



# Accreditation Council for Graduate Medical Education

## Thoracic Surgery Case Logs National Data Report

**Prepared by:** Department of Applications and Data Analysis

- I. National Resident Statistics Main Table
  - A. The main table provides a national picture of educational experiences. The report is ideal for establishing and assessing national policy related to resident practical experiences. Data are broken out by role (surgeon, assistant, etc), indicating the resident's procedures with primary credit. Procedures with secondary credit are also shown.
  - B. Descriptive statistics have been chosen to provide useful information for judging performance at the national level.
    - i. "Natl Res AVE" - The national average describes the mean number of procedures performed per resident in the nation.
    - ii. "Natl Res MIN" - The minimum number of procedures performed nationally.
    - iii. "Natl Res MAX" - The greatest number of procedures performed nationally.
    - iv. "Natl Res MAX" - The greatest number of procedures performed nationally.
- II. National Benchmark Table for Resident Statistics

The table displays selected percentile benchmarks of program averages. For example, a score at the 10th percentile indicates that 10% of residents achieved less than the value while the remaining 90% achieved more than the value.
- III. National Minimums Table for Resident Statistics

The table displays RRC minimums and Natl Res AVE for defined categories of procedures.

The information on the following pages has been created using specialty specific categories. These data should not be used for comparison across specialties as the definition of the categories will vary among the specialties. In addition, care should be exercised when comparing data from year to year as the definition of certain categories may be revised from time to time.

**THORACIC SURGERY : NATIONAL RESIDENT REPORT (Main Table)**  
**Reporting Period: Total Experience of Residents Completing Programs in 2018-2019**  
**Residency Review Committee for Thoracic Surgery**  
**Report Date: September 23, 2019**

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Number of Programs in the Nation: 62    Number of Residents in the Nation: 97

		Surgeon				Assistant				Secondary Credit			
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX
Area	RRC Procedure												
Chest Wall	Resection of tumor	4.0	3	0	16	0.0	0	0	0	0.2	0	0	4
	Debridement rewiring sternum	7.9	5	0	42	0.4	0	0	7	0.5	0	0	7
	Repair pectus excavatum carinatum	1.3	0	0	9	0.1	0	0	3	0.0	0	0	1
	Thoracic outlet	1.9	0	0	36	0.0	0	0	0	0.0	0	0	2
	Repair sternal or rib fracture	0.9	0	0	10	0.0	0	0	1	0.0	0	0	1
	Thoracoplasty	0.2	0	0	3	0.0	0	0	0	0.0	0	0	3
	Other (chest wall)	4.9	4	0	24	0.1	0	0	1	0.5	0	0	7
	<b>Total Chest Wall</b>	<b>21.1</b>	<b>19</b>	<b>1</b>	<b>64</b>	<b>0.6</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1.3</b>	<b>0</b>	<b>0</b>	<b>11</b>
Lung and Pleura	Pneumonectomy	5.7	4	0	39	0.0	0	0	1	0.3	0	0	6
	Pneumonectomy w/sleeve rsxn	0.0	0	0	1	0.0	0	0	0	0.0	0	0	1
	Extrapleural pneumonectomy	0.8	0	0	48	0.0	0	0	1	0.0	0	0	1
	Lobectomy	15.6	12	0	56	0.1	0	0	3	1.6	0	0	23
	Lobectomy w/VATS	30.8	25	2	99	0.6	0	0	22	1.8	0	0	22
	Lobectomy w/sleeve rsxn	1.2	1	0	8	0.1	0	0	2	0.1	0	0	2
	Segmental resection	1.9	1	0	16	0.0	0	0	1	0.2	0	0	3
	Segmental resection w/VATS	4.8	3	0	22	0.2	0	0	11	0.3	0	0	4
	Wedge resection	0.1	0	0	8	0.0	0	0	0	0.0	0	0	0
	Wedge resection w/VATS	42.8	34	13	121	0.6	0	0	28	5.3	2	0	60
	Lung volume reduction surgery	0.9	0	0	12	0.0	0	0	0	0.0	0	0	1
	Thoracotomy for explor / biopsy	4.9	3	0	29	0.1	0	0	3	0.9	0	0	23
	Decortication	6.0	6	0	20	0.0	0	0	1	0.5	0	0	5
	Decortication w/VATS	6.5	5	0	29	0.1	0	0	2	0.4	0	0	9
	Pleurectomy pleurodesis	1.3	0	0	18	0.0	0	0	1	0.2	0	0	4
	Pleurectomy pleurodesis (w/wout bleb rsxn)	0.3	0	0	5	0.0	0	0	1	0.0	0	0	1
	Pleurectomy pleurodesis w/VATS	9.8	8	1	31	0.0	0	0	1	0.9	0	0	6
	Closure broncho pleural fistula	0.3	0	0	4	0.0	0	0	1	0.0	0	0	1
	Drainage lung abscess empyema	1.0	0	0	7	0.0	0	0	1	0.1	0	0	2
	Resection pulmonary cyst or sequestration	0.3	0	0	4	0.0	0	0	0	0.0	0	0	1
	Pulmonary resection w/en bloc chest wall	0.6	0	0	5	0.0	0	0	0	0.0	0	0	1
	Other (lung and pleura)	2.1	1	0	14	0.1	0	0	3	0.4	0	0	5
	<b>Total Lung and Pleura</b>	<b>137.9</b>	<b>122</b>	<b>64</b>	<b>342</b>	<b>2.0</b>	<b>0</b>	<b>0</b>	<b>76</b>	<b>13.1</b>	<b>6</b>	<b>0</b>	<b>86</b>

Statistics for each role (surgeon, assistant) include only procedures for primary credit. Secondary procedures are shown separately and include all roles.

