prior to surgery do we count blood in the OR if given? And again if it is given post op? These are questions my surgeons asked me to clarify. **If they were septic prior to surgery, then it is pre-existing so it's not counted post-op. If it reoccurred post op and they had positive blood cultures, then you could mark Yes for sepsis. Count any intra-op blood given at seq# 1450 and post-op blood as a po event, seq# 1990.**

Seq. #: 2080**Long Name:** Other Infection Requiring IV Antibiotics**Short Name:** OtherInfect**Definition:** Indicate whether the patient experienced any other infection requiring IV antibiotics.**Intent/Clarification:**

October 2016: Regarding these infection complications, specifically 2080, there is no guidance on whether this is an event and counts incidence only, or whether it is sensitive to the infection's pre-existence prior to surgery. Another issue is how do we code folks who are HIV+, who are highly likely to endure multiple infections of many types that have nothing to do with intervention? **If the infection is present pre-operatively and treated post-operatively, it is not a post op event. For all patients, if the infection develops post-operatively, then it is a post op event.**

May 2017: Pt is admitted 10 days post DC with swelling, redness of underneath breast area (underneath the incision) along with WBC 10.45 (afebrile). OR 13 days earlier, removal of breast implant, resection of right chest wall malignancy with placement of Gortex patch and reconstruction with new implant. It is markedly tender to palpation. CT Scan shows fluid collection deep to the implant within the breast capsule anterior to the Gortex mesh. It is felt that the fluid collection posterior to the implant is not accessible to perc drainage. Pt is started on IV antibiotics, then sent home on oral antibiotics. Would this be collected as "Other infection requiring IV antibiotics, or as surgical site infection? **Not enough information to determine. Cannot tell if infection is from implant or Gortex. SSI requires an "extent" of**

infection. Training Manual has very specific criteria for determining the extent of a surgical site infection. Ask surgeon if this is SSI or 'other infection'.

Seq. #: 2090

Long Name: New Central Neurological Event

Short Name: CentNeuroEvt

Definition: Indicate whether the patient experienced any of the following neurological events in the postoperative period that was not present preoperatively:

1. A central neurologic deficit persisting postoperatively for > 72 hours.
2. A postoperatively transient neurologic deficit (TIA recovery within 24 hours; reversible ischemic neurologic deficit with recovery within 72 hours).
3. New postoperative coma that persists for at least 24 hours secondary to anoxic/ischemic and/or metabolic encephalopathy, thromboembolic event or cerebral bleed.

Intent/Clarification:

Stroke

Occurs when the blood supply to part of the brain is suddenly interrupted or when a blood vessel in the brain bursts, spilling blood into the spaces surrounding brain cells or blood flow is otherwise obstructed. Brain cells die when they no longer receive oxygen and nutrients from the blood or there is sudden bleeding into or around the brain. The symptoms of a stroke persist for 24 hours or more and may include sudden numbness or weakness, especially on one side of the body; sudden confusion or trouble speaking or understanding speech; sudden trouble seeing in one or both eyes; sudden trouble with walking, dizziness, or loss of balance or coordination; or sudden severe headache with no known cause. There are two forms of stroke: *ischemic* - blockage of a blood vessel supplying the brain, and *hemorrhagic* - bleeding into or around the brain. Central events are caused by embolic or hemorrhagic events. Neurological deficits such as confusion, delirium and/or encephalopathic (anoxic or metabolic) events are not to be coded in this field.

Transient Ischemic Attack (TIA)

A TIA is a transient neurologic event that lasts less than 24 hours, sometimes only for a few minutes. It occurs when the blood supply to part of the brain is briefly interrupted. TIA symptoms, which usually occur suddenly, are similar to those of stroke but do not last as long. Most symptoms of a TIA disappear within an hour, although they may persist for up to 24 hours. Symptoms can include: numbness or weakness in the face, arm, or leg, especially on one side of the body; confusion or difficulty in talking or understanding speech; trouble seeing in one or both eyes; and difficulty with walking, dizziness, or loss of balance and coordination. Patients who have suffered a TIA have an increased risk of peripheral and coronary artery atherosclerosis, and an increased risk of subsequent heart attack and stroke.

Coma

Sometimes also called persistent vegetative state, is a profound or deep state of unconsciousness. Persistent vegetative state is not brain-death. An individual in a state of coma is alive but unable to move or respond to his or her environment.

Encephalopathy is a term for any diffuse disease of the brain that alters brain function or structure. Encephalopathy may be caused by infectious agent (bacteria, virus, or prion), metabolic or mitochondrial dysfunction, brain tumor or increased pressure in the skull, prolonged exposure to toxic elements (including solvents, drugs, radiation, paints, industrial chemicals, and certain metals), chronic progressive trauma, poor nutrition, or lack of oxygen or blood flow to the brain. The hallmark of encephalopathy is an altered mental state. Depending on the type and severity of encephalopathy, common neurological symptoms are progressive loss of memory and cognitive ability, subtle personality changes, inability to concentrate, lethargy, and progressive loss of consciousness. Other neurological

symptoms may include myoclonus (involuntary twitching of a muscle or group of muscles), nystagmus (rapid, involuntary eye movement), tremor, muscle atrophy and weakness, dementia, seizures, and loss of ability to swallow or speak. Blood tests, spinal fluid examination, imaging studies, electroencephalograms, and similar diagnostic studies may be used to differentiate the various causes of encephalopathy.

