

FRED HUTCHINSON CANCER RESEARCH CENTER SERVICE

Location:

Fred Hutchinson Cancer Research Center, South Lake Union
University of Washington Medical Center

FACULTY CONTACT:

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OVERALL EDUCATIONAL PURPOSE

To acquire knowledge and clinical experience with inpatient and outpatient consultation of pulmonary problems occurring in patients receiving bone marrow transplantation and in patients with underlying malignancies.

To learn consultation and primary care management of acute, severe (i.e., life threatening) medical problems occurring in patients receiving bone marrow transplantation or with malignancies in an intensive care unit setting.

To acquire knowledge and clinical experience in the evaluation, diagnosis and treatment of immunocompromised patients with pulmonary complications.

To learn principles of biomedical ethics and gain experience in medical ethical issues involving critically-ill patients, including withdrawing and withholding life support.

TEAM STRUCTURE

Pulmonary/CCM attending
Pulmonary/CCM fellow

PRINCIPAL TEACHING METHODS

Case discussion and review

Each case for which a consult has been requested, which includes all critically ill patients, is reviewed at least once daily by the fellow and attending. Review always involves communication with the primary oncology service and usually with subspecialty faculty and fellows including Infectious Diseases, Gastroenterology and Nephrology.

Rounds

The fellow will round on all consult patients and all ICU patients at least daily. Rounds with the attending will focus on recommendations for patient care, but also include an educational component, with bedside teaching.

Didactics

Problem solving skills on instructive cases are presented at weekly conference (Tuesdays, 8 am) where senior members from all services participate in a case-based multidisciplinary conference. Daily conferences to review and discuss x-ray findings, primarily chest x-rays and CTs involves staff radiologists and the ward teams. Review of pathologic material is accomplished at a monthly morbidity and mortality conference as well as on a case-by-case basis through discussion with faculty in the Pathology Department. Participation in Division-wide didactic conferences is urged and includes Seattle Area Chest Grand Rounds, Pulmonary Critical Care Seminar, Department of Medicine Medical Grand Rounds and weekly pulmonary physiology study groups.

EDUCATIONAL CONTENT

Mix of Diseases

A wide spectrum of the clinical presentations related to the special problems of patients with malignancy and bone marrow transplantation are seen. Infectious diseases related to immunocompromise are a frequent problem. Bronchiolitis, idiopathic pulmonary disease, pulmonary vascular disease, interstitial lung disease, neoplasms of the lung and pleural diseases are also seen. In the intensive care unit, acute respiratory failure, cardiogenic and non-cardiogenic pulmonary edema, multiple organ failure, gastrointestinal bleeding and neurologic disease are the more common problems.

Patient Characteristics

The patient population includes men and women, as well as children, referred to the Center from throughout the United States and the world.

Types of Clinical Encounters

The fellow supervises and actively participates in patient care and decision-making in the Intensive Care Unit. Outside the Intensive Care Unit the fellow functions as a consultant to the physicians on the Oncology Transplantation Service as well as the General Oncology Service of the University of Washington Medical Center. The fellow, with attending supervision, also provides outpatient consultation for both general oncology patients as well as those post-bone marrow transplantation.

Procedures

Fellows perform diagnostic and therapeutic bronchoscopy and bronchoalveolar lavage under the direct supervision of pulmonary attending. Chest tube placement and management occurs under the supervision of the Surgical Service or pulmonary

attending. Fellows perform the placement of pulmonary artery catheters and arterial lines and thoracentesis under the supervision of the pulmonary attending when necessary. Endotracheal intubation is performed under the supervision of the pulmonary attending or a staff anesthesiologist.

Services

The inpatient service of the Fred Hutchinson Cancer Research Center located within the University of Washington Medical Center, which has a full range of medical and support services, including all medical subspecialties including neurology, surgery, anesthesiology, radiology, pathology, respiratory therapy, and laboratory medicine. A bronchoscopy suite and full pulmonary diagnostic laboratory is available. Outpatients are seen at the FHCRC facility in South Lake Union, providing a state of the art clinic for bone marrow transplant patients.

Rotation Specific Schedule

Monday

Morning work rounds
Radiology conference

Tuesday

FHCRC Grand Rounds (8 am)
Morning work rounds
Radiology Conference

Wednesday

Morning work rounds
Radiology Conference

Thursday

Medicine Grand Rounds
Morning work rounds
Radiology Conference
Division-wide conferences at HMC

Friday

Morning work rounds
Radiology Conference

Call and Weekend Responsibilities

There is no in-house call. The fellow takes calls from home according to a published schedule. This schedule requires that the assigned pulmonary fellow take calls every other weekend and

five out of ten week nights. A second- or third-year fellow will cover otherwise. Need to return to the hospital is not common, but the fellow on-call must be available to assist the primary team in delivering critical care services when requested.

Principle Educational Materials Used Recommended Readings

A compendium of medical literature has been prepared and is distributed to all pulmonary and critical care medicine fellows at Fred Hutchinson Cancer Research Center. The compendium includes pertinent literature specifically related to the problems of marrow transplantation, diagnosis and treatment of immunocompromised patients. Additional medical and pulmonary textbooks are available at the Center's library where computer literature searching is also available.

Pathologic materials

All pathologic material, such a lung biopsies, obtained in the evaluation of patients is reviewed by the fellow and attending. Review of pathologic material also occurs at a monthly morbidity and mortality conference.

METHODS USED IN EVALUATING RESIDENT AND PROGRAM PERFORMANCE

At the end of the rotation, the fellow is evaluated in writing and their performance reviewed with them verbally by every attending he or she has interacted with for more than five days. The evaluator rates the fellow on a nine-point scale in each component of clinical competence (i.e. patient care, medical knowledge, practice based learning improvement, interpersonal and communication skills, professionalism, system based learning, educational attitudes, leadership, overall clinical competence).

The fellow is given the opportunity to evaluate in writing the quality of the curriculum and the extent to which the educational goals and objectives of the rotation have been met. The resident also evaluates the teaching competence of each attending with whom s/he has interacted for a significant amount of time. The fellows will meet with the program director and division head at the end of each rotation to discuss these issues directly.

EXPLICIT LINES OF RESPONSIBILITY FOR CARE OF PATIENTS ON THIS SERVICE

The pulmonary and critical care medicine fellow does not take in-house call. Admissions to the floor and ICU are the responsibility of the Oncology Team on call. However, all admissions are to be reported to the pulmonary and critical care fellow and consultation, if appropriate, will be sought. All patients requiring intubation and mechanical ventilation require a pulmonary consult. The pulmonary and critical care medicine fellow has primary responsibility for ventilator management and related clinical problems. Pulmonary and critical care medicine attending will see all patients in the ICU and be available 24 hours per day.

The fellow under the guidance of the attending coordinates the pulmonary and critical care medicine consult service and is responsible for supervising the care delivered by the medical team and the implementation of recommendations by the pulmonary and critical care medicine team. The fellow receives a request for consultations for both inpatient, Intensive Care Unit patients and outpatients. He or she notifies the attending of the pending consult and performs the initial evaluation. Attending presence is usually subsequent to the fellow's initial evaluation but in selected cases this is performed jointly as the situation requires. Fellows see all consults in follow up as appropriate and evaluate the laboratory and radiography and pathologic data relevant to the patients' care.