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Area	RRC Procedure												
Tracheobronchial	Resection of stricture	1.5	1	0	15	0.0	0	0	1	0.0	0	0	2
	Resect tumor	0.3	0	0	3	0.0	0	0	0	0.0	0	0	1
	Repair of rupture or laceration	0.3	0	0	3	0.0	0	0	1	0.0	0	0	1
	Other (tracheobronchial)	3.0	1	0	29	0.1	0	0	2	0.4	0	0	10
	<b>Total Tracheobronchial</b>	<b>5.1</b>	<b>4</b>	<b>0</b>	<b>30</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0.4</b>	<b>0</b>	<b>0</b>	<b>12</b>
Mediastinum	Excision of tumor cyst	3.1	2	0	16	0.1	0	0	3	0.1	0	0	2
	Excision of tumor cyst w/VATS	4.6	3	0	23	0.1	0	0	3	0.1	0	0	2
	Thymectomy	5.6	5	0	24	0.1	0	0	2	0.2	0	0	3
	Ligation of thoracic duct	1.1	0	0	17	0.0	0	0	1	0.1	0	0	2
	Mediastinotomy	3.9	2	0	25	0.1	0	0	4	0.4	0	0	8
	Other (Mediastinum)	28.8	22	2	113	0.1	0	0	4	7.5	1	0	76
	<b>Total Mediastinum</b>	<b>47.0</b>	<b>41</b>	<b>14</b>	<b>144</b>	<b>0.6</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>8.3</b>	<b>1</b>	<b>0</b>	<b>78</b>
Diaphragm	Repair of congenital hernia	0.2	0	0	3	0.0	0	0	0	0.0	0	0	0
	Repair of traumatic hernia	0.9	0	0	6	0.0	0	0	0	0.1	0	0	3
	Plication	2.1	1	0	15	0.1	0	0	1	0.1	0	0	2
	Other (diaphragm)	1.5	1	0	15	0.0	0	0	1	0.3	0	0	5
	<b>Total Diaphragm</b>	<b>4.7</b>	<b>4</b>	<b>0</b>	<b>22</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0.5</b>	<b>0</b>	<b>0</b>	<b>5</b>

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Area	RRC Procedure												
Esophagus	Esophagectomy	17.8	14	3	48	0.2	0	0	2	0.2	0	0	5
	Correction of reflux or stricture	0.3	0	0	3	0.0	0	0	0	0.1	0	0	3
	Correction of reflux or stricture w/VATS	3.4	1	0	36	0.1	0	0	5	0.4	0	0	17
	Repair paraesophageal hernia	10.7	7	0	46	0.1	0	0	3	0.4	0	0	11
	Repair paraesophageal hernia w/VATS	0.0	0	0	3	0.0	0	0	1	0.0	0	0	0
	Excision diverticulum	0.8	0	0	4	0.0	0	0	0	0.0	0	0	1
	Myotomy and reflux procedure	0.4	0	0	5	0.0	0	0	0	0.0	0	0	1
	Myotomy w/VATS	0.4	0	0	5	0.0	0	0	0	0.0	0	0	1
	Myotomy w/laparoscopy	2.1	1	0	24	0.0	0	0	2	0.1	0	0	3
	Closure of fistula	0.4	0	0	4	0.0	0	0	1	0.1	0	0	1
	Repair drainage of perforation or rupture	1.1	1	0	7	0.0	0	0	1	0.1	0	0	2
	Other (esophagus)	4.6	3	0	28	0.1	0	0	1	0.9	0	0	16
	Total Esophagus	41.9	35	10	135	0.5	0	0	11	2.3	0	0	27
	Video Assisted Thoracoscopic (VATS)	Diagnostic thoracoscopy biopsy	0.1	0	0	5	0.0	0	0	0	0.0	0	0
Pericardial window		0.8	0	0	12	0.0	0	0	1	0.1	0	0	2
Drainage empyema hemothorax		0.4	0	0	15	0.0	0	0	1	0.0	0	0	1
Sympathectomy		1.3	0	0	16	0.0	0	0	1	0.0	0	0	1
Other (VATS)		3.9	2	0	27	0.0	0	0	1	0.9	0	0	13
Total VATS		6.5	4	0	39	0.1	0	0	2	1.0	0	0	13
Closed Operations Congenital	Patent ductus arteriosus	1.2	0	0	13	1.0	1	0	5	0.7	0	0	11
	Coarctation of aorta	0.2	0	0	4	1.0	0	0	7	0.0	0	0	1
	Shunting procedure	0.2	0	0	3	0.9	1	0	5	0.1	0	0	2
	BiDirectional Glenn shunt (closed)	0.0	0	0	1	0.1	0	0	2	0.0	0	0	0
	Other (closed operations congenital)	1.0	0	0	10	1.3	1	0	10	0.4	0	0	7
	Total Closed Operations Congenital	2.7	1	0	28	4.3	3	0	18	1.2	0	0	14