Reference: <http://www.ninds.nih.gov/disorders/stroke/stroke.htm>

Seq. #: 2100

Long Name: Recurrent Laryngeal Nerve Paresis

Short Name: RecLarynParesis

Definition: Indicate whether the patient experienced in the postoperative period, paresis or paralysis of the recurrent laryngeal nerve that was not identified during the preoperative evaluation.

Intent/Clarification:

The recurrent laryngeal nerve (RLN) is a branch of the vagus nerve (cranial nerve X) that supplies all the intrinsic muscles of the larynx, with the exception of the cricothyroid muscles. There are two recurrent laryngeal nerves, right and left, in the human body. The nerves emerge from the vagus nerve at the level of the arch of aorta, and then travel up the side of the trachea to the larynx. The recurrent laryngeal nerves may be injured as a result of trauma, during surgery, as a result of tumor spread, or due to other means. Injury to the recurrent laryngeal nerves can result in a weakened voice (hoarseness) or loss of voice (aphonia), aspiration or other problems in the respiratory tract.

09/15: Patient with LUL lung cancer, no pre-op hoarseness, but intraoperatively was found to have significant involvement of laryngeal nerves; "tumor was stuck in the AP window". It was a purposeful removal of tumor. Pt subsequently went back to OR for vocal cord paralysis. Does this count as a post-op event for seq. 2100?

Yes because the pt went back to the OR.

January 2017: Patient is seen by thoracic surgeon PA 29 days after thoracic surgery. Per PA note, "voice is clear but quality is diminished from baseline. Not completely hoarse but is unchanged from prior eval a few weeks ago." Patient referred to ENT. Surgeon documents having to do a thorough dissection of previously positive station 5 LN at the time of lung resection which was near the recurrent laryngeal nerve. Does change in voice quality alone qualify as postop event Recurrent Laryngeal Nerve Paresis or does patient have to have confirmation of paresis from ENT? **No, needs confirmation from ENT or Thoracic Surgeon.**

Seq. #: 2110

Long Name: Delirium

Short Name: Delirium

Definition: Indicate whether the patient experienced delirium in the postoperative period marked by illusions, confusion, cerebral excitement, and having a comparatively short course.

Intent/Clarification:

July 2016: Do we select 'yes' for delirium seq 2110 even when a patient has been identified as suffering from ETOH withdrawal? Does it matter if the delirium occurs before or after there is documentation of ETOH withdrawal? **Yes**

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April 2017: Would it be appropriate to apply the delirium comp in a case when the confusion was clearly associated with the lingering effect of surgical meds, lasted for approx. 20 minutes after transfer to the floor, and did not affect LOS or treatment? Pt was confused and a consult note was drafted for post-op delirium during this time, so reviewers are not agreeing on whether to apply. **If delirium was documented, then count it as a post-op event.**

Seq. #: 2120

Long Name: Other Neurological Event

Short Name: OtherNeuro

Definition: Indicate whether the patient experienced any other neurologic event in the postoperative period.

Intent/Clarification:

July 2016: A pt has a known hx of seizures, and after thoracic surgery has 1 instance of "seizure like" activity. However, pt's family who witnessed this event states that it was not typical of the pt's other seizures. Pt responded well to Narcan, and the event did not reoccur. Is this a finding of Neuro Other (b/c it is a new type of seizure), or not an STS comp due to being either a medication reaction since it responded to Narcan or a possible extension of pre-existing seizure activity?

This is not a Neuro, Other finding.

April 2017: I am reviewing a chart for a pt who had a partial pulm decort and also had an empyema showing pseudomonas, to be treated with cefepime until 2/27. He was discharged on 2/13. He also has a history of bilateral lung transplants. On 2/19 he was readmitted with AKI on CKD, SCr 3.78, and myoclonic jerking which has caused him to fall and has impaired his PO intake. 1. His cefepime was DC'd at readmit and by discharge (2/22) his myoclonus had almost completely resolved. Do I count this as another neuro complication? **No, this is not an "other neuro" complication. It is a readmit within 30 days.**

June 2017: Post-op patient exhibited stuttering of speech and tremors - Neurology consult, MRI brain normal. Should we document this as an 'other neurology event'? **Yes, a neuro consult and MRI were done.**

Seq. #: 2140

Long Name: Renal Failure - RIFLE Criteria

Short Name: RenFailRIFLE

Definition: Indicate whether the patient had acute renal failure or worsening renal function resulting in ONE OR BOTH of the following:

1. Increase in serum creatinine level 3.0 x greater than baseline, or serum creatinine level ≥ 4 mg/dL. Acute rise must be at least 0.5 mg/dl
2. A new requirement for dialysis postoperatively.

