

UCLA-OLIVE VIEW INTERNAL MEDICINE RESIDENCY
HEMATOLOGY-ONCOLOGY WARD CURRICULUM

Target: PGY 1-3
Updated May 2021

A. EDUCATIONAL OVERVIEW

The purpose of the Hematology-Oncology Inpatient Ward Rotation is to train residents to competently care for complicated, hospitalized patients diagnosed with leukemia or aggressive lymphoma who are undergoing treatment with inpatient treatment protocols or experiencing severe cancer treatment-related side effects. They will learn to: recognize the common presenting signs and symptoms of hematology and oncologic emergencies; perform the standard diagnostic evaluation to better define the causative disorder; implement early intervention and longer-term management; provide supportive care for malignancies and common toxicities of chemotherapy and radiation therapy; and participate in the team approach to the transition of terminal patients to palliative care.

B. ROTATION DESCRIPTION AND STRUCTURE

The Hematology-Oncology Inpatient Ward service is a major part of the curriculum in Hematology-Oncology alongside the Hematology-Oncology Consult service. Training on the ward service will take place at the Olive View-UCLA Medical Center during a two-week block.

On the inpatient Hematology-Oncology Ward service, housestaff will be responsible for the care of patients with malignancies requiring inpatient administration of chemotherapy, biologic agents, or chemoradiation therapy, treatment and supportive care for acute leukemias and lymphomas, management of acute toxicities resulting from the underlying malignancy or its treatment, and end of life care. The care team consists of two housestaff, one Hematology-Oncology fellow, and a faculty member from Hematology-Oncology. The team collaborates with the palliative care team led by Dr. Katherine Yu and Dr. Chris Metchnikoff. Trainees will be supervised by the attending and fellow physician.

During this rotation, trainees will also attend weekly Bone Marrow Rounds to review all bone marrows performed on patients on service with a Pathology faculty member. Attendance at division teaching conferences such as Multidisciplinary Lymphoma Conference (monthly), Tumor Board (weekly), Journal Club (monthly), Hematology-Oncology Curricular Review Conference (weekly), and fellow teaching conferences (biweekly), is recommended as clinical duties permit.

C. GOALS & OBJECTIVES

Residents are expected to achieve the common goals and objectives of clinical care (see separate document) in addition to the following objectives by the end of the three-year residency training program.

1. Goal: Understand the general concepts of diagnosis and treatment of hematologic disorders.

- Describe how the molecular biology of cancer (gene regulation, oncogenes, growth factors, chromosomal abnormalities) influences diagnosis and treatment for specific disorders. (MK1)
- Explain the principles of diagnosis and recommend appropriate steps for diagnosis, including bone marrow biopsy, flow cytometry, cytogenetics, as well as for staging and prognosis. (MK1, PC1/2)
- Identify and select appropriate labs and studies for cancer staging, including CT scan, PET scan, endoscopic ultrasound. (PC1/2).

- Accurately describe normal and abnormal peripheral smear findings, and use this information to assist with the patient's diagnosis. (PC1/2)

2. Goal: Recognize and treat oncologic emergencies.

- Identify these oncologic emergencies based on signs, symptoms, exam findings, and lab or radiographic data: (PC1, MK1)
 - Tumor lysis syndrome
 - Hypercalcemia
 - Spinal cord compression
 - Brain metastasis
 - Superior vena cava syndrome
 - Pericardial tamponade
 - Hyperviscosity
- Appropriately monitor and select treatments to manage these oncologic emergencies. (PC1-3)
- Appropriately consult subspecialty services to assist in management of these emergencies. (PC2/3/5)

3. Goal: Coordinate the ongoing treatment of malignancies and provide supportive care during treatment.

- Describe the general treatment approaches and considerations for the following diseases: (PC2/3, MK1)
 - Head and Neck cancer: inpatient chemotherapy protocols, concurrent chemoradiation therapy
 - Esophageal cancer: tri-disciplinary treatment approach combining chemotherapy, radiation therapy, surgery; concurrent chemoradiation therapy
 - Anal cancer: tri-disciplinary treatment approach, disease staging including CT/PET/EUS
 - Testicular cancer: inpatient chemotherapy
 - Gynecologic cancers: role of surgical debulking, intraperitoneal chemotherapy
 - Sarcoma: tri-disciplinary treatment approach, inpatient chemotherapy protocols
- Communicate the goals, risk and benefits of therapy to the patient in a clear, effective manner. (ICS1, PC2)
- Diagnose and manage common complications of cancer: (PC1-3, MK1)
 - Malignant effusions/ascites
 - Hypercalcemia
 - Pain