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Area	RRC Procedure												
Open Congenital	Tetralogy fallot	0.3	0	0	4	1.2	1	0	6	0.0	0	0	1
	Transposition	0.1	0	0	4	0.9	0	0	8	0.0	0	0	1
	Truncus arteriosus	0.0	0	0	1	0.2	0	0	3	0.0	0	0	1
	Ventricular septum defect	1.1	1	0	10	2.5	2	0	19	0.4	0	0	4
	AV septal defect	0.2	0	0	3	1.1	1	0	5	0.1	0	0	2
	Anomalous pulmonary venous drainage	0.7	0	0	5	0.9	0	0	5	0.1	0	0	1
	Atrial septum defect	5.3	5	0	18	2.4	2	0	10	1.2	0	0	14
	BiDirectional Glenn shunt (open)	0.2	0	0	5	0.9	0	0	5	0.0	0	0	1
	Interrupted arch hypoplastic left heart	0.2	0	0	3	1.9	1	0	13	0.1	0	0	4
	Fontan procedure	0.4	0	0	7	1.4	1	0	11	0.0	0	0	0
	RVOT reconstruction	0.2	0	0	4	0.6	0	0	5	0.1	0	0	2
	Other (open congenital)	4.5	3	0	22	5.9	4	0	58	1.5	0	0	22
	<b>Total Open Congenital</b>	<b>13.4</b>	<b>10</b>	<b>1</b>	<b>57</b>	<b>19.8</b>	<b>15</b>	<b>3</b>	<b>77</b>	<b>3.4</b>	<b>1</b>	<b>0</b>	<b>28</b>
	Valvular Heart Disease	Mitral aortic valve repair	15.9	12	1	67	2.9	0	0	54	3.4	2	0
Valve replacements		68.4	65	15	184	11.8	10	0	61	12.8	7	0	74
Aortic root replacement		8.9	7	0	53	1.8	0	0	16	1.2	0	0	20
Re-operation for valvular disease		14.4	12	2	63	0.9	0	0	15	2.3	0	0	31
Other (valvular heart disease)		5.8	5	0	40	0.6	0	0	17	3.4	1	0	26
<b>Total Valvular Heart Disease</b>		<b>113.4</b>	<b>109</b>	<b>26</b>	<b>306</b>	<b>18.0</b>	<b>11</b>	<b>0</b>	<b>131</b>	<b>23.1</b>	<b>14</b>	<b>0</b>	<b>120</b>
Resection Cardiac Tumor	Resection cardiac tumor	1.4	1	0	6	0.2	0	0	4	0.1	0	0	2
	<b>Total Resection Cardiac Tumor</b>	<b>1.4</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>2</b>
Operations Coronary Atherosclerosis	Primary bypass	109.2	96	32	366	5.1	0	0	73	31.4	9	0	331
	Re-op recurrent disease	4.3	3	0	16	0.1	0	0	1	0.6	0	0	7
	Ventricular aneurysm	0.3	0	0	2	0.0	0	0	1	0.0	0	0	1
	Acquired VSD	0.5	0	0	4	0.1	0	0	1	0.0	0	0	0
	Coronary anomalies and/or fistulae	0.2	0	0	9	0.1	0	0	3	0.0	0	0	1
	Other (operations coronary atherosclerosis)	0.2	0	0	2	0.0	0	0	1	0.1	0	0	2
	<b>Total Oper Coronary Atherosclerosis</b>	<b>114.6</b>	<b>103</b>	<b>32</b>	<b>380</b>	<b>5.3</b>	<b>0</b>	<b>0</b>	<b>77</b>	<b>32.1</b>	<b>10</b>	<b>0</b>	<b>335</b>

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Area	RRC Procedure												
Pericardium	Pericardial window	5.0	4	0	19	0.1	0	0	1	0.1	0	0	2
	Pericardiectomy	1.2	1	0	5	0.1	0	0	5	0.2	0	0	2
	Other (pericardium)	0.2	0	0	4	0.0	0	0	0	0.0	0	0	2
	<b>Total Pericardium</b>	<b>6.4</b>	<b>5</b>	<b>0</b>	<b>19</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0.4</b>	<b>0</b>	<b>0</b>	<b>4</b>
Other Cardiac Procedures	Arrhythmia surgery	8.4	6	0	31	0.4	0	0	18	3.2	1	0	23
	Insertion epicardial electrical device	2.2	2	0	32	0.4	0	0	6	0.2	0	0	2
	Insertion/removal cardiac assist device	9.3	5	0	37	1.0	0	0	12	1.0	0	0	12
	Removal intracardiac foreign body	0.4	0	0	4	0.0	0	0	2	0.1	0	0	1
	Repair cardiac trauma	0.4	0	0	6	0.1	0	0	2	0.0	0	0	1
	Minimally invasive surgery	0.0	0	0	4	0.0	0	0	0	0.0	0	0	0
	Other (other cardiac procedures)	21.9	18	0	104	0.8	0	0	7	2.4	0	0	25
	<b>Total Other Cardiac Procs</b>	<b>42.7</b>	<b>39</b>	<b>6</b>	<b>116</b>	<b>2.8</b>	<b>1</b>	<b>0</b>	<b>28</b>	<b>6.9</b>	<b>3</b>	<b>0</b>	<b>37</b>
Thoracic Vascular	Open repair traumatic injury	0.6	0	0	10	0.0	0	0	1	0.1	0	0	1
	Repair ascending aneurysm	13.5	11	0	42	1.1	0	0	10	2.7	1	0	40
	Repair desc aneurysm	3.1	2	0	53	0.2	0	0	5	1.2	0	0	18
	Repair thoracoabdominal aneurysm	1.1	0	0	9	0.2	0	0	4	0.1	0	0	2
	Pulmonary embolectomy endarterectomy	1.1	0	0	11	0.3	0	0	5	0.1	0	0	1
	Other (thoracic vascular)	0.9	0	0	12	0.1	0	0	3	0.1	0	0	2
	<b>Total Thoracic Vascular</b>	<b>20.2</b>	<b>15</b>	<b>2</b>	<b>71</b>	<b>1.9</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>4.2</b>	<b>1</b>	<b>0</b>	<b>45</b>
Transplantation	Heart	7.6	5	0	35	1.3	0	0	18	0.5	0	0	8
	Lung	11.5	4	0	67	0.6	0	0	12	1.6	0	0	19
	Heart/lung	0.2	0	0	3	0.1	0	0	1	0.0	0	0	1
	Procurement heart	4.6	2	0	29	0.1	0	0	2	0.0	0	0	1
	Procurement heart/lung	1.7	0	0	18	0.0	0	0	1	0.1	0	0	9
	Other (transplantation)	0.1	0	0	6	0.0	0	0	1	0.2	0	0	5
	<b>Total Transplantation</b>	<b>25.6</b>	<b>20</b>	<b>0</b>	<b>114</b>	<b>2.1</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>2.4</b>	<b>0</b>	<b>0</b>	<b>24</b>

