



In affiliation with



# Annual Outcomes Report

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**Director, Cardiac Surgery Affiliate Programs**

**September 29, 2018**

**Thoracic and Cardiovascular Surgery**





Coming together is a **beginning**,  
staying together is **progress**,  
and working together is **success**.

*- Henry Ford*

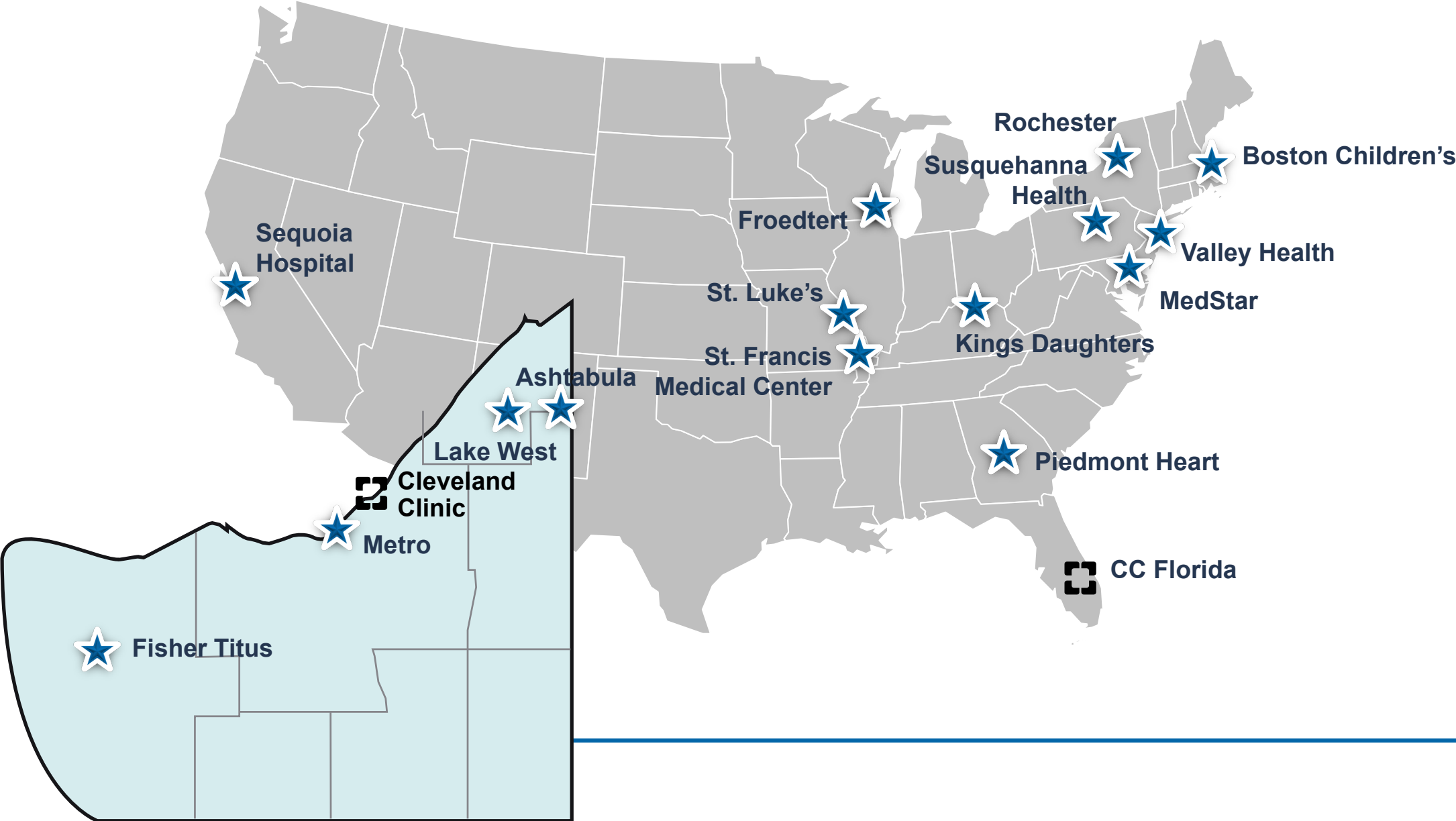
# Cleveland Clinic – Sequoia Relationship History

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## March 2015



# CCF Affiliation program extends nationally with broad membership profile



# Cleveland Clinic Heart & Vascular Affiliation drives value in four key areas

**Optimize quality infrastructure for reporting and improving quality outcomes**

**Gain strategic insights and tools to maximize and differentiate local and regional brand**



**Enhance and expand care delivery across the cardiovascular service line**

**Eliminate waste and excess spending across care delivery processes, ancillary services, and supply chain**

# Quality & Reporting –Highlights

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- 3-Star Mitral Valve Replacement and Repair (MVRR) Rating
- Sequoia Outcomes Book
- Quality & Registry documentation improvement and support
- Quarterly Quality Meetings
  - Cardiac Surgery and Cardiovascular Medicine
  - Focused metric review and sharing of best practice to improve quality outcomes
- Education and conferences
  - Monthly Cardiac Registry Webinars
  - 3-day Cardiac Registry Boot Camp



# Clinical Care Delivery – Highlights

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- Annual clinical assessments & recommendations reports
- Mortality reviews and discussion during quality meetings
- Echo Over-reads
- Sharing of best practices: processes, policies, protocols, education materials
- Education and conferences
  - Monthly Cleveland Clinic Nursing Grand Rounds
  - Cleveland Clinic ECMO Support Training
  - Cleveland Clinic Cath, EP, and Echo Conference
- Collaborative Projects with Continuous Improvement team: Operating Room & SPD Project

# Cost Containment – Highlights

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- Continuous improvement efficiencies initiated in Cath & EP Labs
  - Opportunity related to scheduling of cases, case start times, and physician accountability to arrive on time
  - Cath Lab and procedural area to conduct workflow analysis by Cleveland Clinic continuous improvement team
- Cath & EP Lab scheduling project and onsite assessment
- Initiated billing and coding documentation improvement assessment
  - Claims based quality measure analysis of CMS Hospital Specific Reports (HSRs) for specific CMS Pay for Performance Programs



