



Department of  
**UROLOGIC SCIENCES**  
UBC

**UNIVERSITY OF BRITISH COLUMBIA**

**DEPARTMENT OF UROLOGIC SCIENCES**

**Rotation Goals & Objectives Thoracic Surgery**



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Sciences**

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## **Thoracic Surgery**

### **Rotation Goals and Objectives**

#### **Preamble: General Objectives**

Vancouver General Hospital is a major tertiary referral centre the province of BC; therefore, the Thoracic Surgery service at VGH provides excellent exposure to all aspects of complex lung, mediastinal, vascular, and ancillary thoracic pathologies. As well, VGH is a major teaching site, and the base for the UBC medical school (undergraduate and postgraduate).

The primary objective of this rotation is to acquire the competencies and technical skills sensitive to the field of Thoracic surgery that are related to Urology.

#### **Introduction**

Thoracic surgery is the specialty concerned with surgical conditions of the chest. Specifically, it includes the chest wall, pleura, lungs, airway, esophagus, diaphragm and mediastinum (excluding the heart and great vessels). This rotation on thoracic surgery provides the junior resident with an exposure to the breadth of thoracic surgery practice including the assessment, work-up, operative and non-operative management, and follow-up of patients with thoracic diseases.

## **Specific Goals and Objectives**

These are outlined according to the seven CanMEDS competencies of the Royal College of Physicians and Surgeons of Canada (Medical Expert/Clinical decision Maker, Communicator, Collaborator, Leader, Health Advocate, Scholar and Professional).

### **Medical Expert/Clinical Decision Maker:**

The resident will learn skills to enable them to perform consultations utilizing available elements from patient history, physical examination, imaging and lab/special testing and adjunctive history from other health professionals. The component skills include but are not limited to:

#### **Knowledge: Basic Science and Anatomy**

The resident must develop a strong grounding in the basic sciences related to thoracic surgery including the relevant embryology, anatomy, physiology and pathology.

#### **Knowledge: General clinical**

The following clinical skills must be demonstrated by the end of the rotation:

1. The resident must be able to elicit a history that is thorough and appropriate for the patient's problem(s)
2. The resident must be able to perform a physical examination that is thorough and appropriate for the clinical problem
3. The resident must be able to develop an understanding of the natural history of thoracic diseases, management of risk factors, and how non-surgical treatment and surgical intervention can alter this
4. The resident should have a clear understanding of the diagnostic and therapeutic procedures available in medical imaging for thoracic disorders such as plain radiograms, CT, MRI, and nuclear medicine studies
5. The resident must know the roles of other types of investigation (e.g. pulmonary function and esophageal motility) in the assessment of patients with thoracic diseases
6. The resident should know the roles of bronchoscopy, esophagoscopy, EBUS and thoracoscopy in the assessment and management of patients with thoracic diseases
7. The resident must have an understanding of pre-operative risk assessment and approaches to minimize such risks

### **Knowledge: Specific Clinical Problems**

At the end of the rotation the resident should have the knowledge and skills to assess and contribute to the management of patients with the following conditions:

1. Thoracic neoplasia, including lung, trachea, esophagus, mediastinum, pleura and chest wall
2. The resident should have a working knowledge of:
  - The etiologic factors giving rise to these tumours
  - The assessment and work-up of patients with these tumours
  - The staging of these tumours
  - Operative options for treatment
  - Non-operative options for treatment
  - Palliative care
3. Benign Thoracic Disease
  - Trauma, both blunt and penetrating
  - Chest wall deformities
  - Diaphragmatic hernias and hiatal hernias
  - Pleural space diseases including pleural effusion, empyema, pneumothorax and hemothorax
  - Tracheal diseases
  - Congenital, structural, and inflammatory diseases of the lung
  - Esophageal physiology and motility
  - Lung and transplantation and emphysema surgery
  - Thoracic outlet syndrome

### **Knowledge: Technical**

By the end of the rotation in thoracic surgery the resident must demonstrate the following:

1. Aseptic technique in performing operative and bedside procedures
2. Recognize the appearance of normal & abnormal tissues in the operating room
3. Understand the principles of patient positioning, preparing and draping for common thoracic surgery procedures

Operative procedures that the resident should be able to perform competently under appropriate supervision by the end of the rotation include (assuming availability of cases):

1. Insertion of chest tubes
2. Opening and closing of posterolateral thoracotomy incisions
3. Open lung biopsy

Operative procedures on which the resident should be able to assist competently include:

