

Pediatric
Hematology
Oncology
Rotation
Manual

Table of Contents

1. Introduction
2. Staff List
2. Pediatric Medical Day Unit
3. Aftercare Clinic
4. Hemophilia/Bleeding Disorders Clinic
5. Inpatient Unit
6. Schedule
7. Resident Expectations
8. Medical Student/Clerkship Expectations
9. Objectives of the Rotation
10. Evaluations

Introduction

Welcome to your rotation in Pediatric Hematology/Oncology. We hope your rotation is an educational and enriching experience. Enclosed in this introductory manual is a description of our clinics and the inpatient unit, expectations and objectives of the rotation, a schedule of clinics and conferences and a description of the evaluation process. We have also provided useful articles that will help you fulfill your educational objectives. These articles are found on the Google drive and you can also contact Dr. Patel for other learning resources.

On the first day of your rotation, you will meet with Dr. Patel to go over the rotation, expectations and objectives. Please come prepared with 3 personal learning objectives to discuss at this meeting.

During your rotation we would encourage you to complete 1-2 observed histories and physicals. It would be best to arrange a time for these in the first week with any of the hematologists/oncologists. If you require assistance in arranging these, please let Dr. Patel know. The observed history and physicals work best in the Hematology or the Aftercare clinics.

Staff List:

Hematologists/Oncologists:

Dr. Beth Cairney
Dr. Paul Gibson
Dr. Lawrence Jardine
Dr. Shayna Zelcer
Dr. Alexandra Zorzi
Dr. Serina Patel

Nurse Practitioners

Mary Jo Decourcy (inpatient)
Anne Chambers (outpatient)

Nurse Case Managers:

Julie Dowler
Meghan Reid
Sarah Leppington
Mary Ann Wilson Sprague
Diana Masse
Karen Nethercott

Dietician:

Angela Dodge

Physiotherapy:

Heather Ovens

Child Life Specialists:

Melissa Zurch
Deborah Dewbury Langley

Art Therapists:

Todd Wharton
Veronica Sweet

Psychologists:

Danielle Cataudella
Cathy Mann
Ann Klink

Social Work:

Jessica Mackenzie
Cindy MilneWren

Clinics:

Pediatric Medical Day Unit:

Oncology and Hematology patients are followed on an outpatient basis in the Pediatric Medical Day Unit. Transfusions, chemotherapy, hydration and other supportive care are administered in this setting. Sedated procedures are also performed including lumbar punctures, administration of intrathecal chemotherapy, and bone marrow aspirates and biopsies.

The **Hematology Clinic** is held every second Thursday and Tuesday afternoon. Patients with chronic hematological issues (ex. Thalassemia) and new consultations are seen in this clinic. Dr Lawrence Jardine runs the clinic.

Oncology Clinics are held on Mondays, Tuesdays, Wednesdays, and Fridays.

Aftercare Clinic:

PMDU

In Aftercare clinic you will work with Dr. Cairney, Dr. Zelcer, Dr. Zorzi and Dr. Patel. These clinics occur on alternate Thursday afternoons. Survivors of childhood cancer are followed in this clinic on approximately a yearly basis. These patients are followed for monitoring and treatment of the long-term effects of their therapy and disease.

Hemophilia/Bleeding Disorders Clinic:

PMDU

Dr Lawrence Jardine and Lori Laudenbach (NP) run the Hemophilia/Bleeding Disorders Clinic on alternate Thursday afternoons.

Inpatient Unit:

B6-100

Oncology patients are admitted to B6. They are admitted directly under oncology or under CTU (Clinical Teaching Unit). Multidisciplinary daily morning rounds are conducted on B6-100. Physicians, pharmacist, dietician, and nurses attend.

Residents are not expected to round on the inpatients, however may join inpatient rounds (8:30AM) prior to clinic (which starts at 9:00AM). This is optional. If you see a patient in clinic that is later admitted, we would encourage you to follow-up with this patient for your own learning.

Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
A M	8:30: B6-100 morning rounds 9:00: Oncology Clinic (Dr. Gibson)	8:30: B6-100 morning rounds 9:00: Oncology Clinic (Dr. Zelcer)	800: Pediatric Grand Rounds 830: B6-100 morning rounds 9:00: Oncology Clinic (Dr. Cairney and Dr.Zorzi)	8:30: B6-100 morning rounds 9:00: Multidisciplinary Conference (B2-116) 9:30: Hematology Clinic/Aftercare Clinic (alternating)	8:30: B6-100 morning rounds 9:00: Oncology Clinic (Dr. Patel)
P M	12:00 Procedure Clinic	Hematology Clinic (Dr. Jardine) 3:30: Tumor Board	13:00 Procedure Clinic	Hemophilia Clinic (Dr Jardine) (every other Thursday) 4:00 Neurooncology Rounds (B6361)	12:00 Procedure Clinic

Resident Expectations:

The focus of this rotation will be outpatient based. With respect to oncology patients, this will provide an opportunity to see patients who are getting chemotherapy and who have complications secondary to their chemotherapy (for example, fever and neutropenia, mucositis, nausea and vomiting, anaphylaxis etc.). Aftercare clinic will provide an

opportunity to see survivors of childhood cancer and learn about the long term complications of various therapies. The Hematology clinics will provide exposure to benign hematology, including hemophilia, bleeding disorders, sickle cell anemia, thrombosis, thalassemia and bone marrow failure.