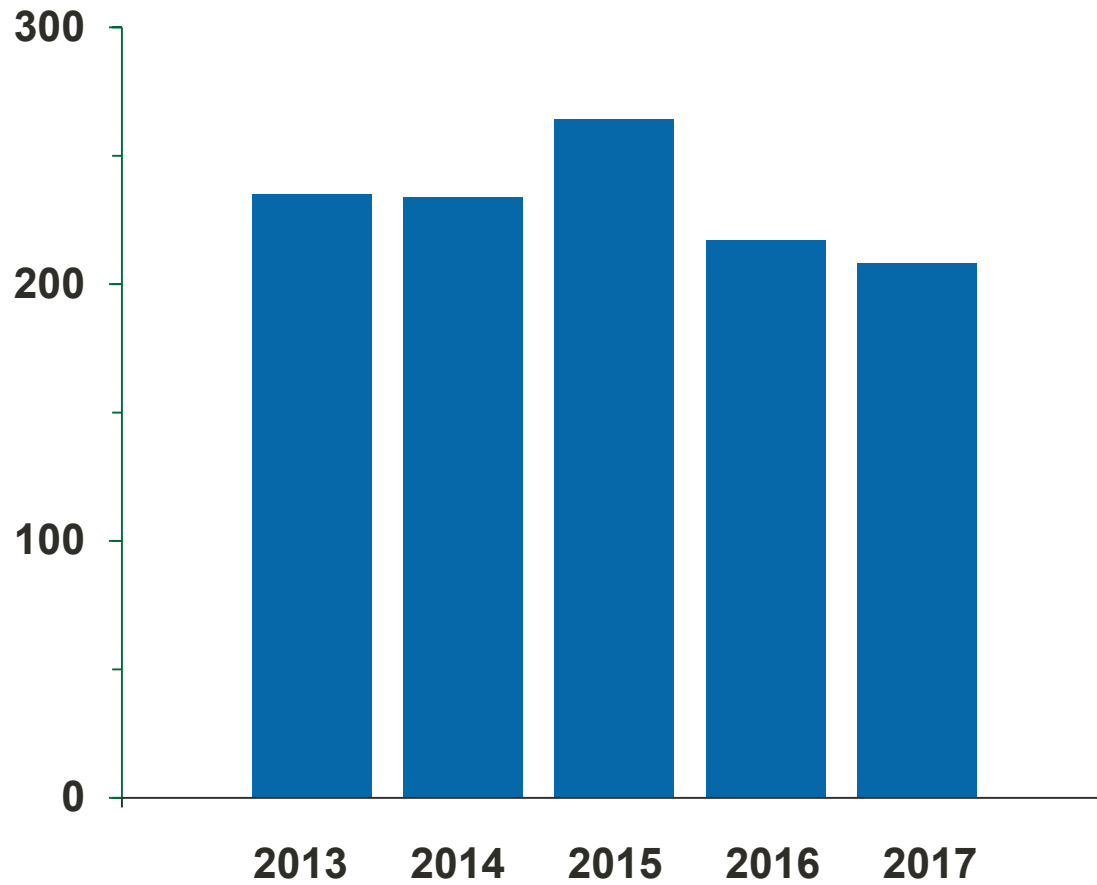
# Programmatic Growth – Highlights

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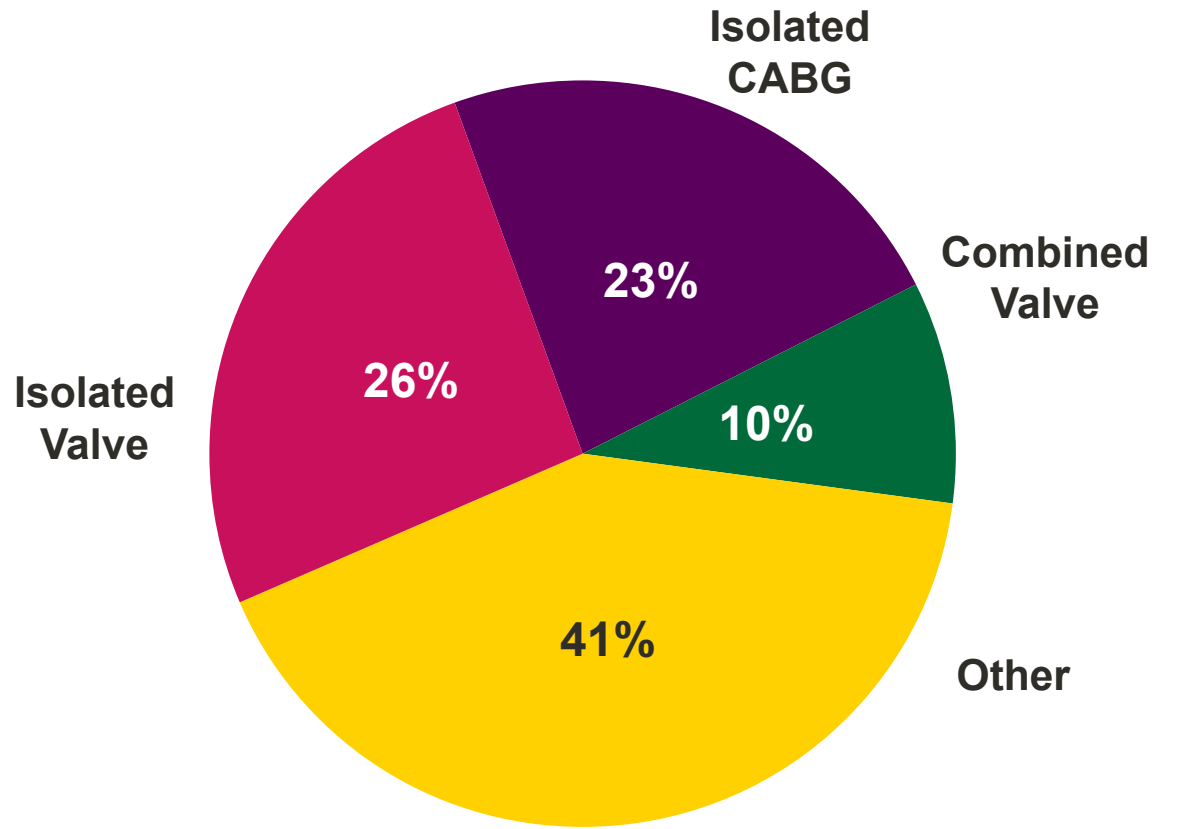
- Branding and Marketing
  - Promotion of physicians/ speaking engagements
  - Mitral Valve surgery market assessment
- Patient Experience assessment and best practices
- Physician Recruitment support
- Direct to Employer (DTE) Quality Profile development
- Education and conferences
  - Samson Global Leadership Academy
  - Cleveland Clinic Marketing Intensive
  - Patient Experience Summit
  - Cleveland Clinic Payment Innovation Summit
  - Alliance and Affiliate Cardiology and Cardiac Surgery Retreat

