July 2011

ROTATION: THORACIC SURGERY

ROTATION DIRECTOR: Mary Maish, M.D.

CHIEF OF CARDIAC SURGERY: Robert Cameron, M.D.

SITES: RRUMC

GOALS AND OBJECTIVES:

To provide trainees an opportunity to participate in the perioperative and operative aspects of thoracic surgery.

DESCRIPTION OF THE ROTATION:

Thoracic Surgery rotation of 8 weeks in PGY4

1. All rotating will be part of the Thoracic Surgery team and responsible for the care of the Thoracic Surgery patients.
2. The surgery residents will provide in-patient care including routine admissions and critical care of patients.
3. Residents will further participate in surgical operations needed on these patients under direct supervision by the surgical faculty.
4. The rotating residents will participate in all Department of Surgery educational conferences and didactic presentations.
5. Residents are expected to actively participate and present at the weekly Thoracic Surgery Conference

ASSESSMENT:

Monitoring of the accomplishment of the stated objectives will be performed using the following methods:

1. Global Rating: end of rotation evaluation of resident performance to assess the resident’s demonstration of Core Competencies with respect to the stated objectives by faculty, other team resident members, students, and nursing staff.
2. Case Logs: auditing of operative cases pertinent to the specialty in the Surgical Operative Log.
3. Written Examination: performance on the annual ABSITE examination, Gastrointestinal and Body as a whole (clinical management) systems section.
4. Patient Survey: performance will be assessed by patient surveys administered though the rotation.
5. For additional information please refer to the Resident Milestones document on the UCLA Surgical Education website:  http://www.surgery.medsch.ucla.edu/resident/Documents/ResidentMilestones.pdf
<table>
<thead>
<tr>
<th>ACGME Competency</th>
<th>Developmental Milestones Informing ACGME Competencies</th>
<th>Time Frame</th>
<th>Assessment Methods/Tools</th>
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<tr>
<td>Patient Care</td>
<td>1. Perform a complete and thorough history and physical examination, with emphasis in elements unique to thoracic surgery patients. 2. Initiate the laboratory evaluation and any other initial diagnostic studies with an understanding of the tests to be ordered. 3. Make informed decisions about diagnostic and therapeutic interventions on thoracic surgery patients with the guidance of senior residents and faculty. 4. Be proficient in the preoperative preparation of the patients for thoracic surgery and routine postoperative care. 5. Understand basic pathophysiology of thoracic disease and begin to master the skills necessary to care for the thoracic ICU patient under the guidance of the senior residents and faculty members. 6. Understand basic pathophysiology of thoracic disease, principles of resuscitation, preoperative and postoperative care of cardiac surgery patients under the guidance of the senior resident and attending physicians. 7. Understand the basic indications for common radiological and interventional studies used in the care of thoracic surgery patients such as plain chest, and CT scans. 8. Participate in and perform level appropriate thoracic surgery procedures under the supervision of attending physicians. 9. Demonstrate the ability to effectively set priorities and coordinate the care of thoracic patients.</td>
<td>8 weeks</td>
<td>Global Rating Case Logs Written Examinations Patient Survey Feedback from faculty/attending physicians at rounds and OR</td>
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<td>Medical Knowledge</td>
<td>1. Describe development of the lungs, mediastinum and esophagus 2. Describe the anatomy, including relationships to other structures, arterial supply, venous and lymphatic drainage, of the lungs, the mediastinum and the esophagus 3. Become familiar with the structures and the orientation of structures in the hilum 4. Become familiar with the anatomy of the hiatus 5. Describe the most common developmental abnormalities in the lungs, mediastinum and esophagus 6. Describe the limitations of CT, PET, EGD, EUS 7. Be able to interpret PFTs, VQ scan and pulmonary stress testing. 8. Describe the indications for the following: a. Bronchoscopy b. EUS</td>
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c. Esophageal manometry and pH testing

9. Develop algorithms for evaluation of the following:
   a. Solitary pulmonary nodule
   b. Mediastinal mass
   c. Chest wall lesion
   d. Esophageal mass
   e. Dysphagia

10. Demonstrate an understanding of the pathophysiology of the following benign conditions:
    a. Hamartoma
    b. Lung scar
    c. Lung abscess
    d. TB lesion
    e. Mediastinal cyst
    f. Esophageal leiomyoma
    g. GERD
    h. Barrett’s esophagus
    i. Achalasia

11. Demonstrate an understanding of the basic principles and procedures of surgery for the following benign conditions:
    a. Hamartoma
    b. Mediastinal cyst
    c. Esophageal leiomyoma
    d. GERD
    e. Barrett’s esophagus
    f. Achalasia

12. Describe the anatomy of the lung on CT and bronchoscopy

13. Describe the familial and environmental risk factors for lung cancer

14. Describe the biology of the 4 major types of lung cancer and the tumor and histopathologic markers that define them.
    a. Squamous cell cancer
    b. BAC
    c. Adenocarcinoma
    d. Carcinoid tumors

15. Describe the risks and benefits to neoadjuvant and adjuvant therapy.

16. Describe the risks and benefits of surgery

17. Demonstrate an understanding of a basic preoperative work up for thoracic surgery, including a thorough cardio-pulmonary evaluation.

