

Thoracic Surgery

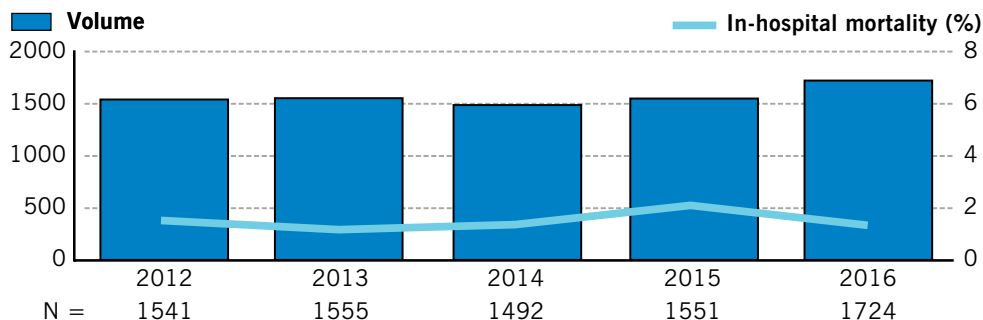


Cleveland Clinic thoracic surgeons treat patients with a wide variety of diseases of the lung and esophagus. The staff includes specialists in lung and esophageal cancer, lung failure, airway disease, swallowing disorders, and other diseases. Diagnosis and treatment approaches include the most advanced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

General Thoracic Surgery

Volume and In-Hospital Mortality

2012 – 2016



In 2016, Cleveland Clinic surgeons performed 1724 thoracic procedures. The STS General Thoracic Surgery in-hospital mortality rate for 2016 is 1.3%.

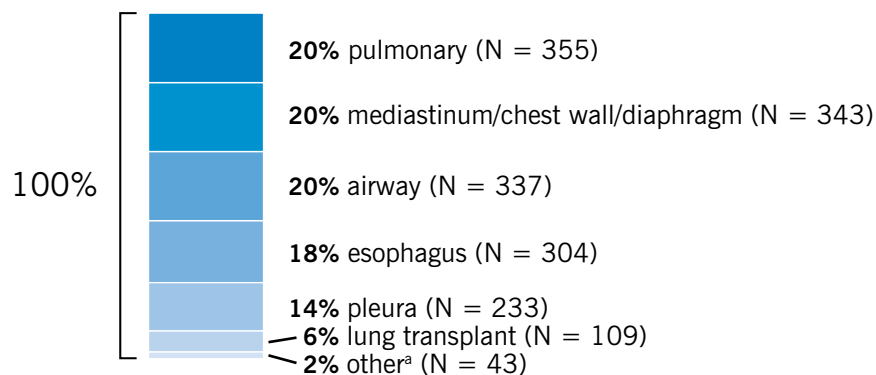
Note: Includes patients with various risk factors – data not risk-adjusted.

Source: Society of Thoracic Surgeons (STS) General Thoracic Surgery Database, July 2013 – June 2016

Major Thoracic Surgery

Distribution by Type (N = 1724)

2016

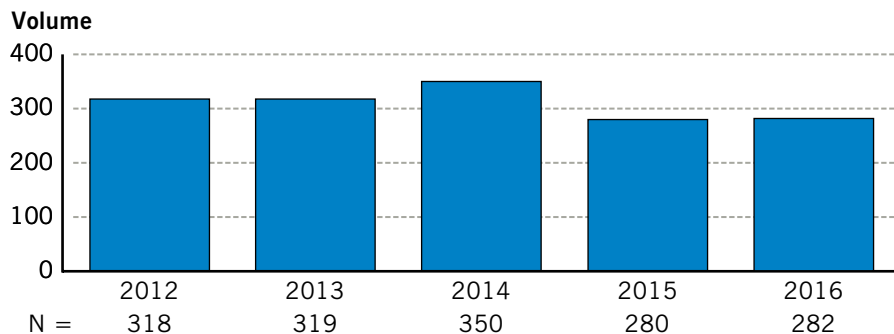


^a“Other” category includes thymectomies, wedge resections, tumor surgeries, paraesophageal hiatal hernia repairs, and thyroidectomies.