# Sequoia Adult Cardiovascular Surgery

## Annual Volumes

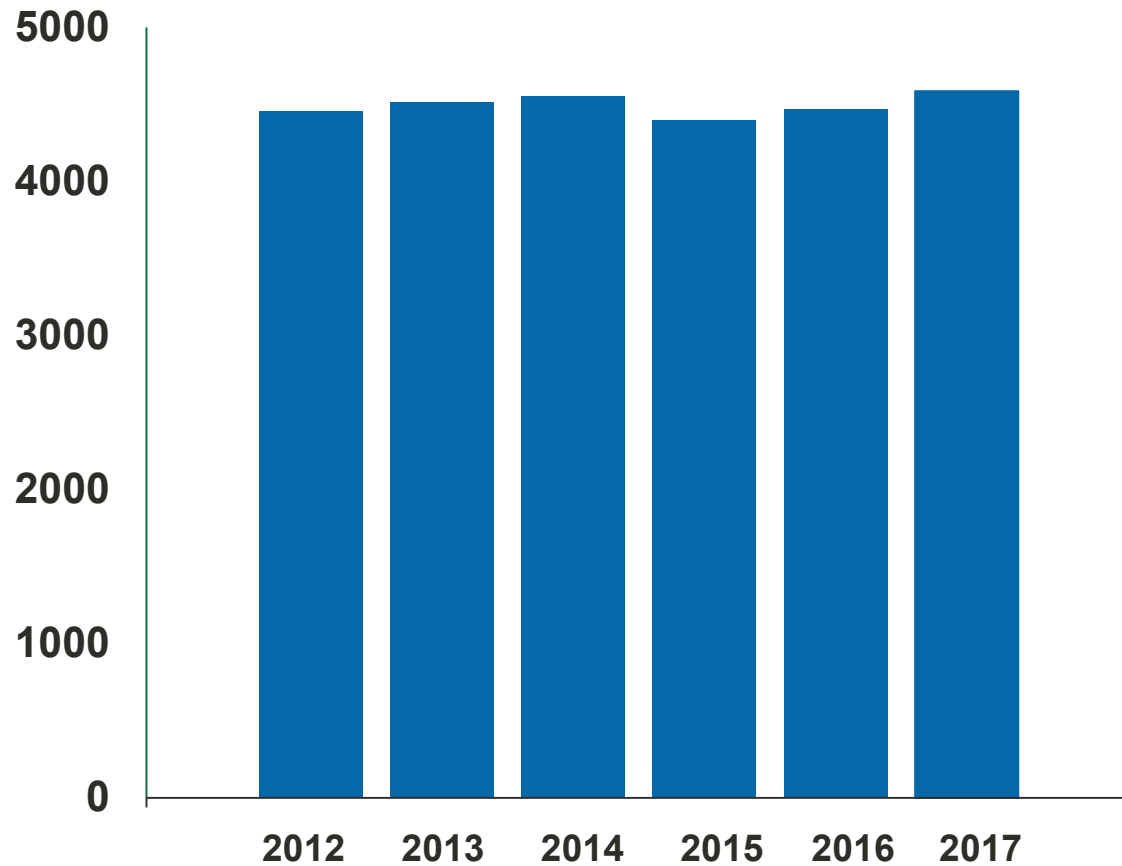


## 2017 Cardiac Operations (N = 208)

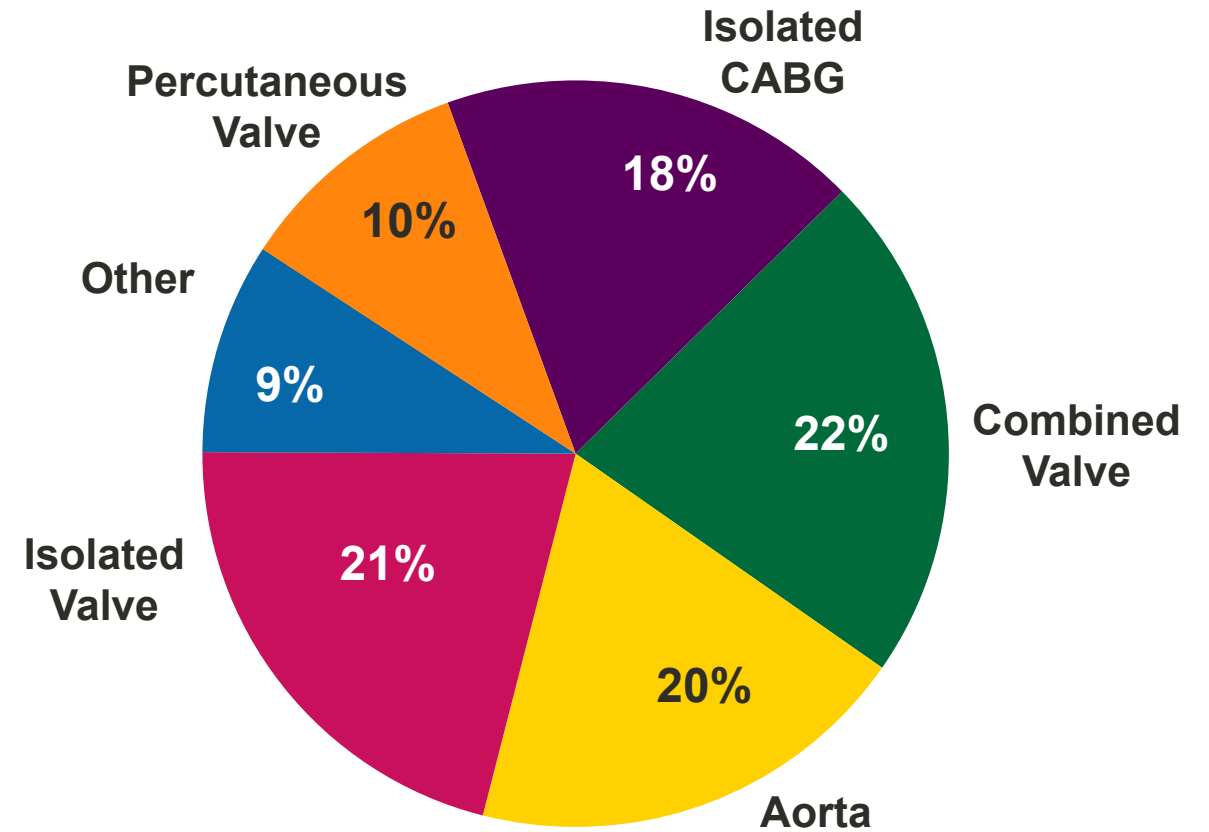


# Cleveland Clinic Adult Cardiovascular Surgery

## Annual Volumes



## 2017 Cardiac Operations (N = 4,586)



# Cleveland Clinic NEOH 2017 STS National Rankings

**STS CABG Composite Quality Rating**  
Rating Trend  
Participant 30986  
STS Period Ending 12/31/2017



| Quality Domain | Participant Rating <sup>1</sup> |                     |                     |                     |
|----------------|---------------------------------|---------------------|---------------------|---------------------|
|                | Jul 2015 - Jun 2016             | Jan 2016 - Dec 2016 | Jul 2016 - Jun 2017 | Jan 2017 - Dec 2017 |
| Overall        | ★★★★                            | ★★★★                | ★★★★                | ★★★★                |



**STS AVR Composite Quality Rating**  
Participant 30986  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 97.1% (96.5, 97.7)         | 95.4%                      | ★★★★                            |  |

**STS MVRR Composite Quality Rating**  
Participant 30986  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 95.9% (95.2, 96.5)         | 93.3%                      | ★★★★                            |  |

**STS MVRR+ CABG Composite Quality Rating**  
Participant 30986  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 88.6% (86.7, 90.3)         | 86.0%                      | ★★★★                            |  |

**STS AVR + CABG Composite Quality Rating**  
Participant 30986  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 94.5% (93.4, 95.6)         | 92.4%                      | ★★★★                            |  |

# Sequoia STS 2017 National Rankings

## STS CABG Composite Quality Rating Rating Trend

Participant 14833  
STS Period Ending 12/31/2017



| Quality Domain | Participant Rating <sup>1</sup> |                     |                     |                     |
|----------------|---------------------------------|---------------------|---------------------|---------------------|
|                | Jul 2015 - Jun 2016             | Jan 2016 - Dec 2016 | Jul 2016 - Jun 2017 | Jan 2017 - Dec 2017 |
| Overall        | ★★                              | ★★                  | ★★                  | ★★                  |



## STS MVRR Composite Quality Rating

Participant 14833  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 96.6%<br>(95.0, 97.8)      | 93.3%                      | ★★★                             |  |

## STS AVR Composite Quality Rating

Participant 14833  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 97.1%<br>(95.4, 98.3)      | 95.4%                      | ★★                              |  |