Intent/Clarification:

The Acute Dialysis Quality Initiative, a multidisciplinary collaboration, defined a range of acute renal dysfunction called the RIFLE classification system. It is used to define grades of severity based on objective measurements.

STS will use the underlined values to analyze post op renal function.

Classifications of Loss and End-stage disease are beyond the current scope of follow-up. Code yes if the patient meets the highlighted RIFLE Failure criteria or if dialysis was newly required post op.

Risk (R) - Increase in serum creatinine level X 1.5 or decrease in GFR by 25%, or UO < 0.5 mL/kg/h for 6 hours

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Injury (I) - Increase in serum creatinine level X 2.0 or decrease in GFR by 50%, or UO <0.5 mL/kg/h for 12 hours

Failure (F) - Increase in serum creatinine level X 3.0, or serum creatinine level ≥ 4 mg/dL with at least a 0.5 mg/dl rise, or decrease in GFR by 75%; UO <0.3 mL/kg/h for 24 hours, or anuria for 12 hours

Loss (L) - Persistent ARF, complete loss of kidney function > 4 weeks

End-stage kidney disease (E) - Loss of kidney function >3 months

August 2016: We are trying to determine if we should apply the Acute Renal Failure comp in the following circumstance: there is only 1 pre-op creat level drawn years prior, which is in normal range. On the day of surgery (drawn just prior) and afterwards, it meets the creat requirement of 5 or greater, AND has an increase of 0.5 mgs from baseline after surgery (ranges from 5.1 prior and up to 6.40, then trends downwards). There is documentation of pre-dialysis renal failure in the months prior to surgery and still no dialysis after. There is no MD documentation of acute renal failure. How should we code the case? **You would code this 'no'. The creatinine is not 3x greater in this case.**

December 2017: Patient is s/p liver transplant (2014) develops renal failure postop with dialysis also develops empyema has Eloesser flap. Returns for flap closure (8/2017) and is no longer on dialysis. Base line creat (2.99) readmitted post flap closure with hyperkalemia (6.3) not responding to medical treatment and creat of 3.35. Dialysis restarted. Would I code RIFLE post flap closure? **Yes, you code renal failure. The patient had a new requirement of dialysis.**

Seq. #: 2150

Long Name: Chylothorax Requiring Drainage/Medical Treatment Only

Short Name: ChyloMed

Definition: Indicate whether the patient experienced a chylothorax in the postoperative period that required drainage **and/or** medical intervention only (i.e., NPO, TPN, etc.).

Intent/Clarification:

Chylothorax is identified by the milky appearance of pleural fluid, which, if analyzed would likely have triglyceride levels >110 mg/dl

November 2016: This patient had a lobectomy with return to OR for Air Leak. Post-op she developed a low volume chyle leak with triglycerides of 154. The notes indicate monitoring of the leak, but no intervention. The patient was not NPO, no TPN, etc. Would this still be captured as a POE? **Was the patient's diet changed in any way? If yes, then it is a post-op event.**

Seq. #: 2170

Long Name: Other events requiring OR with general anesthesia

Short Name: OtherSurg

Definition: Indicate whether the patient experienced any other surgical events in the post-operative period requiring a procedure with general anesthesia.

Intent/Clarification:

09/15: I have a patient that went back to the OR for a Bronch and Tissue Glue to repair a BPF (not emergent case, waited till next day to take patient to the OR). The patient received conscious sedation while in the OR. I have captured the BPF on the Post Op Events. Do I still code yes to Seq# 2170 even though patient only had conscious sedation in the OR?

No, pt did not get general anesthesia.

09/15: Is the "post-operative period" during the current hospital visit? If a patient has a thoracotomy with biopsy of paraortic lymph nodes which does not give a definitive diagnosis and returns to the OR during the same hospitalization

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for mediastinotomy for further biopsies, would this be entered in the "other events requiring Or with general anesthesia"? **Yes, or Return to OR – Other**

July 2016: Please clarify whether a decort done on a subsequent readmission should be captured as both a 30 day readmission of the initial surgery, and a "other events req OR" comp? Or just as a readmission? **You should capture both; "readmission within 30 days" and "other events requiring OR".**

January 2017: Pt had excision of chest wall tumor including ribs (19620) with mesh (I hope, I coded this right) and wound vac application. Pre-op dx was recurrent breast carcinoma of the left breast with chronic wound. Returned to the OR 5 days later for a muscle flap, clearly a planned procedure... is this a post op event? I chose yes at first, other events req. OR with gen anesthesia, but now I am questioning myself. **Yes, planned procedure.**

April 2017: Pt had a thoracotomy with wedge resection on Mar 6, 2017 for left upper lobe mass. Readmitted on April 05, 2017 for thoracotomy with lung resection due to sequestration of left lung. It has been exactly 30 days, do I code this as other events requiring OR with gen anesthesia other surgery (2170) or do I start a whole new STS database sheet? **You would do both. It is a PO-event to the first procedure and readmission. Then you would enter the second case from the second admission.**

