

# Thoracic Surgery

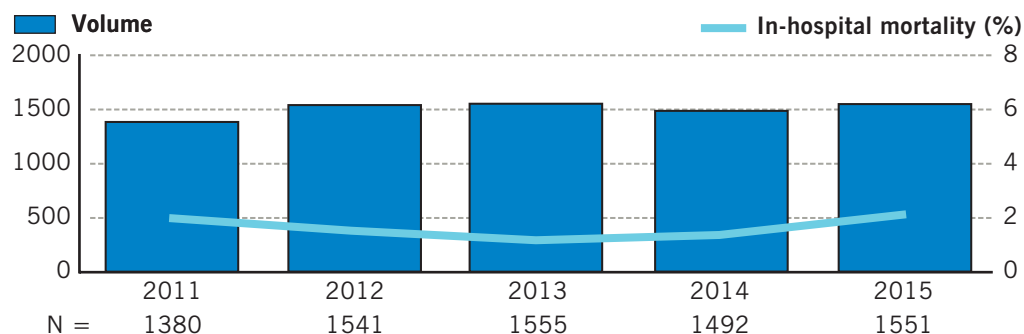


Cleveland Clinic thoracic surgeons treat patients with a wide variety of diseases of the lung and esophagus. The staff is composed of specialists in lung and esophageal cancer, lung failure, airway disease, swallowing disorders, and other diseases. Diagnosis and treatment approaches include the most advanced techniques, such as minimally invasive surgery.

## General Thoracic Surgery

### Volume and In-Hospital Mortality

2011 – 2015

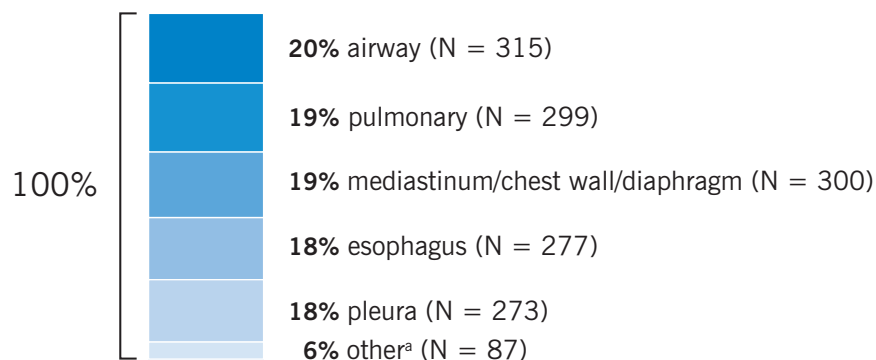


In 2015, Cleveland Clinic surgeons performed 1551 thoracic procedures. The in-hospital mortality rate was 2.1%.

## Major Thoracic Surgery

### Distribution by Type (N = 1551)

2015



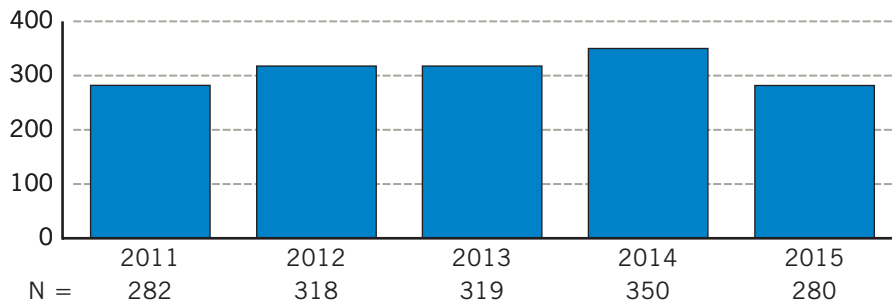
<sup>a</sup>“Other” category includes thymectomies, wedge resections, tumor surgeries, paraesophageal hiatal hernia repairs, and thyroidectomies.

Cleveland Clinic thoracic surgeons perform a variety of procedures to treat patients with even the most complex diseases.

## Pulmonary Resection

2011 – 2015

Volume

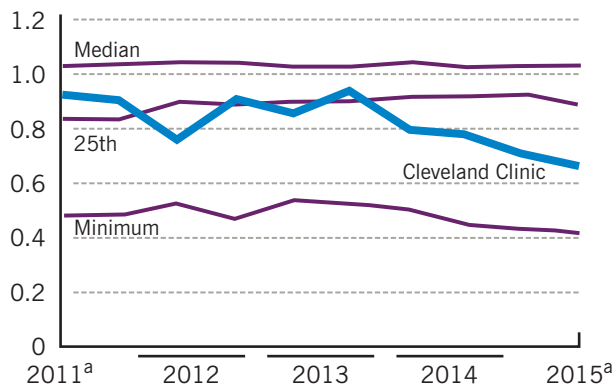


Cleveland Clinic surgeons performed 280 pulmonary resections in 2015.