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Area	RRC Procedure													
Minor Thoracic and CV	Bronchoscopy	40.9	32	0	291	0.1	0	0	4	10.6	1	0	247	
	Bronchoscopy w/intervention	14.2	8	0	104	0.1	0	0	2	1.3	0	0	20	
	EBUS	9.8	5	0	54	0.0	0	0	0	0.3	0	0	5	
	Esophagoscopy	14.8	11	0	63	0.0	0	0	1	1.7	0	0	22	
	Esophagoscopy w/intervention	21.8	17	0	112	0.2	0	0	3	1.1	0	0	17	
	EUS	0.2	0	0	6	0.0	0	0	0	0.0	0	0	0	
	Mediastinoscopy	15.6	13	1	74	0.0	0	0	1	1.2	0	0	18	
	Tracheostomy	6.2	5	0	29	0.2	0	0	8	0.6	0	0	14	
	Catheter drainage pericardium	0.2	0	0	5	0.0	0	0	0	0.0	0	0	2	
	Insertion transvenous device	2.3	1	0	14	0.1	0	0	3	0.2	0	0	6	
	Insertion removal IABP	7.7	8	0	22	0.1	0	0	1	0.4	0	0	6	
	Insertion tunneled pleural catheter	4.2	2	0	68	0.0	0	0	0	0.4	0	0	7	
	Echocardiography	0.2	0	0	16	0.0	0	0	0	0.0	0	0	0	
	Insertion or removal of cardiac assist device	0.1	0	0	5	0.0	0	0	1	0.0	0	0	0	
	Other (minor thoracic and CV)	24.0	18	5	213	0.2	0	0	4	5.0	1	0	154	
	Total Minor Thoracic and CV		162.2	141	68	481	1.1	0	0	10	22.8	8	0	308
	Endovascular	Endovascular	4.2	3	0	24	0.2	0	0	6	0.2	0	0	3
Total Endovascular		4.2	3	0	24	0.2	0	0	6	0.2	0	0	3	
Critical Care - Case Management (thoracic)	Ventilatory management (thoracic)	10.9	8	0	49	0.0	0	0	2	4.9	0	0	91	
	Bleeding (non-trauma ) > 3 units (thoracic)	2.2	2	0	10	0.0	0	0	0	1.0	0	0	18	
	Hemodynamic instability (thoracic)	5.0	4	0	22	0.0	0	0	0	4.5	0	0	41	
	Organ dysfunction/failure (thoracic)	4.0	3	0	63	0.0	0	0	0	3.3	0	0	45	
	Dysrhythmias (thoracic)	2.4	2	0	20	0.0	0	0	0	2.0	0	0	46	
	Invasive line management/monitoring (thoracic)	3.6	3	0	22	0.0	0	0	0	5.6	1	0	71	
	Nutrition (thoracic)	5.1	4	0	38	0.0	0	0	0	3.7	0	0	93	
	Total CC - Case Management (thoracic)	33.2	29	2	112	0.0	0	0	2	25.0	2	0	273	

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		Surgeon				Assistant				Secondary Credit			
		Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX	Natl Res AVE	Natl Res MED	Natl Res MIN	Natl Res MAX
Area	RRC Procedure												
Critical Care - Case Management	Ventilatory management (cardiac)	12.3	9	0	52	0.0	0	0	2	8.5	1	0	78
	Bleeding (non-trauma) > 3 units (cardiac)	4.7	4	0	23	0.0	0	0	2	2.3	0	0	22
	Hemodynamic instability (cardiac)	12.6	11	0	54	0.0	0	0	1	8.6	1	0	57
	Organ dysfunction/failure (cardiac)	7.3	6	0	52	0.0	0	0	0	5.4	1	0	87
	Dysrhythmias (cardiac)	6.1	5	0	21	0.0	0	0	1	3.2	0	0	30
	Invasive line management/monitoring	10.8	7	0	60	0.0	0	0	1	10.6	1	0	109
	Nutrition (cardiac)	3.2	2	0	32	0.0	0	0	0	3.3	0	0	54
	<b>Total CC - Case Management (cardiac/cong)</b>	<b>56.9</b>	<b>53</b>	<b>0</b>	<b>173</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>42.0</b>	<b>6</b>	<b>0</b>	<b>345</b>
Cardiopulmonary Bypass	Set-up and pump run with perfusionist	7.0	5	4	40	0.1	0	0	2	0.3	0	0	14
	<b>Total Cardiopulmonary Bypass</b>	<b>7.0</b>	<b>5</b>	<b>4</b>	<b>40</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0.3</b>	<b>0</b>	<b>0</b>	<b>14</b>
Consultation Experience	New Patients	57.9	53	25	307	0.2	0	0	8	0.5	0	0	28
	Follow-up patients	50.4	50	25	224	0.2	0	0	9	0.2	0	0	11
	<b>Total Consultation Experience</b>	<b>108.3</b>	<b>105</b>	<b>50</b>	<b>531</b>	<b>0.4</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0.7</b>	<b>0</b>	<b>0</b>	<b>28</b>
Simulation	One hour simulation	24.2	23	20	61	0.2	0	0	19	2.6	0	0	36
	<b>Total Simulation</b>	<b>24.2</b>	<b>23</b>	<b>20</b>	<b>61</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>2.6</b>	<b>0</b>	<b>0</b>	<b>36</b>
Multidisciplinary Management Conferences	Tumor board	12.4	11	0	59	0.0	0	0	1	0.0	0	0	1
	Cardiac cath conference	7.8	4	0	57	0.1	0	0	9	0.1	0	0	6
	Multidisciplinary clinics	2.5	0	0	29	0.0	0	0	1	0.0	0	0	1
	Transplant selection committee meeting	2.2	0	0	27	0.0	0	0	0	0.0	0	0	1
	Other (multidisciplinary management conf)	6.7	2	0	98	0.0	0	0	0	0.0	0	0	0
	<b>Total Multidisciplinary Mgmt Conf</b>	<b>31.7</b>	<b>25</b>	<b>20</b>	<b>111</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>6</b>
Non-Tracked Codes	Non-Tracked Codes	59.3	4	0	1,146	3.6	0	0	105	11.0	2	0	147