1. EBU
2. Esophagoscopy
3. Pulmonary resections
4. Surgical therapy of pleural effusions and infections
5. Decortication of the lungs
6. Resection of the esophagus including replacement with stomach or intestine
7. Correction of benign esophageal disorders including diverticula, motor disorders and hiatus hernia as well as gastroesophageal reflux
8. Video-assisted thoracic surgery for mediastinal lung parenchyma and esophageal disease

9. Resection of primary tumors and cysts of the mediastinum and thymus gland
10. Chest wall resections for neoplasia
  - Surgical therapy of thoracic outlet syndrome
  - Traumatic repair of chest wall, lung, major airways, diaphragm and esophagus

### **Communicator**

The resident will develop and demonstrate skills Urologists use to effectively facilitate the doctor-patient and doctor-patient family relationship and the dynamic changes that occur before, during and after the medical encounter. These include but are not limited to:

1. The resident must demonstrate the communication skills necessary to obtain thorough, focused histories from patients, family members and other caregivers
2. In the ambulatory clinic the resident must present patient histories and physicals with management plans to the attending surgeons
3. The resident must write appropriate admission notes, consultation notes, operative notes, and daily progress notes in a timely fashion
4. The resident must dictate accurate and timely operative reports and discharge summaries
5. The resident must convey pertinent information regarding patient assessment in different circumstances (over the phone, during ward rounds and conferences)
6. The resident must explain procedures at a level appropriate for patients and their families to understand in order to gain informed consent

### **Collaborator**

The resident will develop and demonstrate skills Urologists use to work effectively within a health care team to achieve optimal patient care. These include but are not limited to:

1. The resident is expected to function as a member of a multi-disciplinary health care team.
2. The resident must understand the importance of collaboration with family physicians, surgical colleagues, other medical specialists, nurses and other hospital and community health care providers in achieving optimal comprehensive care for patients with vascular surgical problems.

### **Leader**

The resident will develop and demonstrate skills Urologists use to make decisions about allocating resources and contributing to the effectiveness of the health care system. These include but are not limited to:

1. The resident should recognize that many surgical problems, although conceptually and technically within the realm of expertise of general surgeons, are more appropriately managed where there are special thoracic surgery facilities (special expertise in anesthesia, intensive care, diagnostic imaging, nursing, and laboratory facilities).
2. The general surgery resident must recognize that the care of thoracic surgery patients requires the ability to work effectively in a health care team comprising a range of health care workers.

3. The general surgery resident is expected to take direction from the faculty and thoracic surgery residents; the resident should supervise medical students and provide appropriate guidance and teaching for them.

### **Health Advocate**

The resident will develop and demonstrate skills to influence and advance the health and well-being of individual patients, communities and populations. These skills include but are not limited to:

1. The resident should be aware of the factors beyond surgical care that contribute to quality of life for patients. Examples include the use of tobacco and alcohol.
2. The resident should recognize environmental factors that contribute to thoracic diseases.
3. The resident should also identify situations where advocacy is appropriate.

### **Scholar**

The resident will develop and demonstrate skills Urologists use to achieve a lifelong commitment to reflective learning as well as the creation, dissemination and translation of medical knowledge. These include, but are not limited to:

1. The resident must prepare for teaching rounds, ward rounds and operating room cases with adult learning principles and evidence-based medicine. The resident should critically evaluate patient outcomes and participate actively in morbidity rounds and mortality rounds on the thoracic surgery service.
2. The resident should demonstrate a strategy to learn the basic science and clinical aspects of thoracic surgery as outlined in this document.
3. The resident must develop the capacity to access and apply relevant information as well as new and current therapeutic options to clinical practice.

### **Professional**

The resident will develop and demonstrate skills Urologists demonstrate in the establishment of ethical practice, profession-led regulation, and high personal standards of behavior. These include but are not limited to:

1. The resident must appreciate the emotional and ethical issues surrounding the care of patients with thoracic disease and the need to involve family members and other health care-givers in certain situations.
2. The resident must recognize her/his limits, make independent decisions when appropriate, but keep senior residents, fellows and attending surgeons informed.
3. The resident must value the critical need of ongoing systems of peer review, maintenance of competence, and evaluation of outcomes in the surgical management of patients with thoracic disorders.
4. The resident must be aware of the ethics of research concerning patients.
5. The resident must demonstrate effective consultation services with respect to patient care, and education.