

UCSD Interventional Pulmonary Fellowship

Program Description

Introduction:

Interventional pulmonology (IP) is a rapidly developing, procedural-oriented subspecialty of pulmonary medicine. At UCSD, a one-year IP fellowship has been designed to develop and train interventional pulmonologists in complex diagnostic and therapeutic bronchoscopy, as well as advanced minimally invasive pleural procedures. These procedures span the spectrum of malignant and nonmalignant diseases, including lung cancer (diagnosis, staging, and therapeutics), specifically involving evaluation of peripheral pulmonary nodules and mediastinal lymph node staging; metastatic cancer of the chest; central airway obstruction (malignant, tracheal stenosis, tracheobronchomalacia); pleural effusion; pneumothorax; and respiratory failure.

Through didactics, consultation, multidisciplinary conferences, case-based/patient-based discussions, and research, the IP fellow will advance his or her understanding of the anatomy and physiology of the airways, mediastinum, lung parenchyma, and pleural space through rigorous procedural training. This will reinforce the foundation build during training in pulmonary and critical care medicine fellowship. **a)**

Duration:

- One-year program.

b) Requirements:

- Applicants are expected to have completed a Pulmonary and Critical Care fellowship and have to be eligible to practice in California.

c) Goals and Objectives for Training:

- The IP fellowship is designed to provide the trainee with the necessary tools to establish and direct a multidisciplinary academic interventional pulmonary program.
- Procedure-related competencies as established by the ACCP ([CHEST 2017; 151\(5\):1114-1121](#)) should be achieved within this period of time in all areas of the specialty.
- The fellowship program has very close ties with Thoracic Surgery, Pulmonary Medicine, Oncology and Chest Radiology. The multidisciplinary approach to patients is emphasized.
- The IP section is actively involved in the evaluation and postoperative management of patients with complex airway and pleural disorders.
- During the year the fellow will participate in several investigator-initiated (clinical / animal lab) and industry-sponsored trials. With this the fellow will gain experience in designing and conducting trials as well as establishing budgets for them.

II: Resources

a) Teaching staff:

- Interventional Pulmonary: Keriann Van Nostrand, MD, George Cheng MD PhD, Niral Patel, MD, Jorge A. Muñoz Pineda, MD, Russell Miller MD
- Thoracic Surgery: Mark Onaitis MD, Joshua Boys MD, Patty Thistlewhite MD PhD
- Thoracic Oncology: Lyudmila Bezhenova, MD

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- Thoracic Radiology: Seth Kligerman, MD
- Otolaryngology: Philip Weissbrod MD
- Anesthesia: Ruth Waterman MD

b) Facilities:

- UC San Diego Medical Center Hillcrest
- Jacobs Medical Center
- Sulpizio Cardiovascular Center
- Veterans Affairs San Diego Healthcare System

III: Educational Program- Basic Curriculum/Scope of the Program

a) Clinical services:

- ***Complex Airway Program:*** The entire scope of endoscopic interventions including but not limited to rigid bronchoscopy, photodynamic therapy, laser therapy, argon plasma coagulation, cryotherapy, stenting is offered. A particular emphasis of the program is the endoscopic and surgical management of complex benign disorders, including percutaneous tracheostomy. All surgical procedures such as tracheal resection and reconstruction, carinal resection and tracheoplasty are commonly performed.
- ***Pleural Disease Program:*** Nearly all medical patients with pleural diseases are evaluated and treated by the IP service at some point in time. We offer medical thoracoscopy, ultrasound guided thoracentesis with pleural manometry, tunneled pleural catheter, chest tube and pigtail catheter placement as procedures in the management of pleural disorders.
- ***Advanced Diagnostic Bronchoscopy:*** We perform robotic and electromagnetic navigation, autofluorescence (AF) bronchoscopy, narrow band imaging (NBI) and image guided TBNA through cone beam CT guided augmented fluoroscopy or EBUS (radial or linear) on many patients referred for challenging diagnostic or staging purposes.
- ***Advanced Benign Airway Program:*** We perform bronchial thermoplasty for patients with severe persistent asthma who remain symptomatic despite maximal medical treatment. We also perform endoscopic lung volume reduction for patients with severe emphysema. Finally, IP service provides support in the management of transplant related airway complications. **b)**

Research:

- IP related and medical device development research is an important aspect of our program. Collaborations with many manufacturers and device developers exist. Many clinical trials are ongoing at any particular time and active participation of the fellow is expected. As a part of the research team, the fellow gains experience in designing and conducting animal and clinical research studies as well as establishing budgets, etc.
- An active animal laboratory for large animals is onsite for airway, pleural and general chest procedure trials. The IP fellow is expected to be actively involved in IP-related research and present results in conferences and publications.

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- In addition to active research, the IP section is responsible for a variety of educational activities such as a monthly combined Thoracic Surgery / Interventional Pulmonology conference and CME courses throughout the year. The IP fellow is actively involved in the moderation and organization of those conferences.

c) Participant's Supervisory:

- Fellows are always supervised by a staff member during all procedures.

d) Procedural Requirement:

- Procedure related competencies as established by the ACCP (CHEST 2017; 151(5):1114-1121) should be achieved within this period of time in all areas of the specialty.

e) Didactic Components:

- Weekly Interventional Pulmonology core curriculum lecture series (see Curriculum Outline)
- Weekly multidisciplinary thoracic oncology conference (Moore Cancer Center)
- Weekly multidisciplinary thoracic oncology conference (UCSD VA)
- Every other week research conference
- Monthly multidisciplinary airway conference which alternates with journal club • Quarterly Morbidity & Mortality conference • Educational courses:
 - a. Introduction to Interventional Pulmonology: December
 - b. Introduction to Bronchoscopy and Pulmonary Procedures: July

Application Process

- 1 position is offered every year
- Applicants are expected to have completed a Pulmonary and Critical Care Fellowship and must be eligible to practice in California.
- Interested individuals should submit a CV with cover letter and minimum 2 letters of recommendation
- Applications will be received through the National Residency Matching Program (NRMP) • IMPORTANT DATELINES:
 - a. Deadline of application: TBD
 - b. Interviews will be held on TBD
 - c. Rank Order list closes TBD.
 - d. Match Day TBD.
- For more information about the Interventional Pulmonology Fellowship Match, including the Schedule of Dates, contact the NRMP Helpdesk toll free at 1-866-617-5834. Information also is available on the NRMP and AABIP websites. (www.nrmp.org) (www.aabronchology.org)
- UCSD IP Fellowship Contacts:
 - Diane Hillman (dhillman@health.ucsd.edu)