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		Surgeon					Assistant					Secondary Credit				
		Program Percentiles					Program Percentiles					Program Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
<b>Chest Wall</b>	Resection of tumor	0	2	3	5	9	0	0	0	0	0	0	0	0	0	1
	Debridement rewiring sternum	0	3	5	8	19	0	0	0	0	2	0	0	0	0	1
	Repair pectus excavatum carinatum	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0
	Thoracic outlet	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0
	Repair sternal or rib fracture	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Thoracoplasty	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Other (chest wall)	1	2	4	6	12	0	0	0	0	0	0	0	0	0	2
	<b>Total Chest Wall</b>	<b>7</b>	<b>13</b>	<b>19</b>	<b>24</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>
<b>Lung and Pleura</b>	Pneumonectomy	0	2	4	6	13	0	0	0	0	0	0	0	0	0	1
	Pneumonectomy w/sleeve rsxn	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Extrapleural pneumonectomy	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Lobectomy	4	8	12	20	33	0	0	0	0	0	0	0	0	1	5
	Lobectomy w/VATS	9	18	25	35	65	0	0	0	0	2	0	0	0	1	5
	Lobectomy w/sleeve rsxn	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
	Segmental resection	0	0	1	2	6	0	0	0	0	0	0	0	0	0	1
	Segmental resection w/VATS	0	1	3	5	14	0	0	0	0	0	0	0	0	0	1
	Wedge resection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Wedge resection w/VATS	22	28	34	49	77	0	0	0	0	2	0	0	2	5	12
	Lung volume reduction surgery	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Thoracotomy for explor / biopsy	0	1	3	6	12	0	0	0	0	0	0	0	0	0	2
	Decortication	1	3	6	7	11	0	0	0	0	0	0	0	0	1	2
	Decortication w/VATS	1	3	5	8	14	0	0	0	0	0	0	0	0	0	1
	Pleurectomy pleurodesis	0	0	0	1	4	0	0	0	0	0	0	0	0	0	1
	Pleurectomy pleurodesis (w/wout bleb rsxn)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Pleurectomy pleurodesis w/VATS	2	5	8	12	19	0	0	0	0	0	0	0	0	1	3
	Closure broncho pleural fistula	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Drainage lung abscess empyema	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Resection pulmonary cyst or sequestration	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Pulmonary resection w/en bloc chest wall	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
Other (lung and pleura)	0	0	1	3	5	0	0	0	0	0	0	0	0	0	1	
<b>Total Lung and Pleura</b>	<b>75</b>	<b>90</b>	<b>122</b>	<b>162</b>	<b>226</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>15</b>	<b>36</b>	

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		Surgeon					Assistant					Secondary Credit				
		Program Percentiles					Program Percentiles					Program Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
<b>Tracheobronchial</b>	Resection of stricture	0	0	1	2	4	0	0	0	0	0	0	0	0	0	0
	Resect tumor	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Repair of rupture or laceration	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Other (tracheobronchial)	0	0	1	3	8	0	0	0	0	0	0	0	0	0	1
	<b>Total Tracheobronchial</b>	0	1	4	6	11	0	0	0	0	0	0	0	0	0	1
<b>Mediastinum</b>	Excision of tumor cyst	0	1	2	4	7	0	0	0	0	0	0	0	0	0	0
	Excision of tumor cyst w/VATS	0	2	3	6	10	0	0	0	0	0	0	0	0	0	0
	Thymectomy	1	3	5	6	13	0	0	0	0	0	0	0	0	0	1
	Ligation of thoracic duct	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Mediastinotomy	0	1	2	4	9	0	0	0	0	0	0	0	0	0	1
	Other (Mediastinum)	7	12	22	35	65	0	0	0	0	0	0	0	1	4	29
	<b>Total Mediastinum</b>	18	25	41	56	88	0	0	0	0	1	0	0	1	5	35
<b>Diaphragm</b>	Repair of congenital hernia	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Repair of traumatic hernia	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Plication	0	1	1	2	5	0	0	0	0	0	0	0	0	0	0
	Other (diaphragm)	0	0	1	2	4	0	0	0	0	0	0	0	0	0	1
	<b>Total Diaphragm</b>	1	2	4	5	11	0	0	0	0	0	0	0	0	0	1
<b>Esophagus</b>	Esophagectomy	7	10	14	22	34	0	0	0	0	1	0	0	0	0	1
	Correction of reflux or stricture	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Correction of reflux or stricture w/VATS	0	0	1	3	10	0	0	0	0	0	0	0	0	0	0
	Repair paraesophageal hernia	1	3	7	14	28	0	0	0	0	0	0	0	0	0	1
	Repair paraesophageal hernia w/VATS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Excision diverticulum	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Myotomy and reflux procedure	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Myotomy w/VATS	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Myotomy w/laparoscopy	0	0	1	2	5	0	0	0	0	0	0	0	0	0	0
	Closure of fistula	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Repair drainage of perforation or rupture	0	0	1	1	3	0	0	0	0	0	0	0	0	0	0
	Other (esophagus)	1	2	3	5	9	0	0	0	0	0	0	0	0	1	2
	<b>Total Esophagus</b>	15	23	35	47	79	0	0	0	0	2	0	0	0	2	7

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		Surgeon					Assistant					Secondary Credit				
		Program Percentiles					Program Percentiles					Program Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
<b>Video Assisted Thoracoscopic (VATS)</b>	Diagnostic thoracoscopy biopsy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pericardial window	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Drainage empyema hemothorax	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Sympathectomy	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Other (VATS)	0	0	2	5	11	0	0	0	0	0	0	0	0	1	3
	<b>Total VATS</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>
<b>Closed Operations Congenital</b>	Patent ductus arteriosus	0	0	0	1	3	0	0	1	1	3	0	0	0	0	2
	Coarctation of aorta	0	0	0	0	1	0	0	0	1	3	0	0	0	0	0
	Shunting procedure	0	0	0	0	1	0	0	1	1	2	0	0	0	0	0
	BiDirectional Glenn shunt (closed)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other (closed operations congenital)	0	0	0	1	3	0	0	1	2	4	0	0	0	0	1
	<b>Total Closed Operations Congenital</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>
<b>Open Congenital</b>	Tetralogy fallot	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0
	Transposition	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0
	Truncus arteriosus	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	Ventricular septum defect	0	0	1	1	2	0	1	2	3	6	0	0	0	0	1
	AV septal defect	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0
	Anomalous pulmonary venous drainage	0	0	0	1	2	0	0	0	1	3	0	0	0	0	0
	Atrial septum defect	0	3	5	7	11	0	1	2	3	6	0	0	0	1	3
	BiDirectional Glenn shunt (open)	0	0	0	0	1	0	0	0	1	3	0	0	0	0	0
	Interrupted arch hypoplastic left heart	0	0	0	0	1	0	0	1	3	5	0	0	0	0	0
	Fontan procedure	0	0	0	0	2	0	0	1	2	4	0	0	0	0	0
	RVOT reconstruction	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
	Other (open congenital)	0	1	3	5	11	1	3	4	6	12	0	0	0	1	4
	<b>Total Open Congenital</b>	<b>2</b>	<b>7</b>	<b>10</b>	<b>16</b>	<b>26</b>	<b>8</b>	<b>11</b>	<b>15</b>	<b>21</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>9</b>

