

CBE ID

3294

Title

STS Lobectomy for Lung Cancer Composite Score

Project

Primary Care and Chronic Illness

Endorsement Status

Endorsed

Is Under Review

No

Next Maintenance Cycle

Spring 2026

Previous Endorsement Cycle

Spring 2022

Initial Endorsement

Wed, 06/06/2018 - 07:57

Steward

The Society of Thoracic Surgeons

1.0 New or Maintenance

Maintenance

1.1 Measure Structure

Composite Measure

1.3 Electronic Clinical Quality Measure (eCQM)

No

1.6 Measure Description

The STS Lobectomy Composite Score comprises two domains:

1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure)
2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room.

The composite score is created by a weighted combination of the above two domains resulting in a single composite score. In addition to receiving a numeric score, participants are assigned to rating categories designated by the following:

- 1 star: lower-than expected performance
- 2 stars: as-expected-performance
- 3 start: higher-than-expected-performance

1.7 Measure Type

Composite

1.8 Level of Analysis

Facility

1.9 Care Setting

Inpatient/Hospital

1.14 Numerator

The STS Lobectomy Composite Score comprises two domains: 1. Operative Mortality (death during the same hospitalization as surgery or within 30 days of the procedure) 2. Presence of at least one of these major complications: pneumonia, acute respiratory distress syndrome, bronchopleural fistula, pulmonary embolus, initial ventilator support greater than 48 hours, reintubation/respiratory failure, tracheostomy, myocardial infarction, or unexpected return to the operating room. The composite score is created by a weighted combination of the above two domains resulting in a single composite score. Operative mortality and major complications were weighted inversely by their respective standard deviations across participants. This procedure is equivalent to first rescaling mortality and complications by their respective standard deviations and then assigning equal weighting to the rescaled mortality rate and rescaled complication rate. This is the same methodology used for other STS composite measures. In addition to receiving a numeric score, participants are assigned to rating categories designated by the following: 1 star: lower-than expected performance 2 stars: as-expected-performance 3 start: higher-than-expected-performance

Patient Population: The STS GTSD was queried for all patients treated with lobectomy for lung cancer between January 1, 2014, and December 31, 2016. We excluded patients with non-elective status, occult or stage 0 tumors, American Society of Anesthesiologists class VI, and with missing data for age, sex, or discharge mortality status.

Time Window: 01/01/2014 - 12/31/2016

Model variables: Variables in the model: age, sex, year of operation, body mass index, hypertension, steroid therapy, congestive heart failure, coronary artery disease, peripheral vascular disease, reoperation, preoperative chemotherapy within 6 months, cerebrovascular disease, diabetes mellitus, renal failure, dialysis, past smoker, current smoker, forced expiratory volume in 1 second percent of predicted, Zubrod score (linear plus quadratic), American Society of Anesthesiologists class (linear plus quadratic), and pathologic stage.

1.15 Denominator

Number of patients greater than or equal to 18 years of age undergoing elective lobectomy for lung cancer

1.20 Types of Data Sources

Other, Registry data

6.1.2 Current or Planned Use(s)

Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

6.1.3 Current Use(s)

Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

Exclusions

Patients were excluded with non-elective status, occult or stage 0 tumors, American Society of Anesthesiologists class VI, and with missing data for age, sex, or discharge mortality status.

Measure Disclaimer

N/A

Planned Use

Public Reporting, Quality Improvement (Internal to the specific organization), Quality Improvement with Benchmarking (external benchmarking to multiple organizations)

Risk Adjustment

Statistical risk model

Target Population

Adults (Age \geq 18)

Steward Organization

The Society of Thoracic Surgeons

Steward POC email

byagci@sts.org