



Division of Hematology and Hematologic Malignancies

Adult Hematology Residency Training Program

Goals & Objectives

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Hematology Consult Rotation I Foothills Medical Centre

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Hematology Inpatient Consults Rotation I: Foothills Medical Centre

The clinical inpatient rotations at the Foothills Medical Centre will include two rotations of 1 month duration each with responsibility for patients with benign and malignant hematologic disorders admitted to the Foothills Medical Centre. Each of the two 1 month rotations will provide incremental responsibility for patient assessment and the clinical management plan. The spacing of the rotations throughout the training period will allow the resident to achieve the overall goals and objectives of the program in an atmosphere of graduated responsibilities.

Rotation I will be early in the first year of training and will be evaluated at the level of a senior Medical resident/Hematology resident at early training (2 or more months of clinical Hematology exposure, little or no laboratory exposure); Rotation II at the completion of training at the level of a senior Hematology Resident/Junior Consulting staff.

Location

1. Inpatient units at the Foothills Medical Centre other than those run by the hematology service.
2. Emergency department at the Foothills Medical Centre for patient assessments.

Preceptors

1. Drs. Valentine, Owen, Shafey, Savoie, Bahlis, Jenkins, Duggan, Geddes, Lee, Rydz, Zepeda, Suryanarayan, Grossman
2. The Hematology staff generally are assigned management of the clinical consultation service for 1-2 week blocks.
3. Preceptors responsibilities include:
 - Direct supervision of resident based patient care. The Preceptor should gauge the level of competence of the resident and allow graduated responsibility for care and graduated degree of direct supervision of clinical decision making on a day to day basis, as described above.
 - Faculty are required to make daily rounds of actively followed patients and be immediately available to support resident needs by pager
 - Resident teaching and direct observation of resident performance in the form of bedside clinical rounds and review of resident assessment and care planning.
 - Mini-CEX monthly.

- All teaching faculty are required to contribute to education by teaching around patients and reviewing relevant blood smears and bone marrow aspirates/biopsies as indicated by clinical situation.
- Direct patient care coverage to allow the resident to attend to their mandatory educational and outpatient clinic responsibilities.
- Verbal and written feedback on resident performance.

Resident Responsibilities

- Assessment of patients referred for hematology consultation, developing a plan for investigation of the medical problem and a treatment plan for the hematologic disease. If necessary, arranging for transfer of the patient to the hematology inpatient service for care. The resident is responsible for informing and reviewing with the attending Hematologist all new consults or major developments in patient status.
- Ensure the rare blood and bleeding disorder clinic is aware that you are on the consult service by checking in with them daily to ensure you see all urgent assessments for bleeding and preop management of hemophilia and bleeding disorder patients
- Ensure on the first day of rotation that Dr. Rad is aware that you are available to manage problems with blood banking during your consult rotation.
- Attendance at clinical care rounds with the preceptor of the week (2-5 days /week depending on the resident's level of expertise and responsibility).
- Supervision and teaching of all more junior resident/clerk staff concurrently on the rotation.
- Attendance at all mandatory educational sessions.
- On-call from home as per PARA agreement (see Hematology resident call schedule).
- Attendance at all weekly ongoing longitudinal outpatient clinics (Resident's clinic)
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Rotation Specific Objectives

The clinical consultation rotations at the Foothills Medical Centre include two 1-month rotations spanning the two year training period. As a general

goal/objective it is expected that the resident will progress and accomplish the following objectives in a manner demonstrating a graduated increasing level of competence, independence and responsibility. By the end of the two-year training period it is expected that the resident will be performing at the level of a junior consulting hematologist.

MEDICAL EXPERT/CLINICAL DECISION MAKER

1. The resident will develop evidence-based approaches, **including the assessment and preliminary plan**, for the investigation and management of patients presenting with
 - Anemia (microcytic, normocytic, macrocytic)
 - Thrombocytopenia
 - Neutropenia
 - Pancytopenia
 - Febrile neutropenia
 - Splenomegaly
 - Lymphadenopathy
 - Leukocytosis (neutrophilia, eosinophilia, basophilia, monocytosis, lymphocytosis)
 - Bleeding, bruising
 - Complications of blood product transfusion
 - Venous thrombosis

2. The resident will develop evidence based management **strategies including assessment and preliminary plan** for the following disorders:
 - Aplastic anemia (congenital, acquired, pure red cell aplasia)
 - Hemolytic anemia
 - Hemoglobinopathies (sickle cell anemia and related disorders and their complications)
 - Thalassemias
 - Microangiopathic hemolytic anemias/thrombocytopenia
 - Immune thrombocytopenic purpura
 - Myelodysplastic disorders
 - Immunodeficiency states
 - Plasma cell dyscrasias
 - NonHodgkins lymphomas and chronic lymphocytic leukemia
 - Acute myeloid leukemia including promyelocytic leukemia and leukemia in the elderly
 - Acute Lymphoid Leukemias including Philadelphia chromosome positive ALL
 - Hodgkins lymphoma
 - Hemophilia and Von Willebrand's disease
 - Rare congenital bleeding disorders
 - Acquired bleeding disorders (iatrogenic, acquired inhibitors of coagulation, DIC, HUS, TTP, HELLP etc)