## Combined Morbidity and 30-Day Mortality

2011 – 2015

Estimated Standardized Incidence Ratio

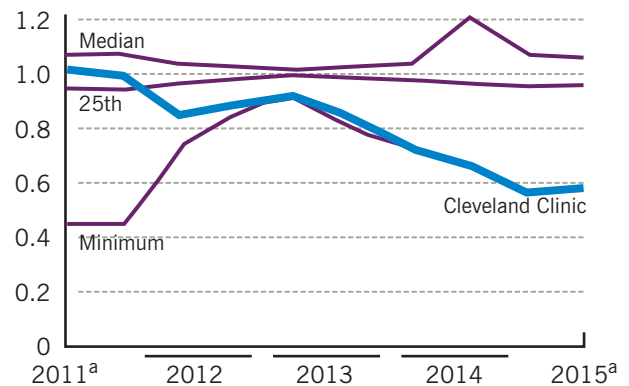


<sup>a</sup>Single quarter reported for these years

## 30-Day Mortality

2011 – 2015

Estimated Standardized Incidence Ratio



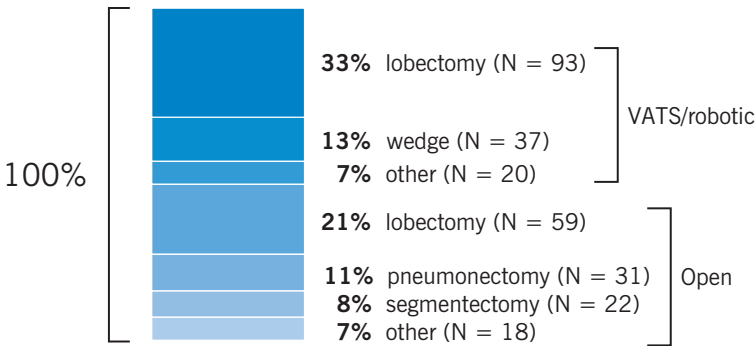
<sup>a</sup>Single quarter reported for these years

A participant's estimated standardized incidence ratio (SIR) is defined as the ratio of the participant's estimated risk-adjusted rate (RAR) divided by the overall Society of Thoracic Surgeons' (STS) observed outcome rate. An SIR value less than 1.0 implies that the participant's risk-adjusted outcome rate is lower than the overall STS rate.



## Distribution by Type (N = 280)

2015



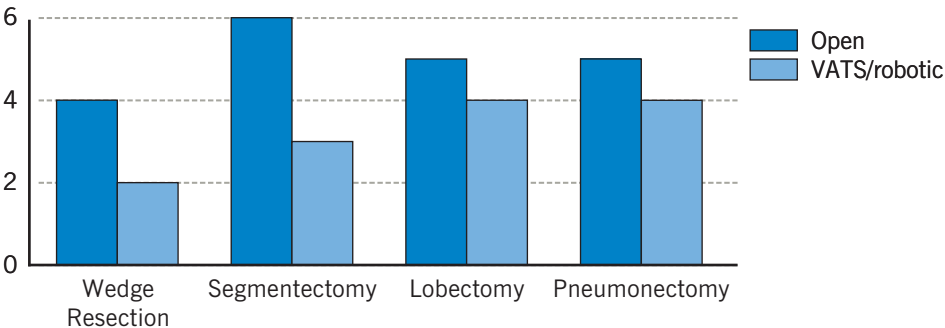
VATS = video-assisted thoracic surgery

The majority of pulmonary resections performed at Cleveland Clinic in 2015 were open and video-assisted lobectomies. Video-assisted thoracic surgery (VATS) and robotic techniques are used when appropriate to yield the best possible outcomes for each patient.

## Postoperative Median Length of Stay (N = 280)

2015

Days



VATS = video-assisted thoracic surgery

Many of the procedures Cleveland Clinic thoracic surgeons perform can be done using both open and video-assisted thoracic surgery (VATS) techniques. The use of VATS or robotic techniques is associated with less postoperative pain, a shorter length of stay, and faster return to normal activities.

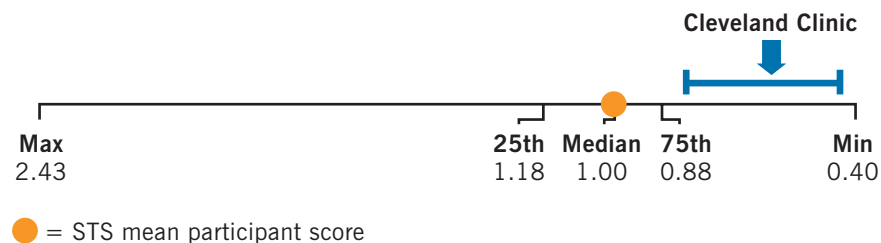
## Pulmonary Resection for Lung Cancer

### Combined Morbidity and 30-Day Mortality (N = 598)

January 2013 – December 2015

Cleveland Clinic surgeons performed 598 pulmonary resections for lung cancer from January 2013 through December 2015. The risk-adjusted rates for morbidity and 30-day mortality were among the best in the country.