## STS MVRR+ CABG Composite Quality Rating

Participant 14833  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 88.5%<br>(83.3, 92.6)      | 86.0%                      | ★★                              |  |

## STS AVR + CABG Composite Quality Rating

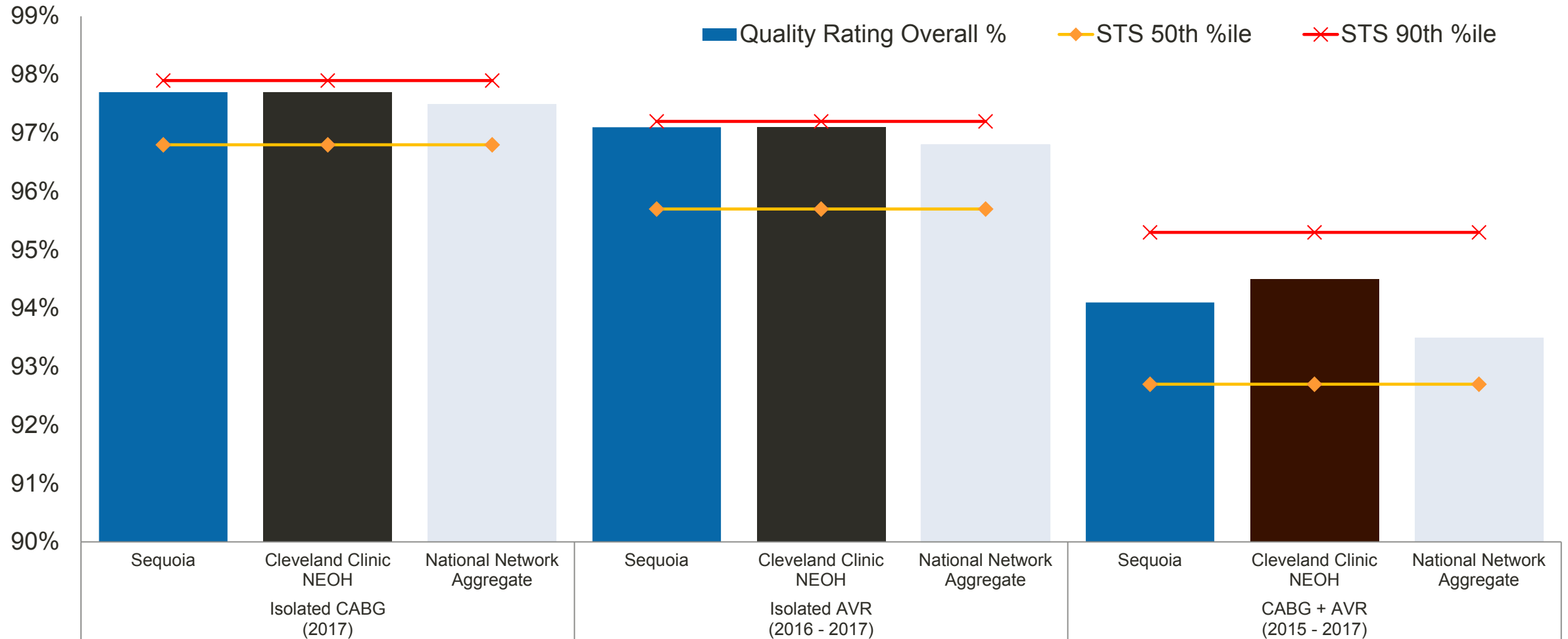
Participant 14833  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>● = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 94.1%<br>(90.9, 96.5)      | 92.4%                      | ★★                              |  |

# STS Quality Star Ratings

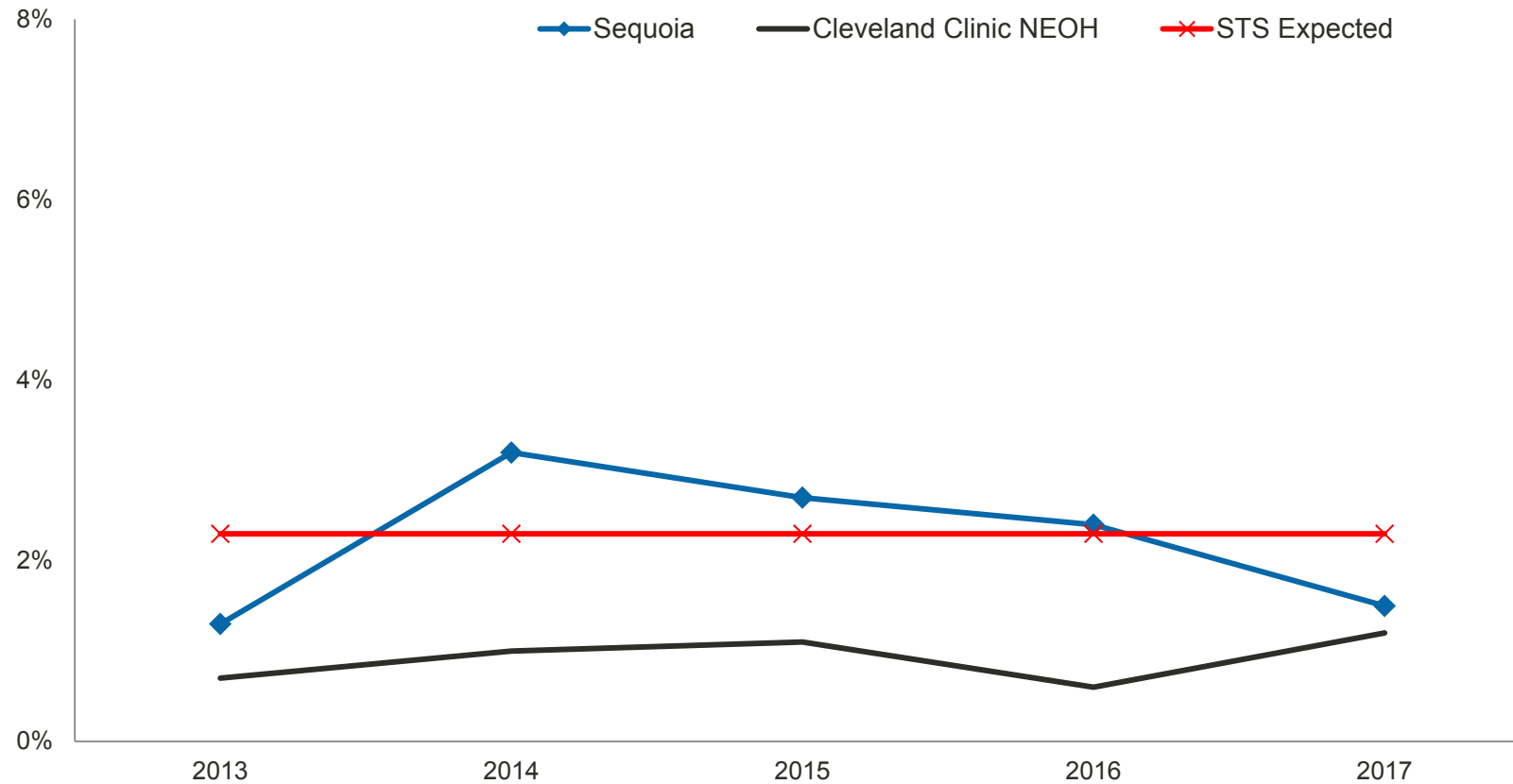
**Conclusion:** Sequoia is above average for CABG, AVR, and AVR + CABG star rated domains, low volume preventing 3-Star Rating.