September 2017: This patient had an IP Pneumonectomy and removal of a periaortic mass that required compromising the RLN-clipped. It was known that the patient would need post-op follow up with ENT. He was scoped and decision was made to do vocal cord injection in the OR with Gen'l Anesthesia. I would not capture this as 2100 RLN paresis since that occurred in the OR, but I would capture the Gen'l Anesthesia 2170. How would I capture the actual procedure for POE's-2120 Other Neurological Event? **You would capture the RLN paresis in Seq. #2100 as 'Yes'. This is a complication. Even though it was known the patient would need to return to the OR you still must capture it. You would also capture 'Other Events requiring General Anesthesia'. You do not need to capture Seq. # 2120 – Other Neurological Events.**

October 2017: We have chosen to put postop events on the initial surgery for consistency. We have a case that has analyzed procedures done on 7/3/17 and 7/13/17 which are within the same hospital admission. This patient was readmitted and had a return to the OR on 8/9/17. Since we have chosen to put postop events on the initial surgery, do we remain consistent and put the return to OR for Seq #2170 on the initial surgery (7/3/17) even though it is > 30 days after that one (but <30 days after the 2nd surgery in that admission)?OR for this scenario, do we put it on the 7/13/17 surgery since it is within 30 days of that surgery? **The readmission and return to the OR should be put on the second surgery. This should be documented as the complication of Other Events Requiring General Anesthesia.**

December 2017: Patient original surgery was open thymectomy. Six days later the patient underwent sternal debridement, rib plating and pectoral muscle flap due to sternal dehiscence. The patient was not discharged in between surgical cases. Is this considered other events requiring surgery or should it be entered as a new thoracic case? **Yes, this would be collected on a new data collection form. It would also be a post-op event on the original surgery. It would be Unexpected Return to the OR (1720); not 'other Events requiring surgery' #2170, since it is during the initial hospitalization.**

Seq. #: 2180

Long Name: Unexpected Admission To ICU

Short Name: UnexpectAdmitICU

Definition: Indicate whether there was an unplanned transfer of the patient to the ICU due to deterioration in the condition of the patient.

Intent/Clarification: during the patient's initial hospital stay.

September 2016: Patient goes to ICU immediately after surgery and is there for 4 days. He develops respiratory distress and is taken back to surgery and stays there for 19 days. I recorded this under ICU Admit this admission initial 4 days

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and ICU Readmit Yes and Additional ICU days 19. Would I also consider this an event and assign Unexpected Admission to ICU? If I would not, when is Unexpected Admission to ICU assigned? **The patient never left the ICU so there is no readmission to the ICU. It would be 23 days in the ICU.**

December 2017: Please clarify whether this data element ONLY applies to the index surgery admission or whether it applies to the entire 30 day postop period. **This applies only during the index/initial hospital stay.**

8. Discharge

Seq. #: 2190

Long Name: Discharge Date

Short Name: DischDt

Definition: Indicate the date the patient was discharged from the hospital (acute care). If the patient expired in the hospital, the discharge date is the date of death.

Intent/Clarification:

Do not include transfers to other services, such as renal care unit. If the patient is discharged (given a new account number) to hospice care but remains in the same bed/unit, the discharge date is that date. If the patient is discharged (given a new account number) to a psychiatric or rehab unit, even if located in the same building, the discharge date is that date.

Seq. #: 2200

Long Name: Discharge Status

Short Name: MtDCStat

Definition: Indicate whether the patient was alive or dead at discharge from the hospitalization in which the primary surgery procedure occurred.

Intent/Clarification:

Indicate if the patient was “alive” or “dead” at the time of discharge. The intent is to capture all patient deaths occurring within the acute care hospitalization following surgery. This includes patients transferred to another acute care facility. Do not capture patients discharged to hospice, rehab, SNF, psych or long term care.

Example: A patient undergoes a wedge resection at hospital A and five days later is transferred to hospital B for a lobectomy. The patient dies 40 days later. Code “dead” since this patient died during the acute care hospitalization.

- Alive

- Dead

08/15: A patient had an emergent major esophageal surgery and then had another unexpected return to the OR for another major procedure (2 DCFs). The patient was in the hospital for more than a month and then died. For both DCFs the discharge status is “dead”, for the first surgery, 30 day status is “alive.” Will this mortality count twice?

No, this is fixed at DCRI. To avoid double counting mortality, only one operation per admission was included in the calculation of participant mortality rates. Patients were classified according to the first chronological primary procedure during the hospital admission. Each hospitalization contributes one observation to the denominator of the mortality calculation and never contributes more than one observation to the numerator.

April 2016: How should we collect discharge on a pt that leaves AMA? **Indicate DC to home.** No opportunity for smoking cessation to be done. **Indicate No.**

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June 2016: A patient has a major procedure with surgeon #1 and is discharged alive, but re-admitted within 30 days and has another major procedure with surgeon #2 which is a complication of the prior procedure, then dies within the 2nd admission. Which procedure and surgeon does the mortality get attributed to? **It goes to both surgeons. The complication gets attributed to the first case; the readmission and reoperation gets attributed to the first case and the death gets attributed to the first case in the 30 day post-operative status (death). The death also goes on the second case in status at discharge (death).**

Seq. #: 2210

Long Name: Discharge Location

Short Name: DisLoctn

Definition: Indicate the location to where the patient was discharged.