18. Demonstrate an understanding of the basic principles and procedures of surgery for the treatment of lung cancer.
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<tr>
<td>19.</td>
<td>Describe the familial and environmental risk factors for esophageal cancer.</td>
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<td>20.</td>
<td>Describe the biology of the 2 major types of esophageal cancer and the tumor and histopathologic markers that define them:</td>
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<td>b. Adenocarcinoma</td>
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<td>21.</td>
<td>Understand the role that Barrett’s esophagus plays in the pathophysiology of esophageal adenocarcinoma</td>
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<td>26.</td>
<td>Describe the anatomical compartments of the mediastinum</td>
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<td>Be familiar with the most common masses of the mediastinum</td>
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<td>Understand the pathology of the following tumors:</td>
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<td>b. Lymphoma</td>
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<td>c. Germ Cell tumors</td>
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<td>d. Neurogenic tumors</td>
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<td>e. Mediastinal cysts</td>
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<td>29.</td>
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<td>33.</td>
<td>Complete all relevant modules of the SCORE curriculum:</td>
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<td><a href="https://portal.surgicalcore.org/home">https://portal.surgicalcore.org/home</a></td>
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### Operative Skills
At the completion of the thoracic surgery rotation the resident will be able to:

1. Insert complex chest tubes
2. Perform a bronchoscopy
3. Perform an EGD
4. Position patients for thoracic surgery in the operating room
5. Place a mediastinoscope into the mediastinum and identify structures
6. Perform all types of thoracotomy incisions
7. Appropriately place ports for thorascopic surgery
8. Mobilize the hilum and great vessels in the chest
9. Mobilize the esophagus in the chest, abdomen and mediastinum
10. Properly place ports for laparoscopic procedures
11. Mobilize the stomach and esophagus during laparoscopic procedures
12. Appropriately place drains and close thoracic incisions

### Operative experience (estimate for 8 weeks)
1. Thoracotomy/thoracoscopy: 10-12
2. Lobectomy/wedges: 10-12
3. Mediastinoscopy: 5-7
4. Bronchoscopy: 10-12
5. EGD: 8-10
6. Esophagectomy: 2-5
7. Benign Esophageal: 2-5

### Practice Based Learning
1. Develop a personal program of self-study and professional growth with guidance from the teaching staff and senior residents. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of thoracic surgery disorders will allow for sound surgical judgment, which relies on knowledge, rational thinking and the surgical literature.
2. Utilize current literature resources to obtain up-to-date information in the thoracic patients and practice evidence-based medicine.
3. Participate in teaching and organization of the educational weekly thoracic surgery conference.
4. Participate in activities of the Department of Surgery (including all teaching conferences) and assume responsibility for teaching and supervision of subordinate surgical house staff, and medical students.
5. Participate in the Department Morbidity & Mortality conference and utilize information to further improve patient care.
6. Participate in daily teaching rounds and be able to present patients in an organized and complete fashion

### Professionalism
1. Practice compassionate patient care maintaining the highest moral and ethical

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2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Maintain professional interactions with other health care providers and hospital staff

| Interpersonal Relationships And Communication | 1. Create and sustain a therapeutic and ethically sound relationship with patients and patient families | 2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students. | 3. Maintain professional interactions with other health care providers and hospital staff | 8 weeks | Global Rating
Written Examinations
Patient Survey
Feedback from faculty/attending physicians /hospital staff /patients |

| Systems Based Practice | 1. Understand how the health care organization affects surgical practice of thoracic surgery | 2. Demonstrate cost effective health care | 3. Be able to coordinate care including discharge planning, social service, rehabilitation, and long term care | 4. Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals. | 5. Maintain complete of medical records operative notes staff sheets and notes, patient database cards and other patient care related documentation in a timely, accurate, and succinct manner. | 8 weeks | Global Rating
Case Logs
Hour logs
Completion of required evaluations
Completion of medical records
Written Examinations
Feedback from faculty/attending physicians at rounds and OR |
TYPICAL WEEK:

Thoracic Surgery Conferences
1. Thoracic Teaching Conference
   a. Thoracic teaching conference is once a week on Friday. Residents will be expected to participate.
2. M&M Conference
   a. Thoracic surgery M&M is once a month. Residents rotating through the service will be expected to participate.
3. Thoracic Surgery Grand Rounds
   a. Thoracic surgery M&M is once a month. Residents rotating through the service will be expected to participate.
4. Thoracic Surgery Journal Club
   a. Thoracic surgery M&M is once a month. Residents rotating through the service will be expected to participate.
5. Thoracic Surgery Tumor Board
   a. Thoracic surgery tumor board is once a week on Friday. Residents rotating through the service will be expected to participate.

Thoracic Surgery Clinic
1. Monday all day and Friday mornings.
2. Residents will be expected to attend all clinics.
3. Residents will see patients prior to the faculty and develop a treatment plan for the patient.

Typical week:
1. Residents will be able to modify the weekly schedule according to personal and attending vacations, meetings and operative schedules.
2. Residents will be excused from clinical duties to attend all departmental
3. Resident conferences.