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

Pulmonary Resection

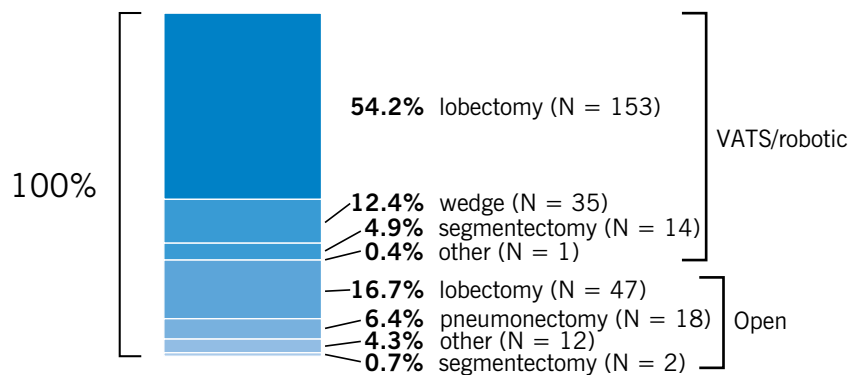
2012 – 2016



Cleveland Clinic surgeons performed 282 pulmonary resections in 2016.

Distribution by Type (N = 282)

2016



VATS = video-assisted thoracic surgery

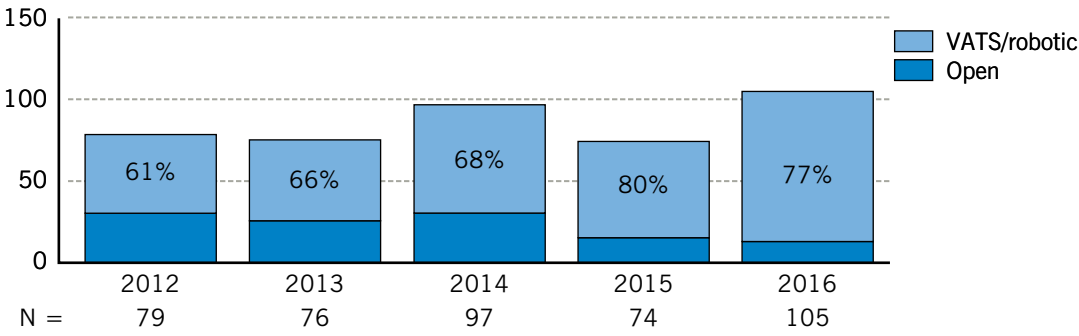
The majority of pulmonary resections performed at Cleveland Clinic in 2016 were open and video-assisted lobectomies. Video-assisted thoracic surgery and robotic techniques are used when appropriate to yield the best possible outcomes for each patient.

Thoracic Surgery

Lobectomy for Stage I Lung Cancers

2012 – 2016

Volume



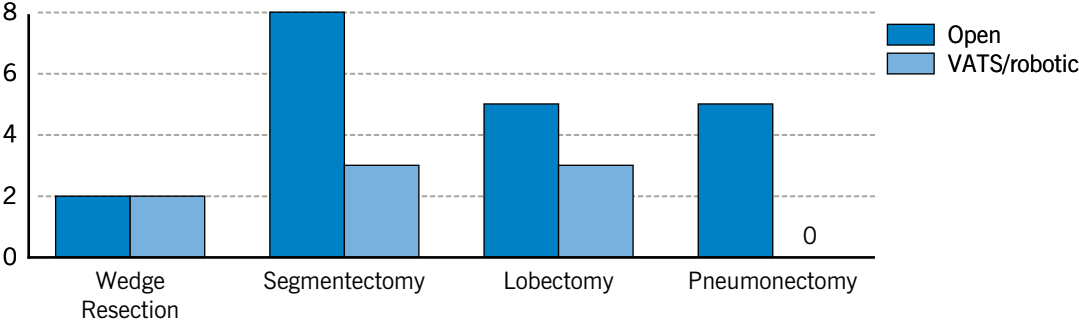
VATS = video-assisted thoracic surgery

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.

Postoperative Median Length of Stay (N = 282)

2016

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.

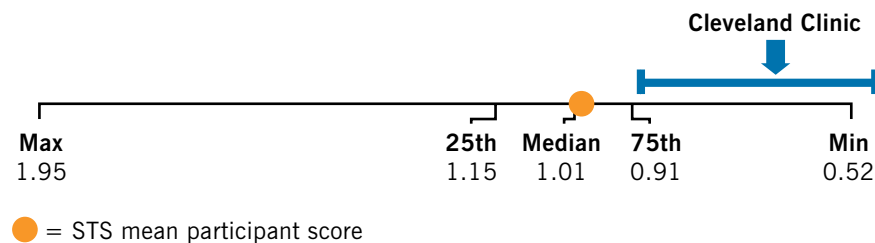
Pulmonary Resection for Lung Cancer

Combined Morbidity and 30-Day Mortality (N = 631)