- Diagnose and select appropriate treatment for anticipated complications of therapy, including the common toxicities of chemotherapy and radiation therapy: (PC1-3)
 - Neutropenia and febrile neutropenia
 - Thrombocytopenia
 - Anemia
 - Nausea and vomiting
 - Anorexia
 - Mucositis
 - Diarrhea
 - Constipation
 - Electrolyte abnormalities
 - Pain and neuropathy
 - Immune-related adverse events
- Explain the indication and benefit of bisphosphonates and hematopoietic growth factor therapy in selected patients. (PC2-3, MK1)
- Recommend nutritional support when indicated. (PC2/5)
- Co-manage symptoms in consultation with palliative care medicine when appropriate. (PC2/5)
- Explain the roles of other DHS and Medi-Cal facilities in providing tertiary services not available at OVMC such as stem cell transplantation, Omayra reservoir placement, acute neurosurgical, cardiothoracic, or orthopedic interventions. (PC2/5, SBP3)

4. Goal: Use a team approach to identify the goals of care and manage patients for advanced care planning and at the end of life.

- Elicit and appropriately document the patient's goals of care, including completion of the POLST form when appropriate. (ICS1, PROF3)
- Educate patients and families on the intervention goals and symptoms management. (ICS1)
- Engage multi-disciplinary team members, including social work and palliative care, to enhance the care of patients when appropriate. (SBP1, ICS1)
- Ensure safety and comfort during the transition to home or other facility. (PC2, SBP1)

D. CORE TOPICS ON HEMATOLOGY-ONCOLOGY WARDS

The medical knowledge goal of this curriculum is comprehensive. It is understood that residents will focus their study on the medical conditions of the patients they are exposed to during the rotation. Additional topics are listed in the Hematology-Oncology Consult curriculum. Competency with all of the Medical Knowledge objectives is not expected until the end of the three-year training program. Residents are expected to describe the initial presentation, diagnosis and treatment of: (MK1)

- Hematologic Disorders
 - Acute myeloid leukemia (AML)

- Acute promyelocytic leukemia (APML)
 - Myelodysplastic Syndrome (MDS)
 - Acute lymphoblastic leukemia (ALL)
 - Chronic lymphocytic leukemia
 - Hairy cell leukemia
 - Non-Hodgkin lymphoma, e.g. diffuse large B cell lymphoma, Burkitt's lymphoma, lymphoblastic lymphoma, primary CNS lymphoma, follicular lymphoma
 - Hodgkin lymphoma
 - T-cell lymphoma
 - Waldenstrom's macroglobulinemia
 - Multiple myeloma
 - Amyloidosis
 - HIV-associated malignancies
 - Benign disorders: Hemophilia and von Willebrand Disease, disseminated intravascular coagulation, autoimmune hemolytic anemia, immune thrombocytopenia, aplastic anemia
Knowledge, skill or attitude goal
- Oncologic Diseases
 - Head and Neck cancer
 - Esophageal cancer
 - Anal cancer
 - Testicular cancer
 - Gynecologic cancers: ovarian, gestational trophoblastic disease
 - Sarcoma

E. TEACHING METHODS

Clinical education is primarily delivered through direct patient care. Attending and fellow physicians will be responsible for teaching housestaff during the rotation, during daily teaching rounds where the diagnosis, common complications of cancer, and the therapeutic modalities used to treat these patients will be addressed as part of the care plan. Attending rounds will include case-based didactic discussions and bedside teaching of physical examination and interview skills.

Housestaff are expected to supplement their learning with additional reading on the diseases encountered.

Housestaff will attend teaching conferences: Bone Marrow Rounds, Surgical Tumor Board, Gynecologic Oncology Tumor Board, Lymphoma Conference, Multidisciplinary Breast Conference, Hematology-Oncology Journal Club, Hematology-Oncology Curriculum Review Conference, as permitted by patient care responsibilities.

Attendance at Noon Conference attendance is mandatory.

F. SUPERVISION AND EVALUATION

Attending physicians and fellows will directly observe interaction with patients and their families, colleagues, and support staff.

Attending physicians will give continuous verbal feedback on the resident's performance during the rotation.

The supervising attending will electronically submit a written evaluation based on the above objectives and competencies at the end of the rotation.

G. EDUCATIONAL RESOURCES

The following resources are available in the Hem-Onc fellow's office:

- Topic-specific, electronic, PDF-based library
- Library of textbooks and monographs
- Dual-headed microscope

The multi-headed microscope for review of peripheral blood smears and bone marrow studies is also available in the hospital.

Electronic access to major journals in Hematology and Oncology as well as web-based resources maintained by professional societies for hematological and oncologic disorders is available through the intranet at Olive View-UCLA Medical Center and through UCLA.

- UpToDate
- Dynamed (coming)
- Harrison's Principles of Internal Medicine
- PubMed
- Olive View-UCLA Health Science Library
- UCLA Health Library