

Rotation Description: R3 Hematology-Oncology Rotation

I. General Information

- A. Rotation Length: 4 weeks
- B. Faculty: Bradley Lair, M.D. Roy Molina, M.D.
Roscoe Morton, M.D. Steve Hedding, M.D. (rotation director)
Mark Westberg, M.D. Robert Behrens, M.D.
Debra Welker, M.D. Bradley Hiatt, D.O.
Matt Hill, DO Angela Sandre, DO
Tom Buroker, DO Dan Buroker, MD
Brian Freeman, MD

II. Logistics of Rotation and Orientation

- A. You will be assigned one attending physician to work with during the rotation. You may find out who you are assigned to work with via Bea or Gina in the residency office. Please contact Connie Robinson to establish the time and place to meet on the first day of the rotation. You can reach her through the office at 282-2921 (IMMC) or 247-3970 (Mercy).
- B. Schedule of activities:
1. You will typically join the attending oncologist on Powell-3 at IMMC for hospital rounds at the start of the day.
 2. You will then see patients in clinic with your attending oncologist. You will see some new patients referred for evaluation and will need to do a detailed evaluation on these patients.
 3. There will be some outreach clinics, which are an essential part of cancer medicine practice in a rural state like Iowa. You may attend some of these clinics if they do not conflict with your own continuity clinics.
 4. Radiation therapy: you will spend one day in the Radiation Therapy Department at IMMC. Your attending physician will help organize this or you may **contact Dr. Robert Goebel. at 241-4330** to determine where and when you are to report.
 5. Hospice: you will spend one day at Hospice of Central Iowa during the month. Please report to the Kavanagh House on Grand in West Des Moines **by 1:30 pm** on the **3rd Wednesday** of the month (1821 Grand Ave in West Des Moines, phone number 327-1172). You will tour this residential hospice facility, see patients with Dr. Hirsch, and participate in interdisciplinary care conference that day. You must **contact HCI Medical Director Roscoe Morton, M.D. at 271-1330 if you need to reschedule** this experience to a different day.
 6. Tumor Board is conducted weekly and you should attend this conference during the rotation. Tumor Board is held on Wednesdays at IMMC (Bierring Dining Room) and on Mondays at Mercy Medical Center (Beh Auditorium).

7. You are encouraged to attend journal club meetings of the Medical Oncology and Hematology Associates with your attending physician.
8. The Iowa Oncology Research Association is a local research organization for clinical protocol management of cancer. It is affiliated with the North Central Cancer Treatment Group. During the rotation you will have an opportunity to see patients involved in clinical trials of the NCCTG. You may attend a meeting at IORA during the month with your attending oncologist. IORA offices are located at 1223 Center Street, Suite 19. The IORA phone number is 244-7586.

III. Cognitive Objectives

- A. Residents will be expected to understand the major principles of management for patients with hematology problems.
 1. Understanding of hematopoiesis
 2. Evaluation of a patient with anemia
 3. Diagnosis and treatment of nutritional anemias
 4. Hemolytic anemias and treatment
 5. Aplastic anemia, myelodysplasia and bone marrow failure syndrome
 6. Acute and chronic leukemia – diagnosis and treatment
 7. Lymphoid malignancies
 8. Plasma cell dyscrasias and multiple myeloma
 9. Chronic myeloproliferative disorders
 10. Blood component therapy
 11. Bone marrow and stem cell transplantation
 12. Platelet disorders
 13. Disorders of thrombosis and hemostasis
 14. Anticoagulant, antifibrinolytic and antiplatelet therapy
 15. Bone marrow aspiration and biopsy – indication and proficiency in the procedure
- B. Residents will be expected to understand the major principles of management for patients with neoplastic disorders.
 1. Cell biology of cancer
 2. Cancer genetics
 3. Cancer screening and prevention of cancer
 4. Principles of cancer treatment, chemotherapeutic agents, radiation therapy, immunologic and biologic agents in treatment of cancer
 5. Diagnosis staging and treatment of cancer (breast, colon, lung, prostate, GI gynecologic, head and neck, sarcoma)
 6. Paraneoplastic syndromes
 7. Identification and treatment of oncologic emergencies
 8. Recognition of late consequences of cancer and their treatment
 9. Management of common side effects of cancer and treatment (i.e. nausea, pain, weight loss, neutropenia, immune suppression, and thromboembolism)
 10. Care of the terminal cancer patient

IV. Competency-Specific Rotation Objectives

Patient Care

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to:

- evaluate new patients and arrive at a differential diagnosis for hematology and/or oncology problem presenting in each patient
- formulate diagnostic and treatment pathways for patients with anemia, bleeding disorders, thrombophilia, common cancers (lung, colon, breast, ovary, prostate) and hematologic malignancies
- be familiar with the approach to care of the terminal patient
- demonstrate effective use of blood component therapy
- do bone marrow aspirations and biopsies

Medical Knowledge

Residents must demonstrate knowledge about established and evolving biomedical, clinical, and epidemiological sciences and the application of this knowledge to patient care. Residents are expected to:

- demonstrate understanding of the pathobiology of chronic anemias, bleeding and clotting disorders, hematologic neoplasms, immune disorders and leukocyte disorders
- demonstrate knowledge of cancer biology, genetics, clinical manifestations and complications of cancer.
- understand staging systems for common cancers.
- be familiar with adjuvant therapy in the treatment of breast, colon, lung and ovarian cancers.
- understand multimodality therapy in cancer: surgery, radiation, chemotherapy, nuclear oncology and biologic agents.