Intent/Clarification:

- Home
- Extended Care/Transitional Care Unit/Rehab
- Other Hospital
- Nursing Home
- Hospice
- Other

If the patient resided in a nursing home before surgery and is discharged to a nursing home, code as "Nursing Home" even though it is considered the patient's "home".

'Other' can include a Guest House (for transplant patients who live too far from the transplant hospital) or a Correctional Facility.

An "assisted living facility" that was the patient's baseline prior to admission is captured as home.

July 2017: Our facility has an area that is specified as "Long Term Acute Care Hospital". It is totally separate from the main hospital. I also referred to as "subacute care". Our understanding is that it is more intensive than traditional nursing facility. Is this considered "other Hospital" or "Extended Care/Transitional Care Unit/Rehab"?

Extended Care/Transitional Care Unit/Rehab

July 2017: We have patients that are admitted for Thoracic procedures from another facility/hospital and our surgeons are affiliated with this hospital as far as follow ups and rounding for post op. On discharge, should these patients be captured as going -Home or Other Hospital? I have been coding these as Other Hospitals. **If being transferred back to other hospital then discharge to Other Hospital. If discharged home then discharge to home.**

Seq. #: 2220

Long Name: Discharge With Chest Tube

Short Name: CTubeDis

Definition: Indicate whether the patient was discharged with a chest tube for persistent air leak or to drain a postoperative effusion.

Intent/Clarification:

Include all types of tubes.

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08/15: Is it true that if pt is discharged with Pleurx catheter inserted post op for "Hydropneumothorax in the setting of stage IIIB Lung Cancer and recurrent effusion" that we do not collect this as Discharge with CT? **No, that is incorrect.**

Capture this for all patients discharged with any type of chest tube.

November 2016: Following a lobectomy, patient's chest tube was removed and he was discharged. Was readmitted within 30 days of discharge for pneumothorax requiring CT reinsertion. A 2nd DCF is not required for the readmission because no surgical procedure was performed. The patient was discharged from the readmission with a CT in place connected to a pneumostat. Should I code YES to seq #2220, Discharged with Chest Tube, or does this data element only apply to the index procedure admission? **Yes, this is a post-op event. D/C with CT is 'no'.**

July 2017: Does the STS consider the PleurX catheter system a chest tube? **Seq. 2220 refers to discharging with chest tube(s) that were used to treat a post-op air leak or effusion only. If the Pleurx was placed post-op for that purpose, you should mark YES here.**

January 2018: Patient admitted for long term / serious respiratory related issues and is admitted with a chest tube as well as discharged with one. There is definitely an air leak > 5 days after the STS index procedure, but per the 7/17 FAQ the chest tube was not placed due to the leak, it was present pre-operatively. Both leak and chest tube were present pre-operatively and were the reason for admission/surgery. At end of this stay, chest tube was transitioned to a pneumostatic chest drain valve. What comps should apply in this case? **None.**

January 2018: Patients that are s/p esophagectomies being d/c with a Blake drain or JP to self-suction, do I answer Yes to this? Or is this data element just pertains to chest tubes for s/p lung resection patients only? **This field applies to all surgeries.**

January 2018: Patient has history of metastatic pleural effusions has long term Pleurx cath. (inserted 6 months ago) Came in for outpatient procedures (Bronch/biopsy) - we collect all minor procedures. Patient discharged from bronch and with long term Pleurx. Would you code discharged with CT? If not inserted on this DCF. **No, this is not a complication. The patient came in with Pleurx.**

Seq. #: 2230

Long Name: Readmission within 30 days of Discharge

Short Name: Readm30Dis

Definition: Indicate whether patient was readmitted to any hospital within 30 days of discharge.

Intent/Clarification:

Code yes for inpatient admissions to an acute care facility. Include 'all cause' readmissions, planned or unplanned.

Do not capture ED or outpatient visits (see below) or admission to a skilled facility or nursing home.

- It is understood that some readmissions are planned; these are still counted as readmissions.
- Readmission does not need to be at same institution as surgical procedure.
- Obtain information as close to 30 days from date of discharge as possible.
- Do not include Emergency Dept. visits or observation (no matter how long) unless the ED visits lead to a hospital admission.

The intent is to capture inpatient readmissions to acute care and primary care institutions only.

If a patient is readmitted to an inpatient rehabilitation hospital, code "No".

On occasion a patient is readmitted twice within the 30 day time frame from the date of the procedure. This is a Yes/No question, and does not ask how many times readmitted. Any time the patient is readmitted to a hospital ≤ 30 days from the date of discharge regardless if the readmission was planned or unplanned, related or unrelated. You code the first readmission only.

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Example # 1: A patient is re-admitted to the hospital after a lobectomy for reasons that were planned (ex, colon resection or cholecystectomy). Code these readmissions "Yes".

Example # 2: A patient is readmitted as an observation patient, (not an inpatient) and was in the hospital for 3 days and had an insertion of a Pleurx catheter: Code this "NO" as a readmission.

