Covidien Fellowship Application for 2010-2011
General Thoracic Surgery Fellowship
University of California, San Francisco

FELLOWSHIP CURRICULUM

2010-2011

Fellowship Program Director
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A. Fellowship Overview

The **General Thoracic Surgery Fellowship** provides broad exposure in the most complex aspects of general thoracic surgery, preparing the fellow for a future in this important and underserved surgical subspecialty. The trainee will be exposed to complex, surgically demanding tumors such as extrapleural pneumonectomies and radical pleurectomies for mesothelioma, as well as the most innovative surgical techniques, including minimally invasive pulmonary and foregut surgery, laser-guided approaches, and ultrasound bronchoscopy (EBUS).

The **General Thoracic Surgery Fellowship** affords a tremendous learning opportunity for the aspiring thoracic surgeon. General thoracic surgery at UCSF is a bustling program, having grown ten-fold, measured by volume, over the past decade. With four (4) full-time general thoracic surgeons, the Chief, David Jablons, MD; Pierre Theodore, MD; Michael Mann, MD; and Jasleen Kukreja, MD, MPH, UCSF is easily the busiest such program on the West Coast, performing over five hundred (500) major thoracic resections annually. These surgeons are steeped in the techniques of minimally invasive thoracic surgery (VATS), effectively broadening the pool of surgical patients to include those unable to withstand the rigors of an open procedure. Indeed, minimally invasisve thoracic surgeries now account for 35% of all general thoracic surgeries performed at UCSF.

UCSF Medical Center is an important tertiary care facility and referral center for the region, a leading Center of Excellence tightly linked to the UCSF Comprehensive Cancer Center, where patients are evaluated for treatment of lung cancer, esophageal cancer, and mesothelioma.

The thoracic surgery program is well known for its willingness to treat high-risk patients, those routinely turned down for surgery by other institutions. UCSF has been recognized for its “willingness to be aggressive” in bringing advanced lung cancer patients the same innovative surgical approaches that may yield long-term beneficial outcomes in other patient populations.

In addition to performing standard resections, the **General Thoracic Surgery Fellow** will perform operations that are rarely attempted in a community setting, including pancoast tumor resections using anterior approaches, transcervical thymectomy, VATS lobectomy, and extrapleural pneumonectomy. These demanding procedures will be taught utilizing the very latest in surgical innovation. The Fellow will also be expected to achieve fluency and competency in Thoracic Oncology, including techniques to downstage otherwise inoperable tumors through the use of novel multimodality neoadjuvant treatments.

The four thoracic surgeons at UCSF were all trained at prestigious academic medical centers world-renowned for excellence in general thoracic surgery. This team brings a unique, multi-institutional, perspective to general thoracic surgery, incorporating the best-practices and state-of-the-art techniques from the Surgery Branch of the NCI/NIH, Dana-Farber/Brigham and Women's Cancer Center, New York Hospital/Memorial Sloan Kettering Cancer Center, Johns

Hopkins Hospital, and Harvard Medical School. This broad repository of surgical expertise will provide a rich and unparalleled didactic experience for the **General Thoracic Surgery Fellow**. UCSF is an internationally recognized leader in the field of lung cancer, having been selected to host the 13th World Conference on Lung Cancer, sponsored by the IASLC, in San Francisco in 2009. Dr. David Jablons, Chief of the Section of General Thoracic Surgery and Program Leader in Thoracic Oncology, will co-chair this event along with Dr. David Gandara of UC Davis, and will serve as an ad-hoc board member during the three-year ramp up to the meeting.

The international leadership role of UCSF is further underscored by its co-hosting of the Pan Pacific Lung Cancer Conference , a biannual event that takes place in cities such as Beijing and Shanghai. The China Clinical Trials Consortium, an international collaboration spanning three continents, was a direct outgrowth of these conferences. Organized by Dr. Jablons and several prominent surgeons in China, this consortium leverages the immense size of the Asian population to rapidly accrue lung cancer patients in large multicenter trials, studies that will ultimately forge new standards of clinical management and surgical technique.

The **General Thoracic Surgery Fellow** will also participate in a broad spectrum of educational activities hosted by the UCSF Thoracic Oncology Program. As a participant in the annual UCSF/UC Davis Thoracic Oncology Conference, the fellow will be invited to sit on a panel and present data on advances in surgical technique for lung cancer. The Thoracic Oncology Conference, the oldest and longest running such event in existence today, is co-chaired by Dr. Jablons. With participations at this event, and a follow-on symposium, the annual UCSF Clinical Cancer Update, also co-chaired by Dr. Jablons, the fellow will have a wealth of opportunities to broaden his education as a thoracic surgeon.

The **General Thoracic Surgery Fellow** will also gain broad exposure to community-based thoracic surgeons as UCSF expands its San Francisco flagship program to include other locations throughout the Bay Area, including a four-year old program at Sequoia Hospital in Redwood City, and planned satellite programs in Santa Rosa and San Jose, California. By reaching out to these community practices and institutions, the thoracic surgery program at UCSF is advancing the standard of care for thoracic malignancies, helping to make surgery a viable, if not curative option, for patient populations previously shut out from the process or relegated to relying on general surgeons reluctant to perform such procedures.