Practice-Based Learning & Improvement

Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:

- complete reading of MKSAP hematology/oncology (XV)
- read NEJM and Annals articles on common hematology and oncology topics
- review specific topics of interest in Blood and The Journal of Clinical Oncology

Interpersonal and Communication Skills

Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange with patients, families and professional associates. Residents are expected to:

- educate and counsel patients and families about their cancers or blood diseases
- be attentive to psychosocial needs of patients
- interact positively with nursing, pharmacy, social services and other medical professionals involved in patient care.

Professionalism

Residents must demonstrate a commitment to carry out professional responsibilities, adhere to ethical principles, and demonstrate sensitivity in caring for a diverse patient population. Residents are expected to:

- demonstrate respect, compassion, integrity, and honesty when interacting with patients, families, and other colleagues
- commit to self assessment and improvement in knowledge and clinical skills

Systems-Based Practice

Residents must demonstrate an awareness of, and responsiveness to, the larger context and system of health care and the ability to effectively call on system resources to provide optimal care of patients. Residents are expected to:

- provide patient care that is evidence-based and cost effective
- work with other allied members of the health care team to provide timely and comprehensive patient care
- do timely evaluations, treatment and transfer/discharge of assigned patients

V. Principal Teaching Methods

Participation in the evaluation and management of patients referred to your attending oncologist for hematology and oncology problems. You will be expected to work-up new patients referred to your attending oncologist, both inpatient and outpatient. You should take time to formulate an impression and plan and present your history, physical findings, assessment and plan to the attending oncologist.

VI. Education Resources

Besides text books of internal medicine you will find the following text books of hematology-oncology as good resources.

1. Hematology textbooks

Hoffman, Ronald. Hematology: Basic Principles & Practice

Beutler, Ernest. Williams Hematology

Lee, G Richard. Wintrobe's Clinical Hematology

2. Oncology textbooks

Bast, Robert C. Cancer medicine

Devita, Vincent T. Cancer, Principles & Practice of Oncology

Haskell, Charles. Cancer Treatment

American Joint Committee on Cancer. AJCC Cancer Staging Manual

3. MKSAP XV

4. Journals

Blood

Journal of Clinical Oncology

5. File of selected articles in Hematology and Oncology at the MOHA office
6. Med Study
7. Websites:
 - www.noainc.com (Evidence-based expert panel-reviewed cancer treatment guidelines)
 - www.cancer.gov
 - www.nccn.org (National Comprehensive Cancer Network clinical practice guidelines)

VII. Mechanics of Rotation

The resident will make hospital rounds with the attending oncologist and then see patients in the office with them through the remainder of the day.

- A. Residents will attend their continuity clinics on a weekly basis.
- B. Residents are expected to attend Grand Rounds, noon conferences and other required teaching conferences of the residency program.
- B. No weekend or on-call activities are required during the rotation.
- C. Residents will be directly and indirectly supervised by faculty physicians in Hem Onc

VIII. Medical Record and Procedure Documentation

- A. The resident will assist in completing the record for each patient visit they are involved with as directed by the supervising oncologist.
- B. Residents may gain experience in performing bone marrow aspiration and biopsy. You should log all procedures performed in the log book provided by the residency program.

IX. Evaluation

During the rotation, the resident will be evaluated by the supervising faculty. Personal feedback will be provided and an electronic evaluation completed and returned to the residency office. The final evaluation form will be reviewed and signed by the resident.

The resident will be evaluated by faculty in each of the required six general competency areas as follows:

1. **Patient Care:** a. Demonstrate ability to effectively evaluate and manage patients with blood disorders. b. Demonstrate knowledge of cancer staging and treatment of cancer with chemotherapy. c. Demonstrate the ability to manage patients with terminal cancer including use of Hospice d. Demonstrate knowledge of effective use of blood component therapy. e. Demonstrate competency in performing bone marrow aspirate and biopsy.
2. **Medical Knowledge:** a. Access and critically evaluate current medical information relevant to hematology and oncology b. Review of syllabus and assigned readings. c. Review of MKSAP

XV Hematology and Oncology. d. Review of peripheral blood smears for diagnosis of hematologic disorders. e. Demonstrate proficiency in interpretation and use of coagulation tests in the diagnosis and treatment of bleeding and clotting disorders.

3. **Practice-Based Learning:** a. Identify and acknowledge gaps in personal knowledge and skills in the care of patients with blood disorders and cancer. b. Develop real-time strategies for filling knowledge gaps that will benefit patient with blood diseases and cancer.
4. **Interpersonal and Communication Skills:** a. Feedback from patient surveys to be conducted. b. Review of medical records completed by resident. c. Communication skills observed during examination of patients and discussions with patients and family members.
5. **Professionalism:** a. Observed behavior towards patients, families, colleagues and other members of the health care team during rotation. b. Nursing staff evaluation.
6. **Systems-Based Practice:** a. Demonstrate evidence-based, cost-conscious strategies in directing patient care. b. Collaborate with Social Services and other allied members of health care team to assure timely, comprehensive care for patients. c. Assess regarding timely evaluation, transfer, dismissal/discharge of patients.

William J. Yost, MD
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