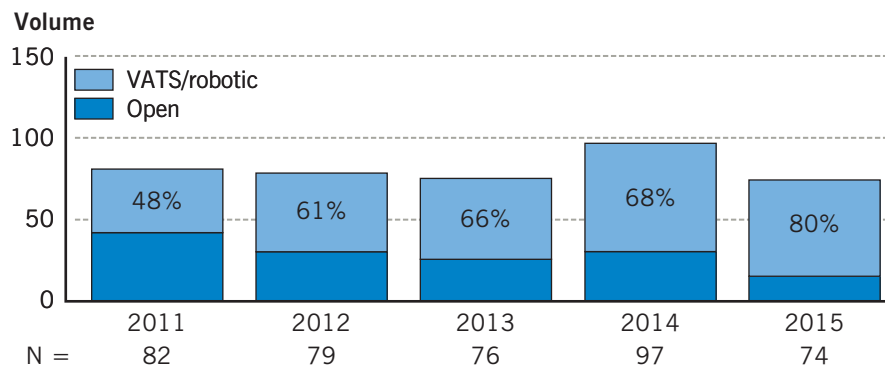
Eligible Procedures	Unadjusted Rate	Risk-Adjusted Rate (95% Confidence Interval)	Standardized Incidence Ratio (95% Confidence Interval)
598	4.8%	4.6% (3.3, 6.1)	0.61 (0.44, 0.82)



Source: Society of Thoracic Surgeons (STS) General Thoracic Surgery Database, January 2013 – December 2015

## Lobectomy for Stage I Lung Cancers

2011 – 2015



Cleveland Clinic surgeons use video-assisted/robotic techniques whenever appropriate for patients having lobectomies. These procedures are less invasive than open procedures and can improve outcomes.

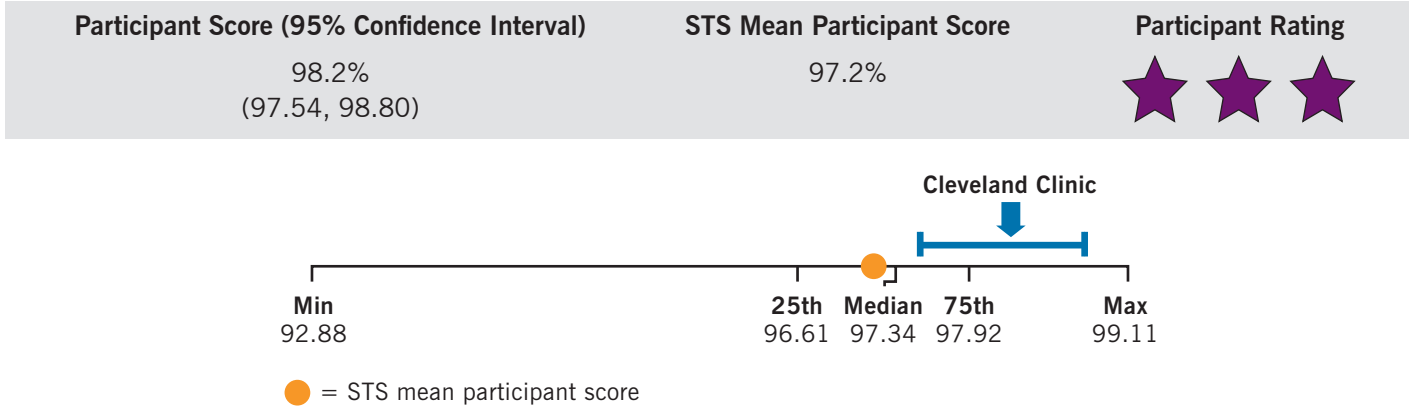
VATS = video-assisted thoracic surgery

# Thoracic Surgery

## Lobectomy for Lung Cancer

### Composite Quality Rating

January 2013 – December 2015



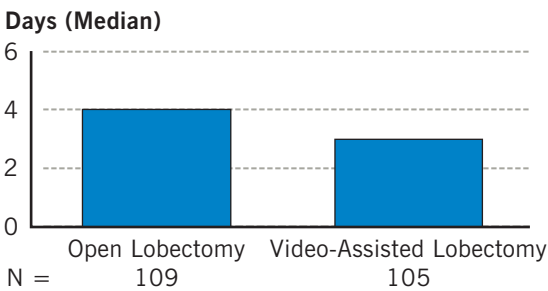
Source: Society of Thoracic Surgeons (STS) General Thoracic Surgery Database, January 2013 – December 2015

