Pulmonary diseases of the lungs, airways and pleura (membranes around the lungs) are common, chronic and often deadly. Lung cancer, for instance, is diagnosed in more than 200,000 people in the United States each year, and is by far the leading cause of cancer death in both men and women. Chronic obstructive pulmonary disease (COPD), an umbrella term that includes emphysema and chronic bronchitis, affects an estimated 24 million people in the U.S. and is the third-leading cause of death. Asthma, though not often life-threatening, can be debilitating. It affects an estimated 25 million people in the U.S., 7 million of them children. And pleural effusions, for which there are more than 50 known causes, are diagnosed in about 1.5 million people in the U.S. each year.

To diagnose and treat patients with these conditions, UCLA’s Interventional Pulmonology Program offers an expanding list of minimally invasive procedures, most of which are performed in an outpatient setting. Patients receive the most advanced and comprehensive clinical care while benefitting from shorter recovery times as compared to open surgery.

The interventional pulmonology ‘hat trick’

Interventional pulmonology procedures can often perform multiple functions at one time. “When a patient is referred to see me, my goal is to diagnose, stage and provide a therapeutic intervention all during one visit in order to expedite care,” says Scott Oh, DO, FCCP, co-director of the Interventional Pulmonology Program.

Take a patient with an abnormal chest X-ray or CT scan who is experiencing shortness of breath. “With advanced bronchoscopy techniques, we can confirm the diagnosis of a blocked airway and then open the airway to improve air flow and breathing. In the same procedure, we can use our minimally invasive tools to biopsy the abnormal areas,” Dr. Oh says. “In that one procedure, we’re able to diagnose, stage and help treat the symptoms that are occurring, and in doing so, provide the best care possible. This is what I like to call the IP ‘hat trick.’”
A less-invasive way of diagnosing pulmonary diseases

Abnormal diagnostic images — those showing a pulmonary nodule, enlarged lymph nodes in the chest, or an accumulation of fluid, called pleural effusion — are some of the most common reasons patients seek care through the UCLA Interventional Pulmonology Program.

UCLA’s Interventional Pulmonology Program is one of only a few in the country to offer comprehensive interventional pulmonology services. Navigational bronchoscopy and endobronchial ultrasound enable physicians to access all parts of the chest to biopsy abnormal areas using a minimally invasive approach. For pleural disease, the program offers the full range of interventional procedures, including ultrasound-guided drainage and sampling of pleural effusions, tunneled pleural catheter placement, and medical pleuroscopy with biopsies and pleurodesis.

The program also provides comprehensive evaluation and treatment of large-airway diseases, including both malignant and benign central-airway obstruction and tracheobronchomalacia.

Minimally invasive treatments for pulmonary diseases

Some of the most rapid advancements in interventional pulmonology are occurring in the area of therapeutic applications. Minimally invasive treatments currently available at UCLA include placing airway stents to treat obstructions, airway-wall weaknesses and fistulas; bronchial thermoplasty to target the airway’s smooth muscles and prevent asthma exacerbations; heat therapies (laser, argon plasma coagulation and electrocautery), cold therapies (cryospray and contact cryoprobe), and bronchoscopic brachytherapy to treat airway tumors or stricture; and tunneled pleural catheters to drain fluid accumulation from around the lungs. The program is also examining bronchoscopic lung-volume reduction valves, which can help those with advanced COPD breathe more easily.

A new specialty that continues to expand

Interventional pulmonology is a new and constantly evolving field. Physicians in the UCLA Interventional Pulmonology Program have received the most advanced training, ensuring that they are able to perform the latest, most innovative procedures with the highest level of skill.

To best meet patients’ needs, the program includes distinct sub-programs in thoracic oncology, complex airway diseases and pleural diseases. Each of these sub-programs is set up to allow physicians from multiple disciplines to work together and deliver individualized treatments to each patient.