

**Internal Medicine Residency Program Rotation Curriculum**

**I. Rotation Sites and Supervision**

**Rotation Name:** HEMATOLOGY ONCOLOGY CONSULT ROTATION

Site 1: **UCIMC**

Faculty Rotation Director: Michael Lilly, MD: Phone 456-5153

Participating faculty: Jae Chang, MD  
S-H Ignatius Ou, MD  
Rita Mehta, MD  
Frank L Meyskens, MD  
Edward Nelson, MD  
Lewis Slater, MD  
Jason Zell, DO

Site 2: **LBVAMC**

Faculty Rotation Director: Lewis Slater, MD: Phone 562-494 -2611 ext 5526

Participating Faculty: P Iyer, MD

**II. Educational purpose or rationale for this rotation**

The education purpose of this elective is to provide clinical experience to common problems in hematology and oncology by direct contact with patients. In addition, the resident will be able to develop the skill as a clinician and teacher by interacting with students, other residents, fellows and faculty. At the end of the rotation, the resident will be able to learn the essential knowledge in evaluating, diagnosing and managing patients with hematologic and oncologic problems, including those related to anemia, coagulation, lymphomas, leukemias and certain solid tumors, and hematologic and oncologic emergencies. The emphasis will be place on establishing the rapport with patients, logical approach for differential diagnosis, planning the management according to evidence-based medicine for each clinical situation and condition.

The resident will participate in rounds on the inpatient consultation service, perform consultations for selected inpatients under the supervision of the fellows and attending physician, and see patients in the outpatient setting. For outpatient activities, assignments will be made to general oncology clinics, the breast center, the melanoma clinic, GYN Oncology clinics, GI oncology clinics, and GU oncology clinics. The residents will be paired with specific faculty in each of these areas. An individualized schedule will be established for each resident at the beginning of the rotation.

The resident will also attend hematology/oncology core conferences including Journal Club, Morbidity and Mortality report, adult/breast tumor board, chief's rounds, GYN Oncology tumor board, head & neck tumor board, brain tumor board, and fellowship program didactic conferences on Tuesday evenings and Friday mornings.

**III. The principle teaching methods for this rotation**

The principle teaching methods include direct faculty observation of patient care with 1-on-1 interaction for the resident, problem-oriented discussion, review of pertinent literature and preparation

of materials for didactic teaching, faculty supervision of discussion and critique, advanced reading assignment from appropriate texts and literature.

#### **IV. Responsibilities of each of the participant on this residency rotation**

- Medical student: Patient care under the direction of the medical resident; case presentation; review of relevant literature and preparation of mini-didactic teaching modules
- Medical Resident: Patient care under the direction of the fellow and attending physician; case presentation; review of relevant literature and preparation of mini-didactic teaching modules
- Fellow: Patient care under the direction of the attending physician; case presentation; review of relevant literature and preparation of mini-didactic teaching modules; orders for all chemotherapy as appropriate
- Attending: Supervision of students, residents and fellows; ongoing instruction related to patient care; didactic teaching; evaluation of each student and house staff for their strength and weakness, and support for their academic advance and clinical skill

### **Competency-based Objectives for the Hematology-Oncology Consult Service Rotation**

#### Educational Objectives for PGY1 Residents

##### The PGY1 Resident

1. Will be able to conduct a competent exam of the lymphatic system, including the spleen.
2. Will be competent to take a history with regard to risk factors for malignancy in the lung, liver, gastrointestinal system, skin, breast, and genitourinary system.
3. Will be competent to initiate an appropriate evaluation for the solitary pulmonary nodule, gastrointestinal bleeding, adenocarcinoma of unknown origin, and suspicious skin lesions.
4. Will be competent to evaluate and treat anemia.

##### The Senior Resident

1. Will be able to conduct a competent exam of the lymphatic system, including the spleen.
2. Will be competent to take a history with regard to risk factors for malignancy in the lung, liver, gastrointestinal system, skin, breast, and genitourinary system.
3. Will be competent to initiate an appropriate evaluation for the solitary pulmonary nodule, gastrointestinal bleeding, adenocarcinoma of unknown origin, and suspicious skin lesions.
4. Will be competent to evaluate and treat anemia.
5. Will be competent to diagnose diseases of the blood, marrow, and lymphatic system including multiple myeloma, hemaglobinopathies, acute and chronic leukemias.
6. Will be competent to diagnosis solid tumors with special emphasis on diseases of the colon, breast, lung, ovaries and testicles.
7. Will demonstrate knowledge of appropriate screening strategies with emphasis on patients with both normal risk and high risk, including those with occupational or environmental exposures, genetic risk factors, and familial syndromes.
8. Will demonstrate the ability to counsel patients on basic genetic risks for breast and colon cancer.

### **Competencies by Level of Training for the Hematology Oncology Consultation and Ambulatory Service Rotation**

The resident at each level will demonstrate these appropriate levels of competence on the hematology and oncology consult service.