# STS Cardiac Surgery

JANUARY 2013 – DECEMBER 2017

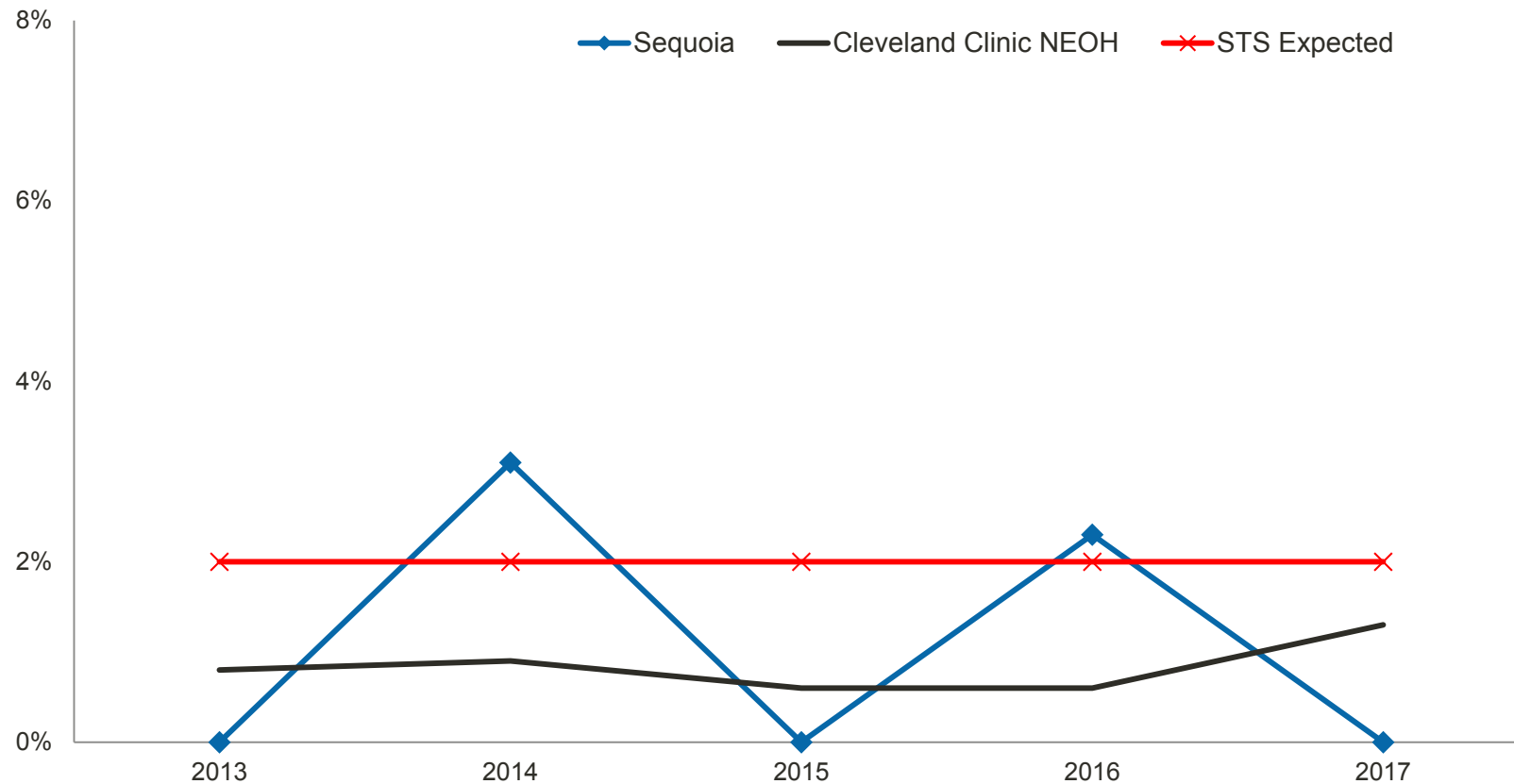
## CABG Risk-Adjusted Operative Mortality