3. The resident will be able to discuss the above problems and disorders in terms of the relevant laboratory, pathophysiological, clinical, prognostic, treatment related and supportive care features.
4. The resident will demonstrate proficiency in eliciting a relevant, concise and accurate history and performance of a thorough and complete physical examination in the problem-based assessment of the above disorders and problems.
5. The resident will demonstrate the cognitive and process skills to integrate the information from history, physical exam, diagnostic and procedural investigations to formulate an initial management plan for the patient's hematological problem/disorder.
6. The resident will demonstrate the ability to effectively integrate the management of hematologic problems in patients with complex multisystem illnesses
7. The resident will demonstrate a basic understanding of the following procedures (including knowledge of technical skills, indications, adverse effects/complications, alternative procedures) and be able to perform them with supervision:
 - Bone marrow biopsy and aspiration
 - Lumbar puncture
 - Intrathecal chemotherapy administration
 - Where appropriate thoracentesis, paracentesis, phlebotomy and tunneled central line removal
8. The resident will demonstrate knowledge necessary for the supervision and appropriate application (including the obtaining of informed consent) of the following procedures:
 - Therapeutic apheresis
 - Transfusion of blood and blood products
 - Iron infusion and chelation therapy

COMMUNICATOR

1. The resident will demonstrate a patient-centered approach to communication and an ability to develop therapeutic relationships with patients and their caregivers.
2. The resident will be able to efficiently and accurately elicit relevant information with respect to the patient's medical history, hematologic problems, indications for treatment and admission to hospital.

3. The resident will be able to provide a concise verbal and written summary evaluation of the patient's history and physical examination and provide accurate and timely documentation for records of daily inpatient care.
4. The resident will be able to gather information about the patient's beliefs, concerns and expectations about their hematologic problem and consider the impact of factors such as the patient's age, gender, ethnic, cultural and socioeconomic background and spiritual values.
5. The resident will accurately convey to the patient and family the recommended diagnostic investigations, diagnosis, prognosis, treatment options, complications, and impact on quality of life and develop a common understanding to develop a shared plan of care.
6. The resident will develop skills to have a discussion of care goals and end of life decision making with patients, families, caregivers and medical caregivers in a humane, compassionate and empathetic manner
7. The resident will be able to effectively manage difficult communication challenges including delivering bad news, and addressing an angry or hostile patient or family, and effectively communicate with patients and families of different cultural backgrounds and languages through the use of available resources.
8. Effectively seek out and maximize the contributions of allied health professionals and other members of the clinical care team to ensure optimal patient care.

COLLABORATOR

1. Coordinate and communicate additional specialist consultation referrals where appropriate.
2. Effectively communicate with the members of the interdisciplinary team in the resolution of conflicts, provision of feedback and where appropriate be able to assume a leadership role on the hematology team with rotating residents from other services and medical students.
3. Effectively delegate where necessary and involve other members of the team to improve for patient care.
4. Participate in the coordination of transitional care from inpatient to outpatient facilities including notification of the appropriate interdisciplinary team members and appointment planning with outpatient hematology care providers.
5. Collaborate with and participate in ongoing clinical trials involving hematology patients.

MANAGER

1. Effectively utilize the information technology available to optimize patient care (e.g. electronic patient records, Tom Baker Cancer Centre and hematology tumor group patient data bases, accessing learning materials, quality improvement and patient safety reporting systems).
2. Be aware of and utilize as appropriate, the quality improvement and patient safety reporting systems within Alberta Health Services.
3. The resident will be able to determine the level of acuity of a consult and triage investigations and where appropriate to ensure ill patients are seen and treated in a timely manner.
4. The resident will demonstrate effective time management skills in order to balance the responsibilities of inpatient consult care, attendance at longitudinal outpatient clinics and educational responsibilities.
5. The resident will demonstrate an understanding of management of finite medical resources, and ensure patients are appropriately enrolled in Blue Cross, as well as the process to make application for special authorization and compassionate release of medications as necessary.

HEALTH ADVOCATE

1. The resident will demonstrate an understanding of how the basic determinants of health will affect outcome of patients with hematologic disease e.g. employment status, social support systems, educational level, community health support systems, nutrition, carcinogen / toxic agent exposure, genetic disease.
2. The resident will appropriately make referrals to social work, psychosocial services, spiritual care, aboriginal care services, and other resources to address supports and resources for determinants of health.
3. The Hematology resident will identify those patients groups that are at risk of hematologic disease and advocate preventive strategies to keep patients from requiring repeat hospital admission (e.g., community health support, immunization or other prophylactic treatment, appropriate follow-up).

SCHOLAR

1. The resident will develop and implement a personal continuing education strategy with respect to the changing indications, treatment modalities, improvements in care and treatment of complications of hematologic disease.

2. The resident will use the principles of evidence based medicine and critical appraisal in the evaluation of literature pertaining to the diagnosis and treatment of hematological disease.
3. The resident will participate in ongoing clinical trials assessing diagnosis and treatment of hematologic disease.
4. The resident will be able to describe the principles of medical education and participate in the teaching of junior residents and clinical clerks when they are participating in the hematology inpatient rotations.
5. The resident will attend and participate in the presentation of clinical and educational teaching rounds on the hematology service.

PROFESSIONAL

1. The resident will deliver the highest quality care with integrity, honesty and compassion and will display professional attitudes and behaviors in the care of patients with hematologic disease.
2. Professional attitudes and behaviours will include an awareness of racial, cultural and societal issues that impact on the delivery of care.
3. The resident will use ethical codes of practice when dealing with ethical issues related to hematological disease e.g. end of life care decision making, informed consent, conflict of interest, research ethics, resource allocation, disclosure of harm.
4. The resident will recognize, analyze and develop strategies for dealing with unprofessional behaviors in clinical practice.