Example # 3: A patient is transferred to your facility from a hospital that does not do thoracic surgery.

Surgery is performed and once stabilized the patient is transferred back to the original hospital for the conclusion of a six-week course of IV antibiotics: Code "No" for a readmission, this is an extension of the acute care hospital stay.

09/15: Patient was discharged and left the hospital at 1600. The patient returned to the hospital at 1933. I answered 'Yes' to readmission. Since the patient was only out of the hospital for 3 hours one account # was issued. Since the return was directly related to the primary procedure (laparoscopic diaphragmatic repair) should I abstract the return as a readmit and fill out a second DCF (evacuation of a mediastinal hematoma on hospital day 3 of the return)? Or should I just consider it as a post op event? Maybe in the miscellaneous section of the post op event and do not fill out a second DCF and consider stay 1 and 2 as one stay? **This is a readmission; complete a second DCF for any major procedures performed during the readmission. Complete "Post Op Event" on the first DCF.**

August 2016: A patient had 2 major surgeries during the same initial hospitalization. Readmitted 2 days later for another Inpatient stay. Which of the initial major surgeries' (Data Collection Form) should the readmission be attached to? I don't want it to appear as 2 readmissions by answering "Yes" to the Seq 2230 Readmission question on both of those initial surgeries. **The readmission must be documented on both of the DCFs. It will not be counted twice; DCRI cleans this type of thing up on the back end.**

February 2017: The patient had surgery 11/1/16, and was not yet ready for discharge, but left AMA on 11/4/2016.

Patient returned later that same day, to the ER, and was readmitted. Since the patient left AMA, and was readmitted the same day, will this still count as a readmission? **Yes, this is still a readmission.**

Seq. #: 2231

Long Name: Readmission Related To Operative Procedure

Short Name: Readm30DisRel

Definition: Indicate whether the readmission was related to this operation.

Intent/Clarification:

The intent is to differentiate between readmissions related to the operation and unrelated readmissions.

July 2016: I'm new and need more information about this field. Here are 4 examples, what is the deciding factor? If a pt had a pulm decortication and was readmitted with flash pulmonary edema req. reintubation - **Yes** Pt has paraesophageal hernia and gets readmitted with bilat emboli and recurrent DVT - **Yes** Pt had total pulmonary decortication and gets readmitted for urosepsis - **Yes** Pt has paraesophageal hernia repair that fails and pt is readmitted for a redo repair of paraesophageal hernia which I would say was related to a failed surgery – **Yes**

July 2016: Pt has debridement of sternal wound with wound VAC and removal of sternal wires.

The next day goes back to surgery (planned) for debridement of sternal wound, and coverage of sternal wound using right pectoralis major turnover flap. Would this be captured under "other events req OR with general anesthesia? If this procedure is within 30 days of original surgery this would be captured in the ACS. **If it is after 30 days you can capture it on as a Minor Procedure; Wound VAC. Complications are not collected on the minor procedures. You can use "other events" if using a Major DCF.**

February 2017: Pt with a dx of necrosis of lung (AML chemo given 7/2016) with a pneumonectomy done 10/31/2016. Pt discharged 11/11/2016. Pt. readmitted 11/29 - 12/24 for stem cell /chemo. Is this readmit related to operative procedure? We did not count this as a postoperative event. **Yes, it is related.**

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June 2017: Pt has "biopsy" thoracotomy. After discharge it is report by path that there is no tumor tissue obtained with the Wedge Bx (pt had adhesions from previous surgery). Pt comes back in for re-do VATS Wedge. Is this considered under Post Op event as "unexpected return to OR" or would this be collected as "other events requiring OR with general anesthesia"? **other events requiring OR with general anesthesia** Also collected is Readmission within 30 days after surgery. Would this be considered a "Readmit related to operative procedure. **Yes.**

Seq. #: 2240

Long Name: Status 30 Days After Surgery

Short Name: Mt30Stat

Definition: Indicate whether the patient was alive or dead at 30 days post-surgery (whether in the hospital or not).

Intent/Clarification:

Use the 30th calendar date after the Date of Surgery to determine mortality status. This is your 30-day post-surgery death, regardless of location.

- Alive

- Dead

- Unknown

08/15: Our surgeon sees patients 2-3 weeks post op and most are referred from elsewhere. Do I still need to check status at 30 days? **30 day follow-up should be on or after the 30th day post op. Many data managers find it helpful to keep a spreadsheet documenting how status was determined: record of visit or lab work in EMR, phone call with provider or patient, etc.**

September 2017: are we required to have 30 day mortality post-surgical date or other on patients who had a minor procedure or are under 18 years of age? **You do not need to collect post-operative 30 day status on minor procedures since they are not analyzed within the registry. You do need to collect 30 day status on patients under the age of 18.**

9. Quality Measures

Seq. #: 2290

Long Name: IV Antibiotics Ordered Within One Hour

Short Name: IVAntibioOrdered

Definition: Indicate whether an order for IV antibiotics to be given within one hour of the skin incision was given.