July 2013 – June 2016

Cleveland Clinic surgeons performed 631 pulmonary resections for lung cancer from July 2013 through June 2016. 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)
631	5.2%	4.8% (3.5, 6.4)	0.66 (0.48, 0.89)



STS = Society of Thoracic Surgeons

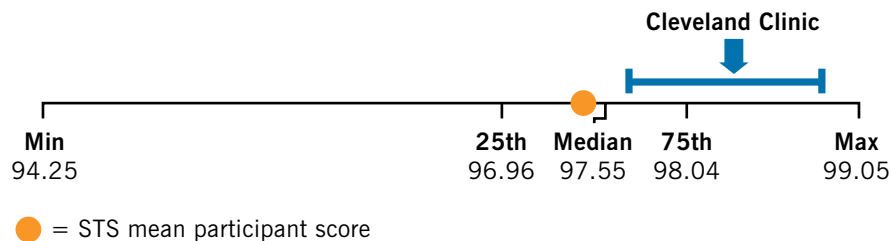
Source: Society of Thoracic Surgeons (STS) General Thoracic Surgery Database, July 2013 – June 2016

Lobectomy for Lung Cancer

Composite Quality Rating

July 2013 – June 2016

Participant Score (95% Confidence Interval)	STS Mean Participant Score	Participant Rating
98.3% (97.71, 98.84)	97.4%	☆☆☆



STS = Society of Thoracic Surgeons

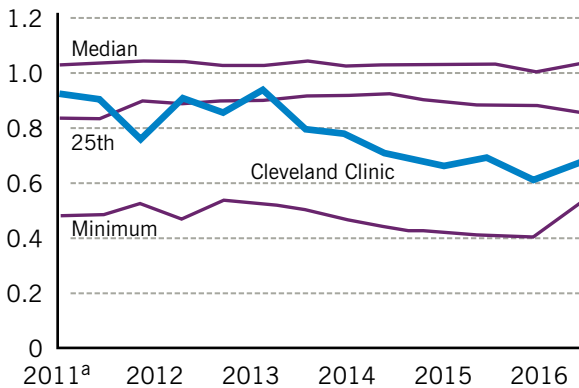
Source: Society of Thoracic Surgeons (STS) General Thoracic Surgery Database, July 2013 – June 2016

Thoracic Surgery

Combined Morbidity and 30-Day Mortality

2011 – 2016

Estimated Standardized Incidence Ratio



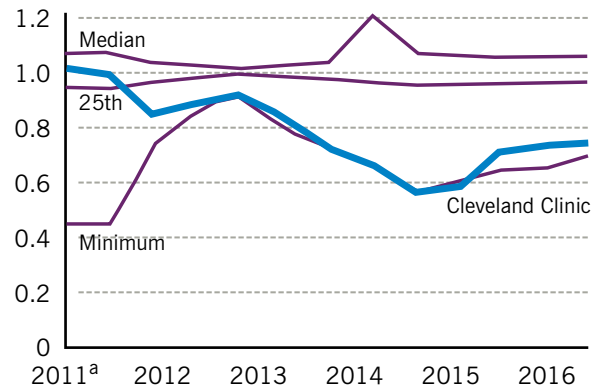
^aSingle quarter reported

The standardized incidence ratio is a ratio of the participant's risk-adjusted rate divided by the overall observed outcome rate in the STS database, which includes all participants. The lower the ratio, the better the performance. Median performance, 25th percentile, and minimum (or best performance) among STS database participants are provided here, along with Cleveland Clinic data. Cleveland Clinic has consistently ranked in the top 10% and achieved an STS 3-star rating every year since the inception of the ranking system.

30-Day Mortality

2011 – 2016

Estimated Standardized Incidence Ratio



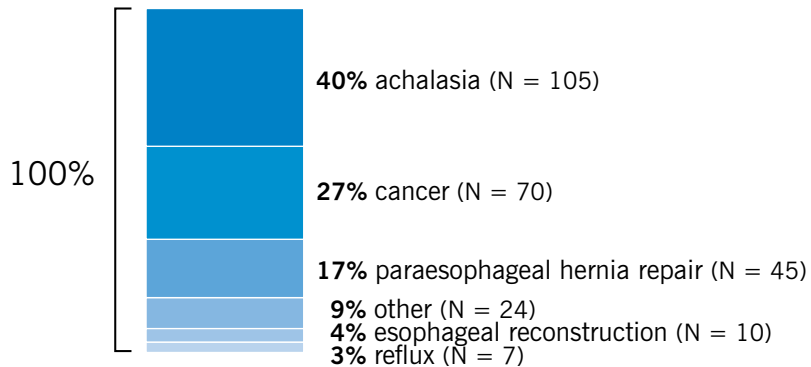
^aSingle quarter reported



Esophageal Surgery

Distribution by Indication (N = 261)