## Lobectomy

### Length of Stay

2015

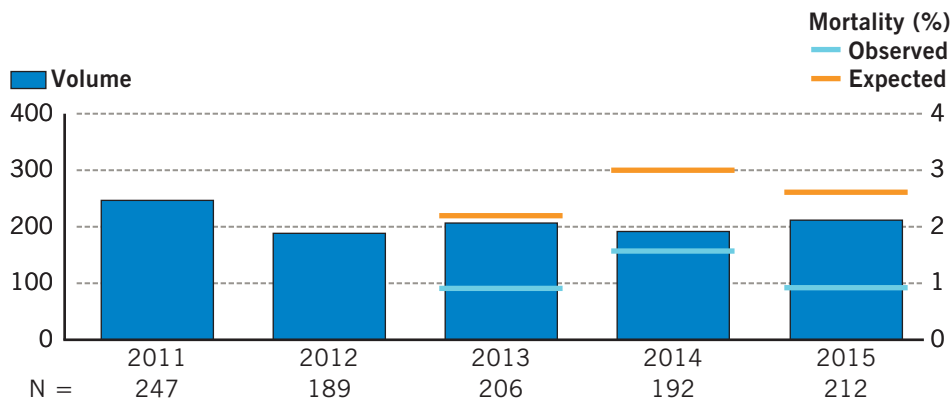
The median length of stay was lower among patients who had video-assisted lobectomies compared with those who had open procedures.



## Esophageal Surgery

### Volume and In-Hospital Mortality

2011 – 2015

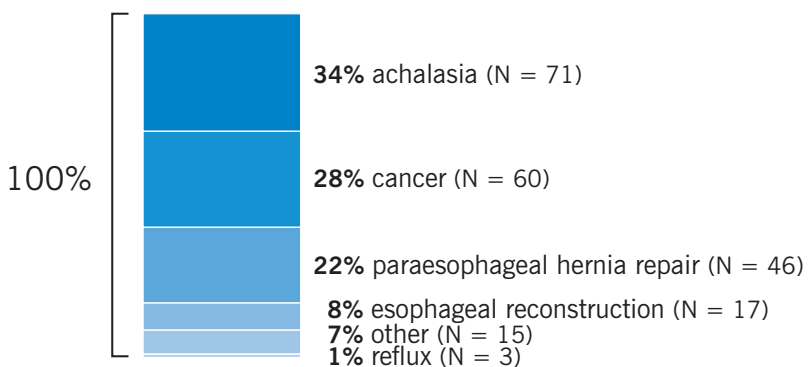


Cleveland Clinic thoracic surgeons performed 212 esophageal procedures in 2015 and achieved a lower-than-expected in-hospital mortality rate (0.9% vs 2.6%).

Source: Data from the Vizient Clinical Data Base/Resource Manager™ used by permission of Vizient. All rights reserved.

### Distribution by Indication (N = 212)

2015



Cleveland Clinic thoracic surgeons treat patients with a diverse range of conditions, including malignant and benign diseases. Cleveland Clinic is a quaternary referral center for complex esophageal disease.

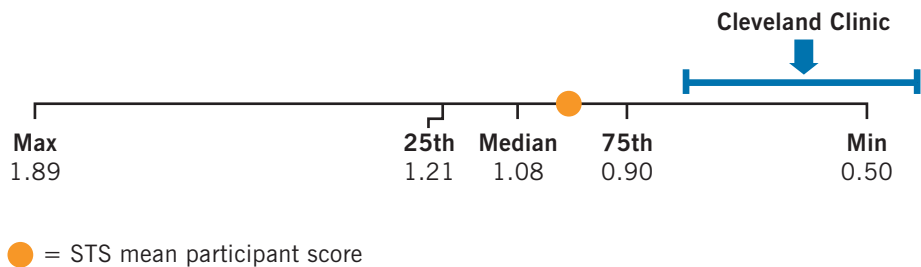
# Thoracic Surgery

## Esophagectomy for Esophageal Cancer

Combined Morbidity and 30-Day Mortality (N = 156)

January 2013 – December 2015

Eligible Procedures	Unadjusted Rate	Risk-Adjusted Rate (95% Confidence Interval)	Standardized Incidence Ratio (95% Confidence Interval)
156	16.0%	16.7% (11.7, 22.3)	0.60 (0.42, 0.80)



Source: Society of Thoracic Surgeons (STS) General Thoracic Surgery Database, January 2013 – December 2015

Cleveland Clinic surgeons performed 156 esophagectomy procedures for patients with esophageal cancer from January 2013 through December 2015. The combined morbidity and 30-day mortality risk-adjusted rate was among the best in the country.