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		Surgeon					Assistant					Secondary Credit				
		Program Percentiles					Program Percentiles					Program Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
<b>Valvular Heart Disease</b>	Mitral aortic valve repair	5	8	12	17	30	0	0	0	2	8	0	0	2	3	11
	Valve replacements	28	43	65	81	118	0	6	10	12	23	0	2	7	16	33
	Aortic root replacement	1	4	7	10	18	0	0	0	2	6	0	0	0	1	3
	Re-operation for valvular disease	5	8	12	17	27	0	0	0	0	2	0	0	0	2	8
	Other (valvular heart disease)	2	4	5	7	10	0	0	0	0	1	0	0	1	3	12
	<b>Total Valvular Heart Disease</b>		<b>44</b>	<b>78</b>	<b>109</b>	<b>134</b>	<b>183</b>	<b>1</b>	<b>7</b>	<b>11</b>	<b>18</b>	<b>43</b>	<b>0</b>	<b>4</b>	<b>14</b>	<b>25</b>
<b>Resection Cardiac Tumor</b>	Resection cardiac tumor	0	0	1	2	4	0	0	0	0	1	0	0	0	0	1
	<b>Total Resection Cardiac Tumor</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Operations Coronary Atherosclerosis</b>	Primary bypass	54	81	96	123	168	0	0	0	4	15	0	2	9	31	86
	Re-op recurrent disease	0	2	3	6	10	0	0	0	0	0	0	0	0	0	2
	Ventricular aneurysm	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Acquired VSD	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
	Coronary anomalies and/or fistulae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other (operations coronary atherosclerosis)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	<b>Total Oper Coronary Atherosclerosis</b>	<b>57</b>	<b>82</b>	<b>103</b>	<b>125</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>15</b>	<b>0</b>	<b>2</b>	<b>10</b>	<b>34</b>	<b>89</b>
<b>Pericardium</b>	Pericardial window	0	2	4	6	10	0	0	0	0	0	0	0	0	0	1
	Pericardiectomy	0	0	1	2	3	0	0	0	0	0	0	0	0	0	1
	Other (pericardium)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	<b>Total Pericardium</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>8</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>Other Cardiac Procedures</b>	Arrhythmia surgery	1	5	6	10	18	0	0	0	0	1	0	0	1	3	10
	Insertion epicardial electrical device	0	0	2	2	5	0	0	0	0	1	0	0	0	0	1
	Insertion/removal cardiac assist device	1	3	5	12	22	0	0	0	1	4	0	0	0	1	3
	Removal intracardiac foreign body	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Repair cardiac trauma	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Minimally invasive surgery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other (other cardiac procedures)	3	9	18	28	47	0	0	0	1	3	0	0	0	2	8
	<b>Total Other Cardiac Procs</b>	<b>15</b>	<b>26</b>	<b>39</b>	<b>53</b>	<b>79</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>20</b>

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**THORACIC SURGERY : NATIONAL RESIDENT REPORT (Percentiles Table)**  
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Programs in the Nation: 62 Residents in the Nation: 97

		Surgeon					Assistant					Secondary Credit				
		Program Percentiles					Program Percentiles					Program Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
<b>Thoracic Vascular</b>	Open repair traumatic injury	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0
	Repair ascending aneurysm	3	8	11	15	30	0	0	0	1	5	0	0	1	2	7
	Repair desc aneurysm	0	1	2	3	6	0	0	0	0	1	0	0	0	1	3
	Repair thoracoabdominal aneurysm	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0
	Pulmonary embolectomy endarterectomy	0	0	0	1	4	0	0	0	0	1	0	0	0	0	0
	Other (thoracic vascular)	0	0	0	1	2	0	0	0	0	1	0	0	0	0	1
	Total Thoracic Vascular	7	11	15	23	44	0	0	0	2	7	0	0	1	4	10
<b>Transplantation</b>	Heart	0	2	5	9	20	0	0	0	1	3	0	0	0	0	2
	Lung	0	2	4	11	32	0	0	0	0	2	0	0	0	1	5
	Heart/lung	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Procurement heart	0	0	2	6	14	0	0	0	0	0	0	0	0	0	0
	Procurement heart/lung	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0
	Other (transplantation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Transplantation	2	10	20	31	62	0	0	1	2	6	0	0	0	2	9
<b>Minor Thoracic and CV</b>	Bronchoscopy	15	26	32	41	67	0	0	0	0	0	0	0	1	5	28
	Bronchoscopy w/intervention	0	4	8	15	32	0	0	0	0	0	0	0	0	1	4
	EBUS	0	1	5	11	25	0	0	0	0	0	0	0	0	0	1
	Esophagoscopy	2	7	11	18	31	0	0	0	0	0	0	0	0	1	7
	Esophagoscopy w/intervention	3	9	17	24	47	0	0	0	0	1	0	0	0	1	3
	EUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mediastinoscopy	6	10	13	18	24	0	0	0	0	0	0	0	0	0	5
	Tracheostomy	0	2	5	8	15	0	0	0	0	0	0	0	0	0	1
	Catheter drainage pericardium	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Insertion transvenous device	0	0	1	3	7	0	0	0	0	1	0	0	0	0	1
	Insertion removal IABP	1	5	8	10	13	0	0	0	0	0	0	0	0	0	2
	Insertion tunneled pleural catheter	0	1	2	5	10	0	0	0	0	0	0	0	0	0	1
	Echocardiography	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Insertion or removal of cardiac assist device	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other (minor thoracic and CV)	9	14	18	25	48	0	0	0	0	1	0	0	1	3	10
Total Minor Thoracic and CV	85	107	141	182	270	0	0	0	1	4	0	2	8	17	59	