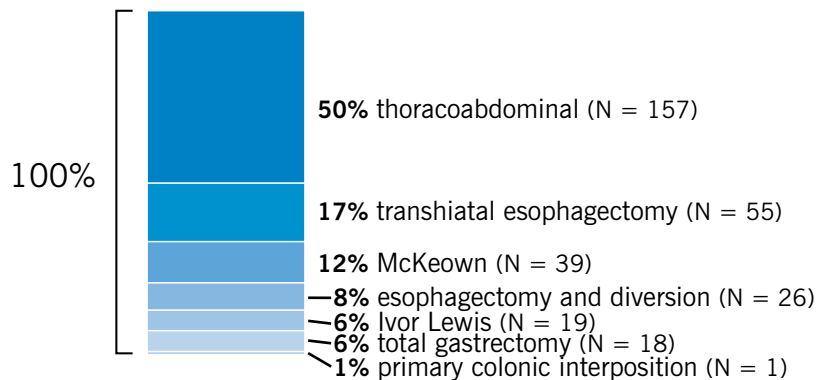
2016



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.

Esophagectomy by Type (N = 315)

2016



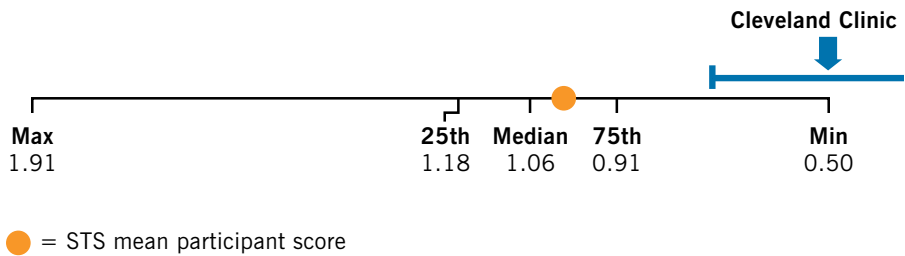
Thoracic Surgery

Esophagectomy for Esophageal Cancer

Combined Morbidity and 30-Day Mortality (N = 153)

July 2013 – June 2016

Eligible Procedures	Unadjusted Rate	Risk-Adjusted Rate (95% Confidence Interval)	Standardized Incidence Ratio (95% Confidence Interval)
153	14.4%	14.7% (10.1, 19.8)	0.55 (0.38, 0.75)

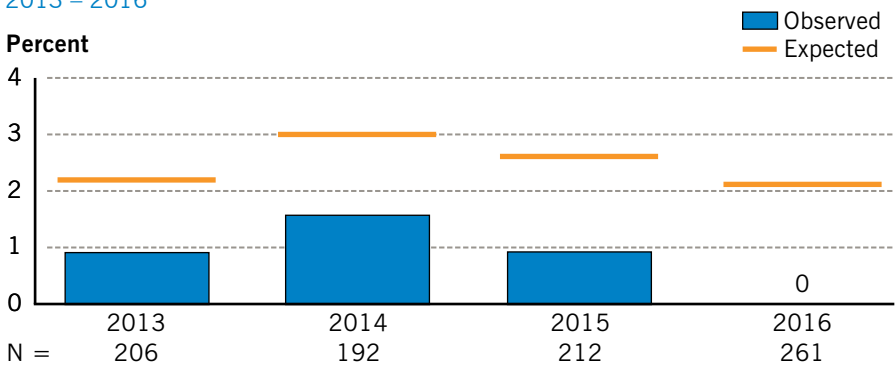


Source: Society of Thoracic Surgeons (STS) General Thoracic Surgery Database, July 2013 – June 2016

Cleveland Clinic surgeons performed 153 esophagectomy procedures for patients with esophageal cancer from July 2013 through June 2016. The combined morbidity and 30-day mortality risk-adjusted rate was among the best in the country.

In-Hospital Mortality

2013 – 2016



Cleveland Clinic thoracic surgeons performed 261 esophageal procedures in 2016 and achieved a lower-than-expected in-hospital mortality rate (0% vs 2.1%).

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