Residents are responsible for completion of consultations to the service. The staff on call will then review the consults. Residents are then responsible for following those patients consulted on, including daily evaluations and note writing, and following up on the recommended investigations.

Residents are expected to attend all clinics. In the clinic, residents are to see patients and then review them with staff. Please ask the nurse case manager who you should see. If a patient is not ready to be seen, please take this time to review the charts. Residents cannot write chemotherapy orders!

There are weekly multidisciplinary rounds on Thursday mornings at 9:00 AM and it is expected that the resident attends these rounds. These rounds occur in B2-116, but please confirm the day before to make sure the location has not changed. Following these rounds, the staff on service will round with CTU on the inpatient floor and review the common patients. This will provide some teaching for the hematology/oncology resident with an inpatient focus, and they are expected to attend these inpatient rounds.

This rotation provides an opportunity for procedural skills, specifically lumbar punctures. There is often a conflict with noon rounds, so please let Belle Smaill know if you miss rounds to do procedures.

Clerkship Expectations:

Clerks are expected to attend morning inpatient rounds. Clerks should familiarize themselves with the inpatients, and be aware of their current issues. Clerk participation in the morning rounds is encouraged.

Clerks are responsible for completion of consultations to the service. The staff on call will then review the consults. Clerks are then responsible for following those patients consulted on, including daily evaluations and note writing, and following up on the recommended investigations.

Clerks are expected to attend all clinics. Clerks will join the clinics after morning rounds. In the clinic, residents are to see patients and then review them with staff. Please ask the nurse case manager who you should see!

Clerks cannot write chemotherapy orders and must have all other orders co-signed!

Objectives of the Rotation

1. To develop an approach to the following clinical problems:
(History, physical exam, laboratory investigations, differential diagnosis, management plan)

Anemia
Thrombocytopenia
Neutropenia
Lymphadenopathy
Leukocytosis
Leukopenia
Hepatosplenomegaly
Clots/Hypercoagulability
Prolonged/excessive bleeding/Easy bruising
Headache/Intracranial Lesion
Abdominal Mass
Childhood Limp
Bone Lesion
Neck mass
Fever NYD
White pupillary reflex
Transfusion Reaction

2. To become familiar with the presentation, investigation and treatment of the following illnesses:

Hemophilia
Von Willebrands' Disease
Immune thrombocytopenic Purpura
Disorders of coagulation
Thalassemia
Sickle cell disease
Hereditary spherocytosis
G6PD deficiency, Pyruvate Kinase Deficiency
Autoimmune Hemolytic Anemia and Aplastic Anemia
Neuroblastoma
Osteosarcoma
Ewings sarcoma
Rhabdomyosarcoma
Wilms Tumor
Brain Tumors
Leukemia
Lymphoma
Retinoblastoma
Hepatoblastoma
Neonatal Anemia

Neonatal Thrombocytopenia
Neonatal Hemostasis

3. To develop an understanding and appreciation of the impact of malignancy and chronic hematologic disorders on:
 - Growth and development
 - Nutrition
 - Educational achievement
 - Psychosocial Functioning
 - Family emotional, economic and psychosocial functioning
4. Recognized the impact of the patient's culture on understanding, reaction, and management of chronic illness.
5. Recognize the unique contributions of each member of a multidisciplinary health care team in caring for children with chronic illness.
6. Identify the key components of delivering bad news in relation to chronic illness.
7. To become familiar with the following issues relevant to the ongoing care of an oncology patient
 - Pain management
 - End of Life Care
 - Symptom management (ex. Nausea and vomiting)
 - Oncologic Emergencies
 - i. Fever and Neutropenia
 - ii. Hyperleukocytosis
 - iii. Tumor Lysis Syndrome
 - iv. Superior Vena Cava Syndrome
 - v. Mediastinal Mass
 - vi. Elevated Intracranial Pressure
 - vii. Hemorrhagic Cystitis
 - viii. Spinal Cord Compression
8. To become familiar with the following issues relevant to the ongoing care of a patient with a chronic hematologic disease
 - Transfusions
 - i. Transfusion reactions
 - ii. Blood product safety
 - iii. Chronic transfusions and iron overload

- Hemolytic Crises
 - Sickle Cell Crisis (chest crisis, pain crisis, priapism)
 - Musculoskeletal complications of hemophilia
9. To become familiar with:
- Common indications for bone marrow transplantation
 - Graft versus host disease
10. To become familiar with the late effects of cancer therapy (chemotherapy, surgery, radiation) and how they are relevant to the ongoing care of the patient. To develop an approach to the “well child care” of a patient with a history of malignancy.
11. To observe/perform the following procedures:
- Bone marrow aspiration
 - Bone marrow biopsy
 - Lumbar puncture with administration of intrathecal chemotherapy
12. To become familiar with the common side effects of chemotherapy

Evaluations:

At the mid and end of the rotation, you will meet with Dr Patel to discuss the evaluation of your performance. Please set up a formal time with her in the first week of your rotation. Feedback on your experience in the rotation will be most appreciated. If at any time you have concerns about the rotation, please contact Dr Patel.