<b>Patient Care</b>	PGY1	PGY2	PGY3
Complete medical data base (H&P) relevant to this hematology oncology and good patient care overall. Special emphasis will be placed upon the understanding of anemia, blood dyscrasias, abnormalities of clotting and platelets, evaluation of lung masses, management of colon masses, evaluation and management of liver masses, and diagnosis of hematologic and lymphatic malignancy.	Reporter & Interpreter	Manager & Educator	Competent at the level of a well-trained internist
Diagnostic decision making based upon the best evidence	Reporter & Interpreter	Manager & Educator	Competent at the level of a well-trained internist
Involving patients in decisions about their care. Special attention on questions of prognosis and management, with subtle interpretation of the literature necessary to define prognosis and the outcome based on appropriate clinical trials.	Most of the time	All of the time	
Working with other health care professionals to ensure the best care	All of the time to manage consensus and ensure that patients receive coordinated and humanistic care		
Teaching patients and families with special emphasis on the chronic nature of most treatment for malignancy and chronic hematologic diseases	Most of the time	All of the time	
Patient triage and evaluation of severity	Reporter & Interpreter	Manager & Educator	Competent at the level of a well-trained internist
Response to emergencies	Reporter & Interpreter	Manager & Educator	Competent at the level of a well-trained internist
Commitment to wellness, screening & prevention with special emphasis on screening for breast and colon cancer as well as second malignancies and other sequelae in patients previously treated for cancer.	Most of the time	All of the time	
Identification & intervention in psycho-social issues, including domestic violence & depression	Most of the time	All of the time	

<b>Practice-based Learning</b>	PGY1	PGY2	PGY3
Take advantage of patient care to read & learn	Consistently		
Use of medical information resources & search tools and applies these to the diagnosis and treatment of malignancy. Aware of and uses data bases uniquely suited to oncology	Consistently		
Inspiring others to use Evidence-based resources and make EBM-based decisions	Basic understanding	Consistently	
Applying critical appraisal techniques consistently to patient resources I use for	Basic understanding	Consistently	

patient care			
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<b>Interpersonal &amp; Communication Skills</b>	PGY1	PGY2	PGY3
Create personal relationships with each patient by appropriately engaging them at each encounter	Most of the time	All of the time	
Use of verbal & non-verbal facilitation	Most of the time	All of the time	
Consistently demonstrate appropriate empathy & <b>good listening skills</b>	All of the time		
Respectful communication with colleagues & other professionals, especially in the context of difficult discussions centered around prognosis and palliative care.	All of the time		
Involve patients & families in discussions about care. Patient education.	Most of the time	All of the time	
I go out of my way to ensure the best possible care.	All of the time		
Enlist patients & families in health care decisions, including their feedback	Most of the time		
My ability to accept & integrate feedback from faculty & peers	All of the time		
Can say: I always sit down at the bedside to speak with my patients.	All of the time		

<b>Professionalism</b>	PGY1	PGY3	PGY3
Altruism: patients needs above their own	Most of the time	Most of the time	Most of the time
Confidentiality (including HIPAA)	All of the time		
Ethical behavior especially with regard to the complex social and professional issues surrounding the treatment of malignant diseases.	All of the time		
Commitment to excellence	All of the time		
Sensitivity to age, gender, gender-preference, ethnicity, culture & disability	Most of the time	All of the time	
Awareness of duty hours, fatigue in myself & others, & other outside stresses, including substance abuse & finances	All of the time	Always aware of these issues in others and competently manages interactions in peers and junior colleagues	
Commitment to education & to learning	All of the time		Accelerated
Personal insight & self-reflection	Most of the time	All of the time	
Completion of assignments	All of the time		
Timely response to pages	All of the time		
Timely completion of medical records	All of the time		
Conference attendance	Meets requirements		
Hand-offs and sign-outs	Consistently well presented	Consistently of the highest quality	
Leadership skills	Developing	Consistent	Consistent

<b>Systems-based Practice</b>	PGY1	PGY2	PGY3
Cost-effectiveness	Generally aware	Integrates into all plans	
Use of outside resources	Generally aware	Integrates into all	

		plans	
Use of case-management especially in the complicated and specific context of the care of the patient with malignancy or other chronic disease.	Generally aware	Integrates into all plans	
Attention to quality, safety, and process improvement	Generally aware	Integrates into all plans	Makes these a top priority in all areas
<b>Systems-based Practice (continued)</b>	PGY1	PG2	PGY3
Identification of systems issues that affect patient care	Developing	Consistently	Consistently
Use of the incident reporting systems to identify systems issues	Developing	Consistently	Consistently
Understanding of the business of medicine, health care systems, & public policy	Developing	Generally aware	Sophisticated understanding

<b>Teaching Skills</b>	PGY1	PGY2	PGY3
Commitment to teaching of colleagues and patients	Generally aware; expresses importance	Strong commitment and consistent performance under the guidance of experienced oncology faculty	
Use of the microskills of teaching	Developing	Skilled	Skilled
Understanding of the teachable moment	Developing	Skilled	Skilled
Patience with learners	Developing	Skilled	Skilled
Conference presentation	Developing	Basic	Skilled
Patient education & adherence	Basic	Clearly competent	