# STS Cardiac Surgery

JANUARY 2013 – DECEMBER 2017

## AVR Risk-Adjusted Operative Mortality

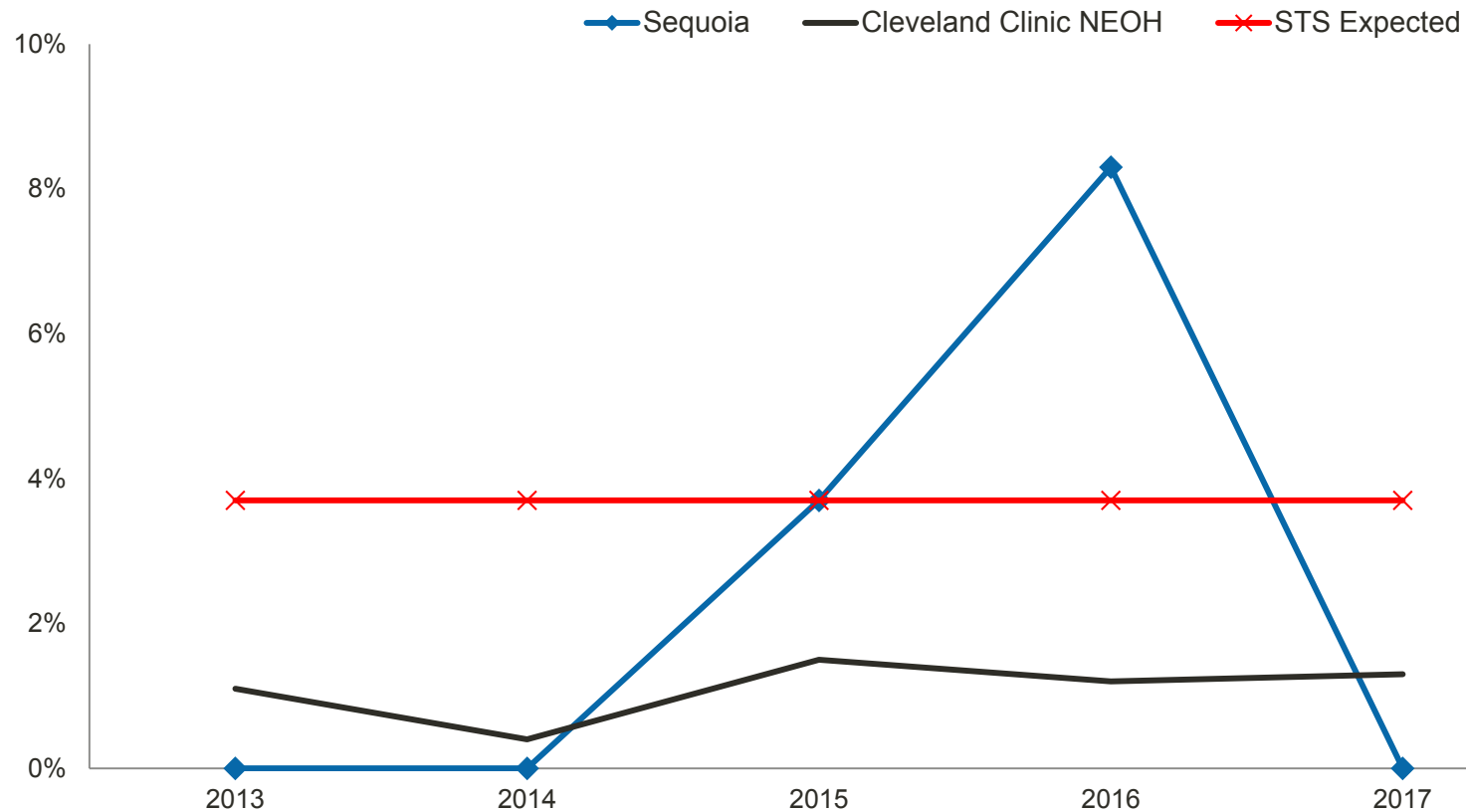




# STS Cardiac Surgery

JANUARY 2013 – DECEMBER 2017

## AVR+CABG Risk-Adjusted Operative Mortality



# Importance of Volume for Star Ranking

## STS AVR Composite Scores



**STS AVR Composite Quality Rating**  
Participant 30986  
STS Period Ending 12/31/2017



| Quality Domain              | Participant Score (95% CI) | STS Mean Participant Score | Participant Rating <sup>1</sup> | Distribution of Participant Scores<br>• = STS Mean |
|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 97.1%<br>(96.5, 97.7)      | 95.4%                      | ★★★                             |  |

CCF



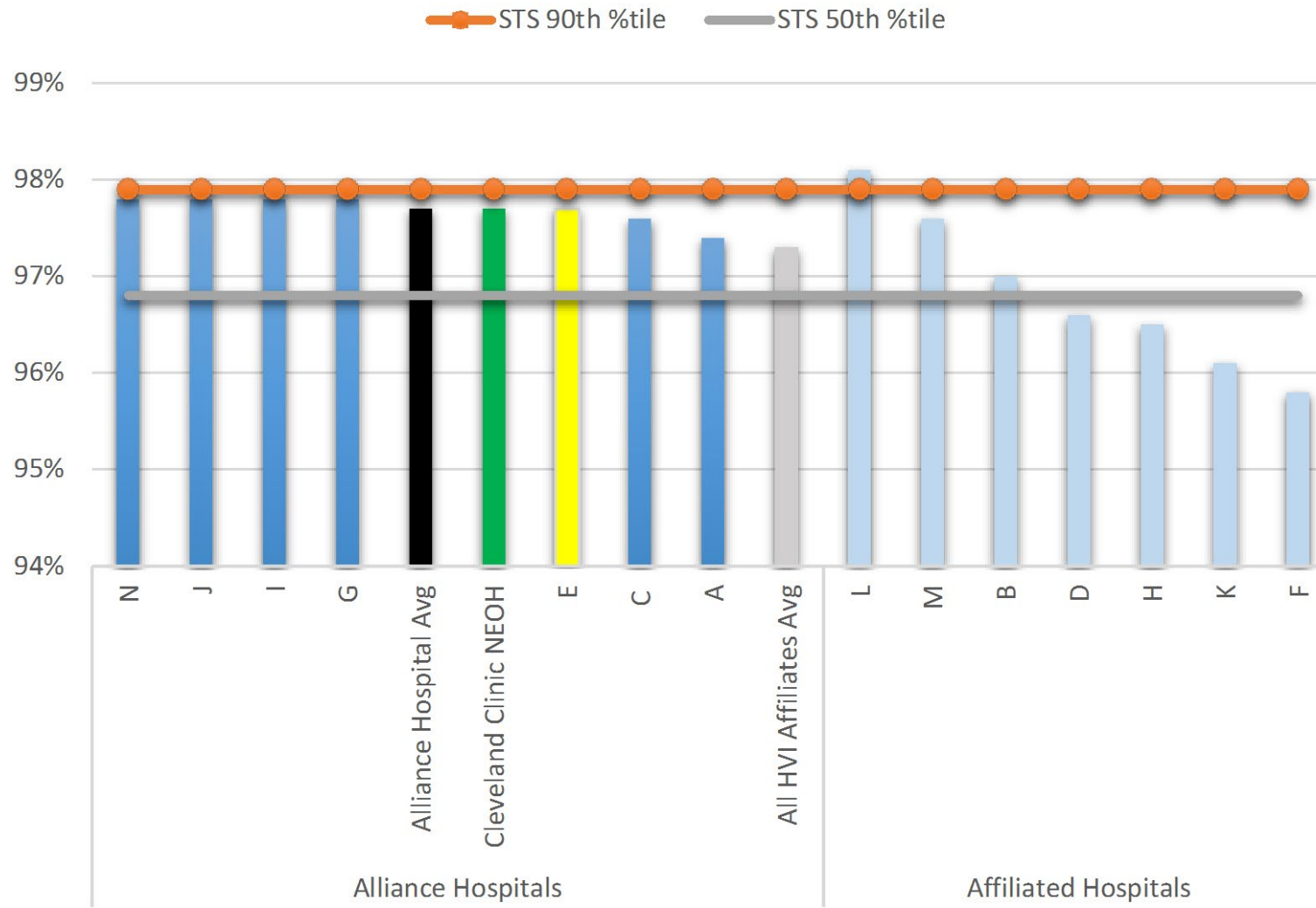
**STS AVR Composite Quality Rating**  
Participant 14833  
STS Period Ending 12/31/2017