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		Surgeon					Assistant					Secondary Credit				
		Program Percentiles					Program Percentiles					Program Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
<b>Endovascular</b>	Endovascular	0	0	3	6	10	0	0	0	0	1	0	0	0	0	1
	Total Endovascular	0	0	3	6	10	0	0	0	0	1	0	0	0	0	1
<b>Critical Care - Case Management (thoracic)</b>	Ventilatory management (thoracic)	3	6	8	13	22	0	0	0	0	0	0	0	0	4	15
	Bleeding (non-trauma ) > 3 units (thoracic)	0	1	2	3	5	0	0	0	0	0	0	0	0	1	3
	Hemodynamic instability (thoracic)	1	3	4	6	10	0	0	0	0	0	0	0	0	4	15
	Organ dysfunction/failure (thoracic)	0	1	3	4	8	0	0	0	0	0	0	0	0	3	10
	Dysrhythmias (thoracic)	0	1	2	3	5	0	0	0	0	0	0	0	0	1	8
	Invasive line management/monitoring (thoracic)	0	1	3	4	8	0	0	0	0	0	0	0	1	4	17
	Nutrition (thoracic)	0	2	4	6	10	0	0	0	0	0	0	0	0	2	10
<b>Total CC - Case Management (thoracic)</b>		20	24	29	36	54	0	0	0	0	0	0	0	2	22	80
<b>Critical Care - Case Management (cardiac/cong)</b>	Ventilatory management (cardiac)	2	6	9	14	26	0	0	0	0	0	0	0	1	8	29
	Bleeding (non-trauma) > 3 units (cardiac)	0	2	4	6	9	0	0	0	0	0	0	0	0	2	9
	Hemodynamic instability (cardiac)	4	7	11	15	24	0	0	0	0	0	0	0	1	11	29
	Organ dysfunction/failure (cardiac)	1	3	6	9	14	0	0	0	0	0	0	0	1	6	17
	Dysrhythmias (cardiac)	1	3	5	7	12	0	0	0	0	0	0	0	0	3	10
	Invasive line management/monitoring (cardiac)	2	5	7	11	28	0	0	0	0	0	0	0	1	8	33
	Nutrition (cardiac)	0	0	2	3	9	0	0	0	0	0	0	0	0	1	10
<b>Total CC - Case Management (cardiac/cong)</b>		25	48	53	60	75	0	0	0	0	0	0	0	6	54	140

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		Surgeon					Assistant					Secondary Credit				
		Program Percentiles					Program Percentiles					Program Percentiles				
		10	30	50	70	90	10	30	50	70	90	10	30	50	70	90
Area	RRC Procedure															
<b>Cardiopulmonary Bypass</b>	Set-up and pump run with perfusionist	4	5	5	6	12	0	0	0	0	0	0	0	0	0	0
	Total Cardiopulmonary Bypass	4	5	5	6	12	0	0	0	0	0	0	0	0	0	0
<b>Consultation Experience</b>	New Patients	26	50	53	60	87	0	0	0	0	0	0	0	0	0	0
	Follow-up patients	26	39	50	55	62	0	0	0	0	0	0	0	0	0	0
	Total Consultation Experience	55	100	105	112	145	0	0	0	0	1	0	0	0	0	1
<b>Simulation</b>	One hour simulation	20	21	23	25	29	0	0	0	0	0	0	0	0	0	16
	Total Simulation	20	21	23	25	29	0	0	0	0	0	0	0	0	0	16
<b>Multidisciplinary Management Conferences</b>	Tumor board	0	3	11	17	27	0	0	0	0	0	0	0	0	0	0
	Cardiac cath conference	0	0	4	10	22	0	0	0	0	0	0	0	0	0	0
	Multidisciplinary clinics	0	0	0	1	9	0	0	0	0	0	0	0	0	0	0
	Transplant selection committee meeting	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
	Other (multidisciplinary management conf)	0	0	2	8	17	0	0	0	0	0	0	0	0	0	0
	Total Multidisciplinary Mgmt Conf	20	23	25	30	57	0	0	0	0	0	0	0	0	0	0
<b>Non-Tracked Codes</b>	Non-Tracked Codes	0	1	4	12	31	0	0	0	0	2	0	0	2	6	29

Statistics for each role (surgeon, assistant) include only procedures for primary credit. Secondary procedures are shown separately and include all roles.

**THORACIC SURGERY : NATIONAL RESIDENT REPORT (Defined Categories Table)**  
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[PAGE 1 ]      Number of Programs in the Nation: 62    Number of Cardiac Track Residents: 62    Number of Thoracic Track Residents: 35

