We developed our 2-year ACGME thoracic fellowship with the aim of providing outstanding operative and clinical training in general thoracic surgery. We are incredibly proud of our commendation from the ACGME for the superb teaching and training that we offer residents.

David H. Adams, MD
Chairman and Program Director

Program Overview

The Mount Sinai Medical Center is a 1,171-bed, tertiary-care, teaching facility founded in 1852. It encompasses The Mount Sinai Hospital and Mount Sinai School of Medicine. Situated in Manhattan between Central Park and Madison Avenue, and serving the Upper East Side, Harlem, and Queens, the Mount Sinai Medical Center bridges some of the most diverse communities in the US.

Our Independent 2-year ACGME Thoracic Fellowship Program was first accredited in 1962 and provides exposure to a particularly large volume of thoracic and cardiac cases, covering the complete spectrum of cardiothoracic surgery in an academic setting. The Program is designed to prepare applicants who have successfully completed an ACGME accredited, 5-year, general surgery residency program for certification by the American Board of Thoracic Surgery (ABTS) in the General Thoracic Pathway. The 2-year program runs in parallel with an Integrated 6-year ACGME accredited cardiothoracic residency program.

Unique aspects of the Fellowship program include the emphasis on minimally invasive (VATS) approaches, the particularly high operative volume and complexity experienced by Fellows, and the commitment to teaching both inside and outside the operating room. Fellows invariably obtain their ABTS operative requirements in both cardiac and thoracic surgery well within the fellowship period. To date, all graduating Fellows have entered successful, independent practice directly from their fellowship.

How to apply: Through ERAS before January 31st the year prior to the fellowship. Denise Galeano can deal with any enquiries, and our residents are also happy to answer questions (emails above and on the back page). We get around 30-40 applications per year, and interview 10-15 people in April.
Program Overview continued

The primary goals of the Department of Cardiothoracic Surgery are excellence in patient care, teaching, and research. The training program is specifically designed to produce surgeons who will provide outstanding, comprehensive care to the general thoracic surgery patient, and who will fully participate in the rapid expansion of minimally invasive general thoracic surgery as clinical and academic leaders.

Fellows start their training with an 8-month block in general thoracic surgery, during which time they gain basic proficiency in the multidisciplinary treatment of malignancies including lung and esophageal cancer, mesothelioma, and the full spectrum of benign thoracic surgical pathology. Skills in minimally invasive thoracoscopic surgery and laparoscopic surgery for benign esophageal disease are developed from the earliest stages, in addition to VATS thymectomy, tracheal resection, and tracheal reconstruction.

This introductory block is followed by an 8-month rotation on the adult cardiac service (including an initial 2-week rotation on the Adult Cardiac ICU), which provides a comprehensive grounding in the principles and practice of adult and congenital heart surgery, and the opportunity to complete the ABTS cardiac surgery operative requirements. Fellows then return to the general thoracic service for their final 8-month block to gain advanced skills in preparation for independent practice.

Featured Research

Mentored research is a key component of the program, particularly given our place in the national top 10 for NIH funded research. Recent work by current ACGME fellows here includes:


• **Shapiro M, Swanson SJ, Wright CD et al.** Predictors of major morbidity and mortality after pneumonectomy. *Annals Thorac Surg.*. 2010; 90: 927-34

• **Shapiro M, Weiser TS, Wsinivesky JP.** Thoracoscopic segmentectomy compares favorably with thoracoscopic lobectomy. *J Thorac Cardiovasc Surg.*. 2009; 137: 1388-1393

Block Schedule

<table>
<thead>
<tr>
<th>Year 1</th>
<th>General Thoracic Surgery (8 months)</th>
<th>CSICU 2 weeks</th>
<th>Adult Cardiac Surgery (4 months)</th>
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<tbody>
<tr>
<td>Year 2</td>
<td>Adult Cardiac Surgery (4 months)</td>
<td>General Thoracic Surgery (8 months)</td>
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All rotations take place in the Department of Cardiothoracic Surgery, The Mount Sinai Medical Center, New York.

The ACGME Thoracic Fellow is appointed Chief Resident for the entire 2nd year. Currently the general thoracic service is run by two Fellows with dedicated Physician Assistants responsible for providing care to patients on the floor 24-hours a day under the supervision of the responsible physicians and general surgery residents rotating through the service. Specific on-call arrangements and the block schedule are subject to change.
Teaching & Training

Conferences

Faculty-led teaching and clinical conferences are a key element of the didactic program, with time allotted during the work week for residents to attend ABTS curriculum sessions, case discussions and teaching rounds:

<table>
<thead>
<tr>
<th>Conference</th>
<th>Frequency</th>
<th>Format</th>
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<tbody>
<tr>
<td>Core Curriculum</td>
<td>Daily during summer, monthly rest of year</td>
<td>Faculty moderated tutorials covering all aspects of clinical and basic science TSDA curriculum</td>
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<tr>
<td>Mock Oral Boards</td>
<td>Monthly</td>
<td>Faculty led practice oral exams on topic provided in advance with constructive review</td>
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<tr>
<td>Conference</td>
<td>Weekly</td>
<td>Lecture by department faculty with bi-monthly visiting professor</td>
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<tr>
<td>Wetlab simulation and surgical skills teaching: see opposite</td>
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<td></td>
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<tr>
<td>Journal Club</td>
<td>Quarterly</td>
<td>Critical review of key publications</td>
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<tr>
<td>M&amp;Ms</td>
<td>Monthly</td>
<td>Multidisciplinary case review</td>
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<tr>
<td>Tumor Board</td>
<td>Weekly</td>
<td>Multidisciplinary case review</td>
</tr>
<tr>
<td>ICU Rounds</td>
<td>Weekly</td>
<td>Multidisciplinary case review</td>
</tr>
<tr>
<td>Transplant and VAD Conference</td>
<td>Weekly</td>
<td>Multidisciplinary case review</td>
</tr>
<tr>
<td>Joint Cardiology Conference</td>
<td>Fortnightly</td>
<td>Case-based discussion of challenging cases.</td>
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Simulation

Surgical skills training allows Fellows to rapidly develop technical proficiency outside the operating room. We use teaching tools ranging from high-fidelity simulation of cardiac and thoracic surgical procedures in cadaver wetlabs (above), to low-fidelity simulation models such as practicing vascular anastomoses using synthetic vessels. We also regularly use faculty-run, in-house, surgical skills wetlabs for Fellows who are also encouraged to participate in the frequent educational workshops hosted by the Department of Cardiothoracic Surgery for visiting surgeons. MSH has a number of high-fidelity simulation resources including dedicated models for critical care, echocardiography, and laparoscopic surgery.

Mentorship and Appraisal

Fellows are assigned a faculty mentor with shared clinical and research interests to provide additional guidance and support wherever needed outside the formal evaluation process.

All Fellows take part in 360° evaluations every six months together with a review of operative logbook, academic progression, and career plans by the Program Director and/or Associate Program Director. Regular appraisal and discussion of objectives helps tailor the training program to individual needs and goals.
Additional information

- Email-mark.shapiro@mountsinai.org (2-year fellow)

Financial support

- Housing allowance or subsidized housing in Mount Sinai accommodation
- Food allowance
- Textbook and equipment grant (including operating loupes and headlight)
- Educational funding for one national conference per year in addition to a board review course in the final year