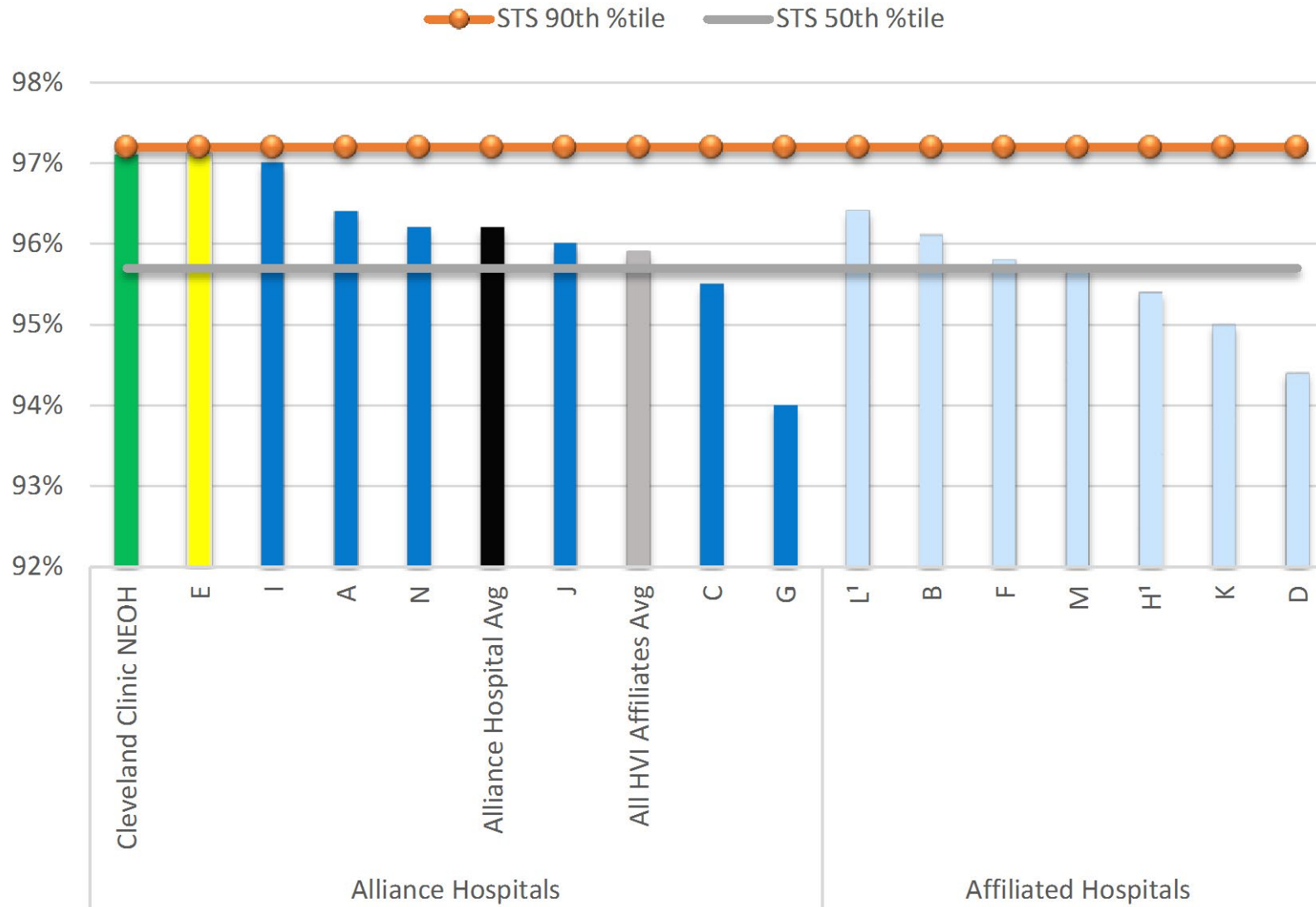
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|-----------------------------|----------------------------|----------------------------|---------------------------------|--|
| Jan 2015 - Dec 2017 Overall | 97.1%<br>(95.4, 98.3)      | 95.4%                      | ★★                              |  |

Sequoia

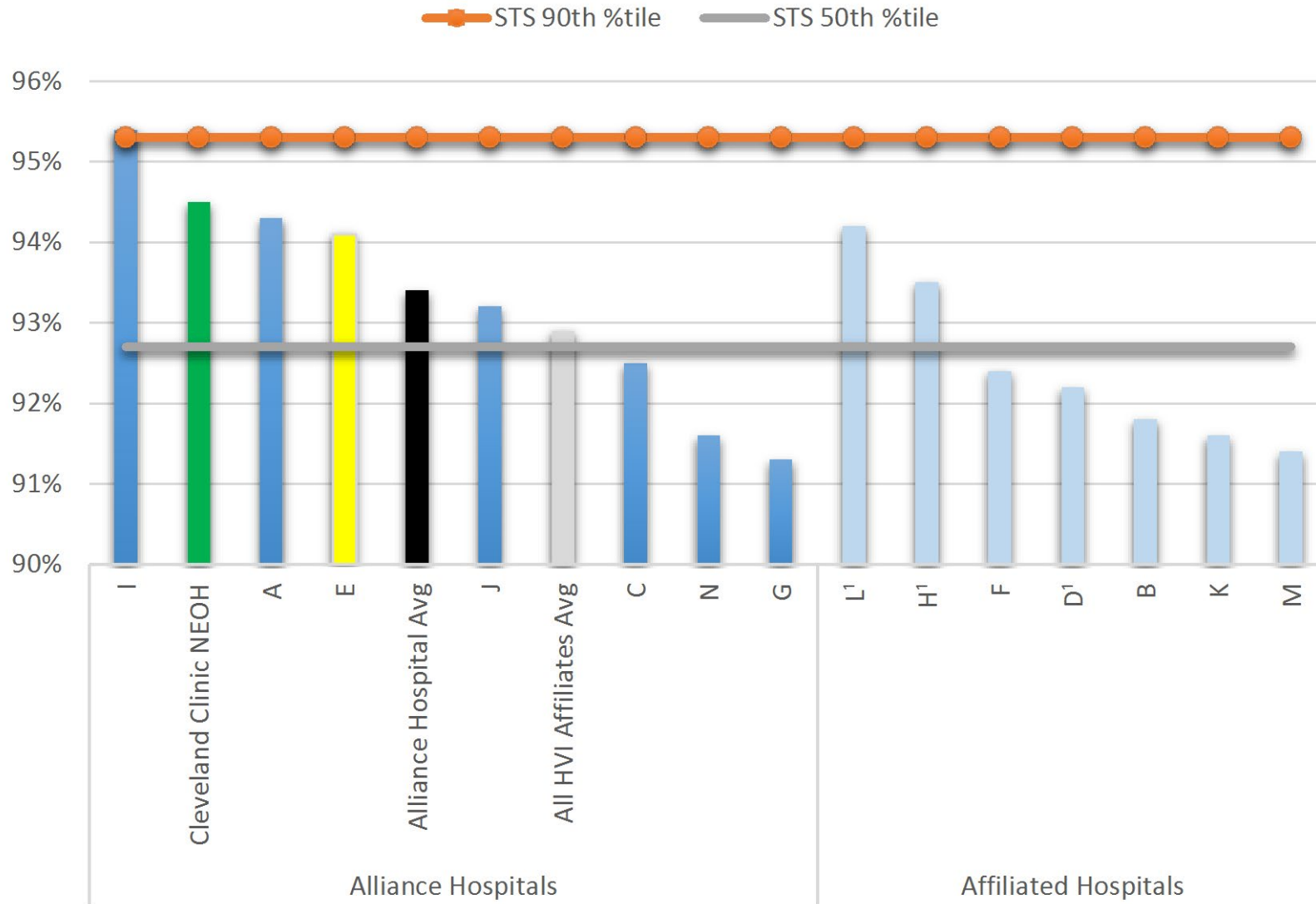
# STS CABG Composite Rating Across Affiliates/Alliances