Group	Defined Category	Natl Res AVE	Cardiac			Thoracic		
			2012 Minimums	2017 Minimums	Track AVE	2012 Minimums	2017 Minimums	Track AVE
Congenital Heart	-Congenital Heart Disease (Assistant)	24.1	10	15	28.2	0	10	16.8
	-Congenital Heart Disease (Surgeon)	16.0	10	5	19.7	0	0	9.5
	Total Congenital Heart Disease	40.1	20	20	48.0	10	10	26.3
Adult Cardiac Experience	Acquired Valvular Heart Disease	104.5	50	60	128.2	25	30	62.4
	-AVR, AV Repair	41.4	0	25	49.6	0	15	26.8
	-MVR, MV Repair	28.9	0	15	35.7	0	5	16.9
	-TVR, TV Repair, Annuloplasty	8.2	0	5	9.2	0	5	6.3
	-TAVR (Assistant)	6.7	0	10	7.9	0	5	4.5
	-TAVR (Surgeon)	11.2	0	5	15.4	0	0	3.9
	Myocardial Revascularization	120.1	80	80	138.0	40	35	88.2
	Re-Do Sternotomy	18.7	15	15	23.2	5	5	10.7
	Interventional Skills or Procedures	58.1	20	15	56.5	20	5	61.0
	-Left Heart Cath, PCI, TEVAR, Mitral Clip	3.4	0	5	5.0	0	0	0.5
	-Intra-aortic Balloon Pump	7.8	0	10	9.1	0	5	5.5
	Conduit Dissection and Preparation	9.9	10	5	10.1	5	5	9.5
	Aortic Procedures	30.6	10	10	38.5	5	5	16.7
	Arrhythmia Surgery	16.3	5	10	20.2	0	0	9.5
	-Maze	11.0	0	5	13.4	0	0	6.7
	-Pacemaker Insertion or Removal	5.4	0	5	6.8	0	0	2.7
	Cardiopulmonary Bypass set-up and pump	7.0	4	5	7.0	4	5	7.0
	Circulatory Assist/Cardiac Transplant	48.8	10	10	56.4	5	5	35.3
	Total Adult Cardiac Experience	414.0	189	215	478.1	104	100	300.3

Notes:

1. "Natl Res AVE" includes all graduates in both tracks.
2. Procedure minimums for residents beginning training after July 1, 2012.
3. New procedure minimums exist for residents starting after July 1, 2017.
4. Procedure counts are based upon the Surgeon role, with the exception of Total Congenital Heart Disease, which is the sum of Surgeon and Assistant.



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Number of Programs in the Nation: 62    Number of Cardiac Track Residents: 62    Number of Thoracic Track Residents: 35

Group	Defined Category	Natl Res AVE	Cardiac			Thoracic		
			2012 Minimums	2017 Minimums	Track AVE	2012 Minimums	2017 Minimums	Track AVE
Adult General Thoracic	-Lung - Major Anatomic Resections	74.3	30	30	56.6	50	50	105.7
	-Lung - Major VATS/Robotic Anatomic	35.6	5	5	23.5	10	25	56.9
	-Lung - Biopsy/Wedge Resection	49.6	25	25	39.2	40	30	68.2
	Total Lung	123.9	60	60	95.8	100	105	173.9
	-Pleura - Major	12.5	0	0	10.0	5	5	16.9
	-Pleura - Minor	13.7	0	0	9.1	15	15	21.8
	-Interventional: In Dwelling Pleural Cath	4.2	0	0	3.0	0	5	6.4
	Total Pleura	30.4	10	10	22.1	20	25	45.1
	Chest Wall and Diaphragm	26.1	3	5	21.2	6	10	34.7
	Mediastinum	14.3	5	5	9.9	10	10	22.3
	Tracheobronchial - Airway Surgery	5.4	0	0	3.0	5	5	9.4
	-Esophagus - Esophagectomy	21.4	10	5	14.1	20	20	34.5
	-Esophagus - Benign Major	20.4	5	5	14.4	10	10	31.2
	-Laparoscopic Hiatal Hernia or	14.1	0	0	8.8	0	5	23.5
	Total Esophagus (Def Ctgy)	41.9	15	10	28.4	30	35	65.6
	Total Adult General Thoracic	242.0	93	90	180.5	171	190	351.1
	Major Operative Experience	Major Operative Experience	696.1	302	305	706.6	285	290

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Number of Programs in the Nation: 62    Number of Cardiac Track Residents: 62    Number of Thoracic Track Residents: 35

Group	Defined Category	Natl Res AVE	Cardiac			Thoracic		
			2012 Minimums	2017 Minimums	Track AVE	2012 Minimums	2017 Minimums	Track AVE
Minor Procedures	-Bronchoscopy - Simple	47.2	0	0	35.3	30	30	68.4
	-Bronchoscopy - Complex	17.8	0	0	9.0	10	10	33.5
	Total Bronchoscopy	65.1	30	30	44.3	40	40	101.8
	-UGI - Endoscopy - Simple	24.1	0	0	18.3	20	20	34.3
	-UGI - Endoscopy - Complex	12.7	0	0	7.5	5	10	21.7
	Total UGI - Endoscopy	36.8	10	10	25.9	25	30	56.1
	-Mediastinal Assessment - Other	1.2	0	0	1.3	0	0	1.2
	-Mediastinal Assessment - Mediastinoscopy	15.6	10	0	13.1	15	0	20.0
	-Mediastinal Assessment - EBUS/FNA	9.8	0	0	3.9	10	10	20.5
	-Mediastinal Assessment - Chamberlain or	30.2	5	0	21.1	5	0	46.2
	-Mediastinoscopy, Chamberlain	19.5	0	5	17.2	0	15	23.7
	-Mediastinal Assessment - Node Dissection	27.5	0	10	18.4	0	30	43.7
	Total Mediastinal Assessment	56.9	20	15	39.4	30	55	87.9
	Total Minor Procedures	158.7	60	55	109.6	95	125	245.7
	<b>Total Operative Experience</b>	<b>Total Operative Experience</b>	<b>854.9</b>	<b>362</b>	<b>360</b>	<b>816.2</b>	<b>380</b>	<b>415</b>
Additional	-Consultation Experience - New Patients	57.9	50	25	54.9	50	25	63.1
	-Consultation Experience - Follow-up	50.4	50	25	48.0	50	25	54.7
	Total Consultation Experience	108.3	100	50	102.9	100	50	117.7
	Multidisciplinary Patient Management Confs	31.7	20	20	33.7	20	20	28.0
	-Thoracic Critical Care Case Management	33.2	20	20	32.8	20	20	34.0
	-Cardiac and Congenital CC Case	56.9	20	20	60.3	20	20	50.9
	Total Critical Care Case Management	90.1	75	75	93.0	75	75	84.9
Simulation	24.2	20	20	24.8	20	20	23.3	

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