Intent/Clarification:

Indicate whether prophylactic antibiotics were ordered to be given within one hour of surgical incision or start of procedure if no incision required.

April 2016: Our surgeons have issues with answering these field when a patient is pre-operatively on therapeutic antibiotics. Currently we are not able to reach 100% compliance on these fields because we are forced to answer "no" even though the patient is already on an antibiotic, therefore appearing we are not compliant in quality measures. The surgeon suggests 3 optional fixes to this:

1- STS can add choice "patient on therapeutic antibiotics"

2- continue what we are doing and falsely appear noncompliant

3- surgeons will be forced to order and administer antibiotics to patients that do not need them in order to have 100% compliance with this measure.

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The surgeon feels options 2 & 3 are not appropriate. What is the core groups opinion on this and is STS willing to add this additional choice in these fields? **These are quality measures. You need to continue doing what you are doing.**

Seq. #: 2300

Long Name: IV Antibiotics Given Within One Hour

Short Name: IVAntibioGiven

Definition: Indicate whether IV antibiotics were given within one hour of the skin incision.

Intent/Clarification:

Indicate whether prophylactic antibiotics were administered within one hour of surgical incision or start of procedure if no incision required (two hours if receiving Vancomycin or fluoroquinolone).

The surgical incision time is the time of the first incision, regardless of location.

Example #1: Is it considered an antibiotic timing complication if a 30 minute antibiotic infusion is hung 1 hour and 14 minutes prior to procedure start time? More than half the antibiotics will be running after the 1 hour pre-procedure mark. – The antibiotic start time must be within 1 hour of the incision. The measure is not met in this case. The goal is to have blood and tissue levels of antibiotics maximized at the time of incision.

11/15 - The patient was being treated with IV Antibiotics pre-op for empyema. The ABX continued post-op. No IV Antibiotic was given within one hour of surgical start time. How would you answer Seq # 2300? There is no exclusion choice. **Code as 'NO'.**

February 2017: My surgeon documents in his op note that "perioperative antibiotics were given". This is how he documents them during the pre-op time out. On occasion, this will be the only documentation I find of the patient receiving pre-op antibiotics. Is this sufficient to answer yes to Seq 2300? **No it is not sufficient. The actual administration of the medication should be documented on the MAR.**

December 2017: This pt had a VATS procedure elect converted to open thoracotomy d/t anatomy. Also had a previous empyema which is why they were returning to surgery. The initial antibiotic was not given within 1 hour prior to initial surgical incision for VATS. However, Cefazolin was given within 1 hour of conversion to open. Conversion time was 16:19, Cefazolin was given at 16:12. Am I allowed to count this as yes? **No, you cannot count the pre-op antibiotic as given. The antibiotic must be given prior to any incision.**

Seq. #: 2310

Long Name: Cephalosporin Antibiotic Ordered

Short Name: CephalAntiOrdered

Definition: Indicate whether an order for first or second-generation cephalosporin antibiotic or appropriate therapeutic substitute (in case of allergy) for prophylaxis was given.

Intent/Clarification:

Examples of other abx may include Vancomycin, Clindamycin

11/15 - If pt was given piperacillin pre-procedure is this considered an appropriate therapeutic substitute for prophylactic antibiotic? Is there a table that list appropriate substitute antibiotics for Thoracic? This pt did not have any documented allergies. Did have other documented infection and received Piperacillin/Tazobactam Q 8 hrs X19 days post procedure. **Piperacillin is not a 1st or 2nd generation cephalosporin thus the answer is "no"**

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Seq. #: 2320

Long Name: Prophylactic Antibiotics Discontinuation Ordered

Short Name: AntibioticDiscOrdered

Definition: Indicate whether an order to discontinue prophylactic antibiotics within 24 hours of the procedure was given.

Intent/Clarification:

Determining the timeframe (within 24 hours) begins at the "surgical end time" – the time the patient leaves the operating room.

Example #1: How do you code antibiotic discontinue time when the patient returns to the OR in the acute phase (within 24 hours)? The 24 hour interval begins after the last OR exit time

Example #2: The patient is allergic to penicillin and is given vancomycin appropriately before and after surgery. Standing orders are followed to dc the vancomycin but the surgeon restarts it to treat endocarditis. Do I code yes for discontinued? - Yes, the prophylactic antibiotic was discontinued. If it was continued without stopping you would mark 'no, due to documented infection'.

April 2016: If the surgeon never ordered antibiotics post op how do we code this field? **Code the field as 'No'.**

April 2016: If the EMR shows that only one abx was given prophylactically on the anesthesia record and no official order was present ,And no evidence of any further abx were given, can you answer yes to this question. Our current practice is Anesthesia gives their prophylactic abx and do not write orders for themselves to give an abx. , therefore an order is not present to discontinue . The intent was to give a one-time prophylactic abx. **No, you can't answer yes.**

Seq. #: 2330

Long Name: DVT Prophylaxis Measures

Short Name: DVTProphylaxis

Definition: Indicate whether prophylactic measures (TED stockings, pneumatic compression devices and/or subcutaneous heparin or low molecular weight heparin) were taken to prevent DVT. Select "Not applicable" if not indicated, or due to documented DVT or contraindications to all methods of prophylaxis.