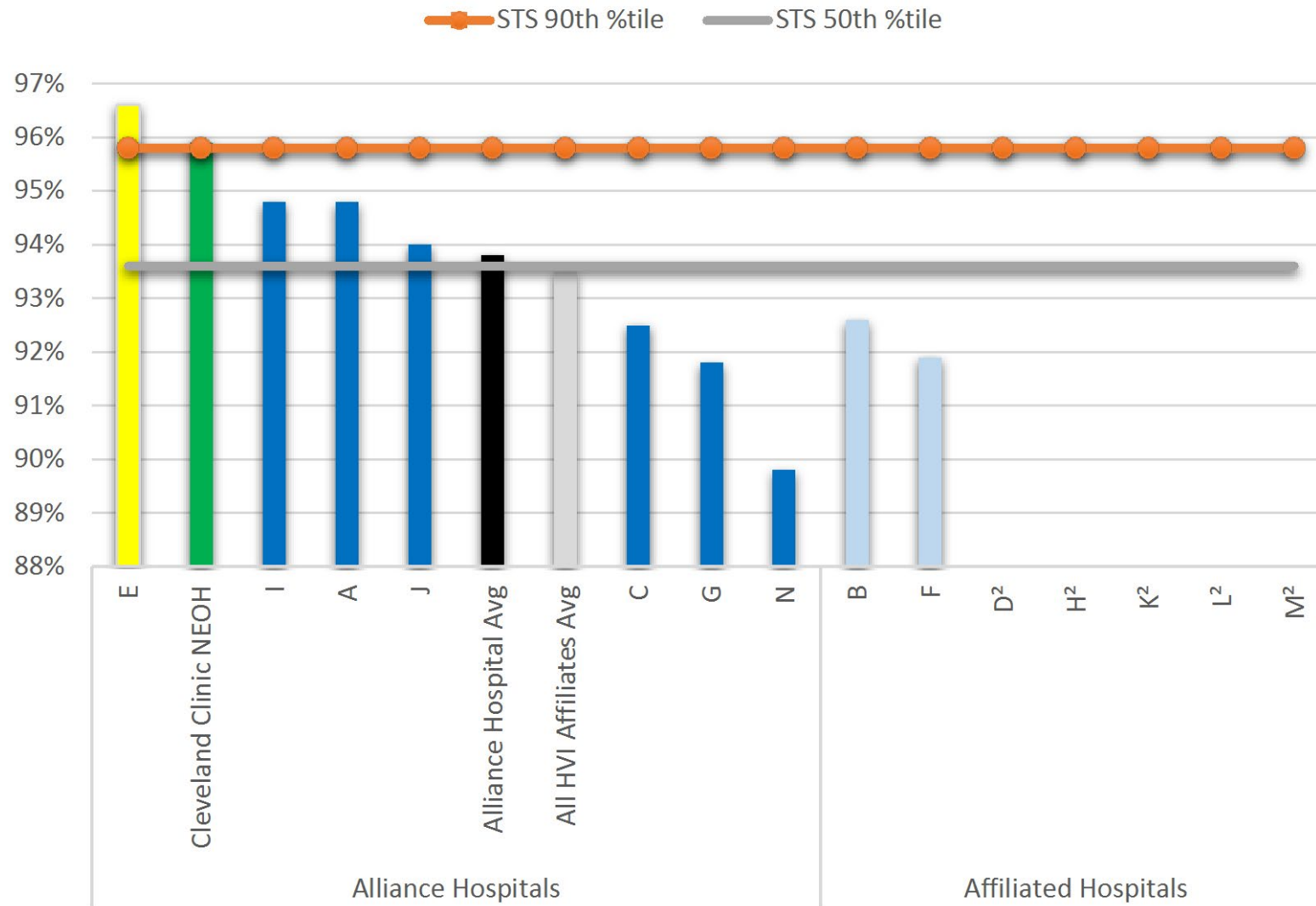
# STS AVR Composite Rating Across Affiliates/Alliances



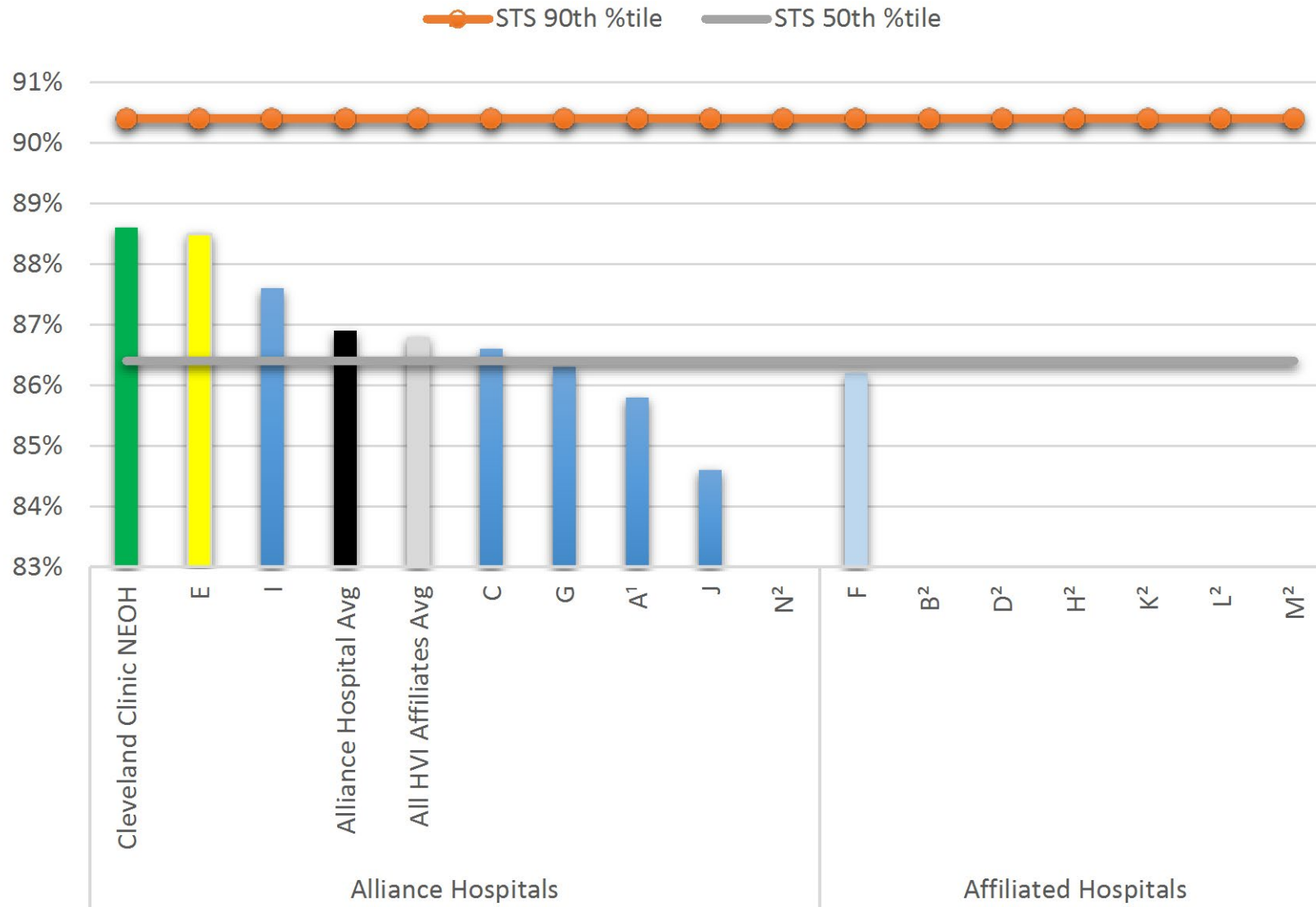
# STS AVR+CABG Composite Rating Across Affiliates/Alliances



# STS MVR/MVr Composite Rating Across Affiliates/Alliances



# STS MVR/MVr+CABG Composite Rating Across Affiliates/Alliances



# Sequoia Value is Driven Through...

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- Experience with the most complex patients
- Highest quality outcomes
- High patient satisfaction
- Reduced long-term cost of care
- Improved long-term quality of life
- Shortened return to work time



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# Congratulations





**Cleveland Clinic**

**Every life deserves world class care.**