Operating Room Experience and Technical Proficiency

The Fellow will participate in the full panoply of surgical activities, acting as **primary surgeon** in approximately **eighty (80) percent** of all cases. Based on the historical experience at UCSF, such procedures will include:

Staging and Diagnostic Procedures

- Flexible and rigid bronchoscopy
- Mediastinoscopy
- Mediastinotomy
- Thoracoscopy
- Upper gastrointestinal endoscopy
- Endoscopic ultrasonography (EUS)
- Endobronchial ultrasound (EBUS)

Major Procedures (Standard)

- Median sternotomy
- Standard mediastinal exploration
- Standard lobectomy with radical mediastinal lymphadenectomy
- Standard mediastinal exploration
- Standard posterior lateral thoracotomy
- Standard pneumonectomy with radical lymphadenectomy
- Radical pleurectomy with decortication
- Extrapleural pneumonectomy
- Wedge resection of the lung
- Bronchial and pulmonary arterial sleeve resection
- Lung Segmentectomy
- Standard esophagectomy with palliation and reconstruction of upper alimentary tract
- Chest wall resection and reconstruction
- Tracheal resections and reconstructions
- Extensive intrapericardial tumor resections with the cardio-pulmonary bypass
- Placement of chest tubes
- Lung transplantation
- Lung Volume Reduction Surgery
- Management of blunt and penetrating thoracic trauma

Major Procedures (Minimally Invasive)

- Video-assisted (VATS) thoracoscopic lobectomy
- Video-assisted (VATS) thoracoscopic esophagectomy

Goals and Objectives

The Fellow will acquire an advanced understanding of the anatomy of the chest wall, mediastinum, esophagus, lung and tracheal bronchial tree, both from a surgical and endoscopic perspective. The Fellow will extend his or her knowledge regarding the evaluation of patients across the broad spectrum of general thoracic disease. The skills to be acquired and refined include:

- Pre-operative evaluation
- Clinical assessment
- Selection and interpretation of appropriate tests and imaging studies
- Decisions regarding timing of surgery
- Technical skills necessary to independently perform standard and advanced general thoracic surgical procedures including chest wall resection and reconstruction, tracheal resection and sleeve resection
- Laser applications in thoracic surgery
- Volume reduction surgery
- Lung transplantation and VATS procedures.

The Fellow will participate in approximately **250 major procedures** during the twelve (12) month Fellowship. The Fellow will gain competency in patient care that is compassionate, appropriate and effective. Fellows will be expected to develop and execute patient care plans, utilize information technology, and accurately evaluate diagnostic studies.

B. Peri-operative Clinical Experience

1. Pre-Operative

The Fellow will participate in all pre-operative outpatient evaluations, pulmonary and medical/surgical conferences, and will perform all consultations. The Fellow will review all cases with the attending staff to assess differential diagnosis, the appropriateness of further testing, operative strategy, risk benefit analysis, indications for surgery, and the timing thereof.

Goals and Objectives

The Fellow will gain an advanced understanding of the pre-operative assessment of the general thoracic surgical patient including:

- Interpretation and use of pulmonary function tests (PFTs)
- Imaging studies
- Work-up and staging of intrathoracic malignancies including lung and esophageal cancers, mesothelioma, and thymoma
- The role of surgery in the treatment of primary intrathoracic malignancies, metastatic disease to the chest
- The principles of the physiology of swallowing and esophageal motility
- The role of surgery in the treatment of benign esophageal disease
- The physiology of chronic obstructive airway disease (COPD)
- The role of lung transplantation in the treatment of COPD
- The role of volume reduction surgery for emphysema
- The physiology and pathology of the pleural space including the management of effusions and other pleural space diseases
- Discovery of undiagnosed pleural disease
- Pneumothorax and bullous disease
- Hemothorax
- Chylothorax and empyema
- Surgical and non-surgical management of infectious and inflammatory diseases

The Fellow will be familiarized with the most advanced applications of multimodality therapy for thoracic malignancies, including neoadjuvant, preoperative and interoperative therapies and their appropriate indications. The Fellows will also achieve an advanced understanding of congenital malformations of the thoracic cavity and chest trauma, and the role surgery plays in their management. The Fellow will assimilate medical knowledge from both established and evolving biomedical, clinical and cognate sciences, and their application to patient care. The Fellow will learn the requirements of professionalism as manifested by a commitment to professional responsibilities, adherence to ethical principles, and sensitivity to the needs of patients of diverse backgrounds.

2. Post-Operative

The Fellow will direct the care of the post-operative patients in the intensive care unit and manage the post-surgery inpatient wards, all under the supervision of the attending staff. He/she will also manage all aspects of ICU care, including pharmacologic therapy, therapeutic bronchoscopy, assessment of chest X-rays and other imaging studies, management of the airway and the ventilator, and will develop a broad understanding of blood gas analysis and pulmonary physiology. He/she will also be responsible for decision-making regarding transfer and discharge of patients following surgery.

Goals and Objectives

The skills and knowledge for post-operative management of general thoracic surgery cases will be greatly enhanced from surgery through the time of hospital discharge. The Fellow will gradually become more confident in the exercise of independent medical judgment. He/she will learn what to expect from the normal post-operative patient course, and learn to anticipate and manage the entire range of unforeseen complications.

The Fellow will gain competency in practice-based learning including the investigation and evaluation of care for thoracic patients, the appraisal and assimilation of scientific evidence, and the methodology for improving patient care. The Fellow will gain competency in the interpersonal and communication skills necessary for discussions with patients, their families, and other health professionals. The Fellow will develop competence in systems-based practice, demonstrating an awareness of and responsiveness to the context in which health care system operates, and learn how to effectively access resources for the delivery of optimal health care.

3. Outpatient

The Fellow, guided by attending faculty, will supervise the thoracic outpatient clinic, providing outpatient preoperative evaluations and follow-up care for the entire range of thoracic surgical patients, including those with pulmonary and esophageal malignancies.

Goals and Objectives

The Fellow will develop an understanding of the normal post-discharge course following surgery in general thoracic patients. He/she will learn how to skillfully evaluate patients preoperatively so as to anticipate the appropriateness of surgical management postoperatively, and in an outpatient setting. The Fellow will also participate in nonclinical scholarly activities, including weekly thoracic surgery/oncology seminars to further refine these skills.