Intent/Clarification:

Deep vein thrombosis (DVT) is the formation of a blood clot in the deep veins within the body, such as in the leg or pelvis. This kind of thrombosis can occur after surgery and may cause redness, pain and swelling.

DVT prophylactic measures should be taken in the pre-operative setting and/or in the operative suite prior to incision.

April 2016: What is the time frame for DVT prophylaxis? Lovenox is often documented as given within 24 hours of anesthesia end time, is this acceptable or does it have to be given in the pre-operative setting? Is the intraoperative surgery record that has SCD device, ID #, and documentation of "ON" acceptable? **Within 24 hours of anesthesia is acceptable.**

January 2018: Please clarify: The December Training Manual, Intent/Clarification, p.146: shows the intent for PHARMACOLOGICAL DVT prophylaxis is within 24hrs of Anesthesia End Time. Question: Does this time frame (within 24hrs of Anesthesia End Time) also apply to MECHANICAL DVT prophylaxis? **Yes, the 24 hour timeframe applies to both.**

Seq. #: 2340

Long Name: Smoking Cessation Counseling

Short Name: SmokCoun

Definition: Indicate whether the patient received cigarette smoking cessation counseling (must include oral counseling, written material offered to patient and/or offer of referral to smoking cessation program).

Intent/Clarification:

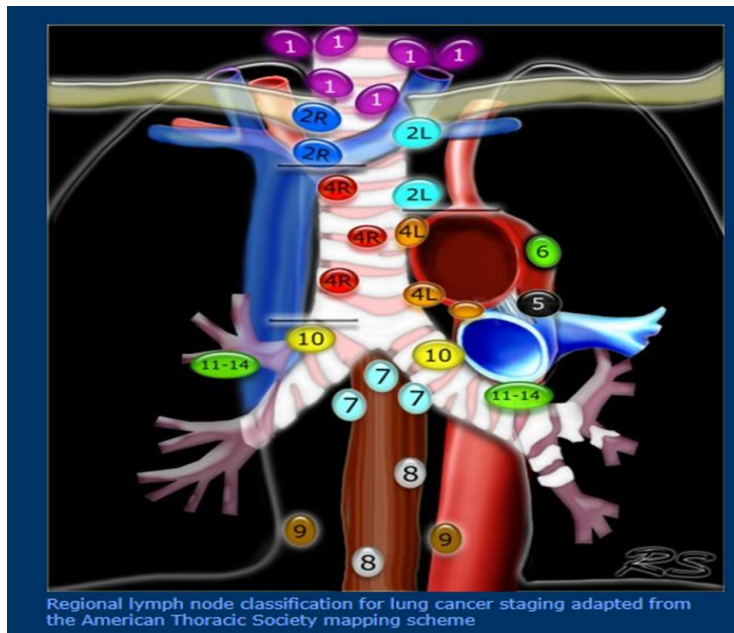
Indicate whether, prior to discharge from the acute care facility, the patient received smoking cessation counseling. Please select "Not Applicable" **"Nonsmoker"** for those patients with no prior history of smoking or remote (more than 1 year) history.

This is a Joint Commission endpoint and it must be documented that either literature and/or counseling was offered and provided to the patient.

September 2017: How should we answer this if the pt has a cognitive disorder preventing smoking cessation teaching to be done? **If the patient smokes and smoking cessation counseling was not provided then you must answer 'no'.**

10. Nodal Stations

Thoracic lymph nodes are divided into 14 stations as proposed by the International Association for the Study of Lung Cancer (IASLC), principally in the context of oncologic staging.



► **Supraclavicular (Supraclavicular Zone)**

- **Station 1**
 - low cervical, supraclavicular, and sternal notch nodes

► **Superior mediastinal (Upper Zone)**

- **Station 2**
 - 2R: upper paratracheal right

- 2L: upper paratracheal left

- **Station 3**

- 3A: prevascular
- 3P: retrotracheal

- **Station 4**

- 4R: lower paratracheal right
- 4L: lower paratracheal left

► **Aortic (AP Zone)**

- **Station 5**
 - subaortic
- **Station 6**
 - para-aortic (ascending aorta or phrenic)

► **Inferior mediastinal**

- **Station 7 (subcarinal zone)**
 - subcarinal
- **Station 8 (lower zone)**
 - para-oesophageal below carina
- **Station 9 (lower zone)**
 - pulmonary ligament

► **Hilar, Lobar, and Segmental**

- **These are all N1 nodes**
- **Station 10 (hilar/intralobar zone)**
 - hilar
- **Station 11(hilar/intralobar zone)**
 - interlobar
- **Station 12 (peripheral zone)**
 - lobar
- **Station 13 (peripheral zone)**
 - segmental
- **Station 14 (peripheral zone)**
 - Subsegmental

<http://www.radiologyassistant.nl/en/p4646f1278c26f/mediastinum-lymph-node-map.html>