<b>Organization Skills</b>	PGY1	PGY2	PGY3
Patient care organization systems & practice	Uses systems	Fully integrated; multi-tasks easily	
Ability to prioritize personal issues in accord with personal values & priorities (Get my life in order)	Basic understanding	Consistent focus	
Ability to help others get organized		Advisor	Educator
Organizing for study, reading, & life-long learning	Conscious of necessity	Competent & committed	
Organizing teams to include & prioritize learning & teaching		Competent & committed	
Organizing to obtain & prepare for careers or fellowships	Aware	Competent	

#### V. Core suggested Reading for this rotation

- Relevant Chapters in *Cancer, Principles & Practice of Oncology* (6<sup>th</sup> edition) by Vincent T. DeVita, Jr et al
- Relevant Chapters in *Williams Hematology* (6<sup>th</sup> edition) by Ernest Beutler et al
- Recent literature for pertinent medical problem for the particular case, as directed by attending physician.

#### Recommended Readings for this Rotation

Basic Recommended Readings for this rotation come from **Current Medical Diagnosis and Treatment**, 2009. Access these readings at

<http://www.accessmedicine.com/resourceTOC.aspx?resourceID=1>

In addition, you should be familiar with basic practice guidelines in this discipline. Access these at

<http://www.accessmedicine.com/guidelines.aspx?type=1>

Select the appropriate chapters for review. These chapters can be accessed through the Grunigen Medical Library website.

<http://www.accessmedicine.com/resourceTOC.aspx?resourceID=1>

Chapters of specific relevance for this rotation are

Chapter 13 [Blood Disorders](#) [Revised April 2009]

Chapter 14 [Disorders of Hemostasis, Thrombosis, & Antithrombotic Therapy](#) [Revised April 2009]

Chapter 39 [Cancer](#)

**VI. Key physical diagnosis skills which should be reviewed during this rotation**

- Physical diagnosis of anemia, coagulation disorders and typical manifestations of certain hematologic disorders
- Physical diagnosis of malignant tumors, and typical manifestations of certain cancer
- Physical diagnosis of various complications related to the treatment for hematologic disorders and cancer

**VII. Key procedures which the resident should be able to *perform***

- Preparation of blood smear
- Bone marrow aspiration and biopsy with the understanding for indication of specialized tests such as cytogenetics, molecular genetics, flow cytometry
- Thoracentesis, paracentesis, lumbar puncture, and access to Ommaya's reservoir
- FNA of lymph nodes and tumor mass

**VIII. Key tests or procedures which the resident should be able to *understand the indications for and to interpret***

- Peripheral smear, with special emphasis for iron deficiency anemia, autoimmune hemolytic anemia, megaloblastic anemia, myelodysplastic syndrome, hemoglobinopathy, acute and chronic leukemias, thrombocytopenia
- Bone marrow aspiration and biopsy for normal and pathologic slides, and iron staining

**IX. The most important diseases or conditions which the resident should see and understand during this rotation**

- Non-neoplastic hematology: anemia of various causes, thrombocytopenic disorders, bleeding disorders, thrombotic disorders

- Hematologic malignancy: myeloproliferative disorders, myelodysplastic syndromes, leukemias (chronic and acute), and lymphomas, multiple myeloma
- Solid tumor oncology: cancer of the breast, colon, lung, prostate, testicular, ovarian, head& neck, pancreatic, esophageal, gastric, renal, liver, and skin

**X. Evaluation Methods**

Faculty will observe the performance of the resident during the rotation and evaluate it, using the standard “Internal Medicine Resident Evaluation Form”, at the end of each block rotation. The “Evaluation Form for the Resident” will be submitted to the Residency Program for the review by the Program Director and the Residency Oversight Committee.

Also, the resident will complete the evaluation of attending faculty, supervising fellows, and Hematology/Oncology rotation program itself. The “Evaluation Form for the Rotation and Faculty” will be submitted to the Residency Program for the review by the Program Director and the Curriculum Committee. Summarized version of the evaluation by residents for the rotation and faculty will be distributed to the entire teaching faculty for their information.

**XI. Core Educational Topics and Venues for this Discipline**

Outlined in the attached Core Curriculum of Internal Medicine

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	GYN Oncology, Dr. Brewster, every other week (east)	Medicine Clinic or Melanoma clinic, Jakowatz & Linden (East)	Rounds with inpatient team, inpatient consults	Breast Center clinic, Dr. Mehta (3 <sup>rd</sup> floor)	Holcombe (GI Oncology) (West)
PM	Inpatient consults	Medicine Clinic or Melanoma clinic, Jakowatz & Linden (East)	Sheth clinic (West)	A. Nguen & J. Zell clinic (West)	Lung Group (West)