

Pediatric Hematology/Oncology Rotation for Pediatric Residents

Welcome to pediatric hematology/oncology. Please find the expectations for residents outlined below along with other important information to orient you to our service.

Any questions can be addressed by Dr. Breakey (breakev@mcmaster.ca)

Expectations of the Pediatric Resident:

1. The resident will review the rotation objectives prior to the start of the rotation.
2. The resident must alert the staff on service about any planned absences or post-call days during the rotation.
3. When you are in the Clinic, you are expected to be at the clinic by 9am. All morning clinics are for oncology patients on active treatment, except Wednesdays, which are reserved for benign hematology. In the afternoons, join the Pediatric Neuro-oncology Clinic (Tuesday afternoons at 1pm), Off Therapy Clinic (Monday and Tuesdays at 1:30pm) and Aftercare clinic (Mondays and Wednesdays at 1pm). On Thursday and Friday afternoons, you can check in with the ward team to see if there are any pending consultations.
4. When you are on the Ward, you are expected to be available for sign over from your colleagues who were on call the night before at 7:50 am. Your primary responsibility will be caring for the inpatients on the Hematology/Oncology service. Please discuss your patient assignment with the nurse practitioner or attending staff at 9am. Ward rounds are held daily at 11:30 am in the 3B Conference room and will be multidisciplinary. Please carry the 5304 pager during the day when you are on the ward. Evening handover occurs at 4:30pm.
5. Generally, in-patient consults are seen by the resident on the ward and out-patient consults are seen by the resident in clinic. Should either aspect of the service be very busy, assistance to your colleague would be expected if your primary duties have been completed.
6. Procedures are booked every Tuesday and Thursday morning when the anesthetist is available and are currently done on 3D. This responsibility should be split between the residents on the service in an equitable manner taking into consideration post call days, vacations, and other days off service. It will be the residents' responsibility to attend the procedures, dictate the notes (through the central dictation system), and inform their respective attending staff on days they will be off the ward or away from the clinic doing procedures.

7. You are expected to attend the following weekly meetings:

Tumor Board	Monday	8:00-9:00	3F Clinic (3F34)
Hem-Onc Rounds	Wednesday	8:00-9:00	1J7(not in July/Aug)
Resident Teaching	Thursdays	3:30pm – 4:30pm	3H20
Radiology rounds	Thursdays	1:30pm-2:30pm	2S32
Clinic Meeting	Friday	8:00-9:00	3F Clinic (3F34)

(Please confirm the room numbers for the above weekly meetings at the start of your rotation as the meeting locations are subject to change)

8. Senior residents (peds R2s and adult hematology residents) will be scheduled to do a presentation on a Wednesday in the Hematology/Oncology Rounds towards the end of the rotation. The presentation can be based on a case you have seen or topics that you would like to learn more about. The audience is multidisciplinary – MD, nursing, pharmacy, social work, childlife, clinical research associates, OT, PT, Nutrition – all members of the hematology/oncology team attend. Please review your topic with the attending staff or Dr. Breakey prior to preparing your talk.
9. The resident should request a mid-rotation and final evaluation with the staff that you have worked with and in turn complete an evaluation of the attending using the online evaluation system.
10. On call issues and responsibilities are covered in the final pages of this document and are available online at: http://www.macpeds.com/hematology_oncology.html

Pediatric Hematologist/Oncologists Pager numbers:

Dr Athale	2118
Dr Barr	2712
Dr. Breakey	2125
Dr Chan	CALL PAGING
Dr Portwine	2119
Dr. Scheinemann	CALL PAGING

Pediatric Hematology-Oncology Clinic Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
Mornings 9am - 12pm	Oncology	Oncology	Hematology (Breakey)	Oncology	Oncology
	Hemoglobinopathy (Athale)		Hemophilia (Chan)		
Afternoons 1:00pm - 4:00pm	Follow-up - Oncology	Follow-up - Oncology	Thrombosis (Chan)	Hatched Area	
	Aftercare (Marjerrison)	Neuro-Oncology (Scheinemann)	Aftercare (Marjerrison)		

*note: Follow-up Oncology clinics generally start at 1:30pm on Mondays and Tuesdays

Preprinted Order Sets

These are the pre-printed order sets available on line for pediatric hematology/oncology patients.

1. Pediatric: Blood Transfusion
2. Pediatric: Febrile Neutropenia (ER and admission orders)
3. Pediatric Oncology: Chemotherapy
4. Pediatric Oncology: Chemotherapy (osteosarcoma)
5. Pediatric Oncology: General (LP & BM procedures)
6. Pediatric: Sickle Cell Disease (vaso occlusive crisis and/or fever)

Please use the appropriate order sets available in citrix under the order sets icon. Make sure to select Pediatrics (there has been a case of someone using adult f/n orders for a pediatric patient).

Pediatric Hem/Onc Rotation Pharmacy Reference Information

Welcome to the Peds Hem/Onc Rotation. As the Clinical Pharmacists on the team; we'll be working closely with you throughout the rotation. Unless you're contemplating Hem/Onc as a career ordering chemo is not likely a big priority for you. What you should focus on is learning to recognize and manage toxicities/side effects of chemo; as this will make your nights/weekends on call a bit easier when you have to look after Hem/Onc patients on the ward. Nevertheless, you'll still be called upon to see patients and order chemo in the outpatient clinic. To make things a bit easier, we've prepared this sheet to help you with some practical aspects of ordering chemo/other drugs during your rotation.

Clinical Pharmacists: John Wiernikowski, Pager 1096
 Joan Lee, Pager 1413
 Paula MacDonald, Pager 4582

At least one of us is ALWAYS here (during the week) so call us if you need help!!

Chemo Ordering: BSA Formula: $BSA = \sqrt{Height \text{ (in cms)} \times Weight \text{ (in Kgs)} \div 3600}$
 Please round BSA's to 2 significant digits. i.e 0.67812 = 0.68 m²

For ease and accuracy of measuring/dosing chemo and other drugs, certain drugs are ordered in specific ways.

Asparaginase: Please round doses up or down to the nearest 1000 Units. This will apply 99% of the time, but for babies we will sometimes round to the nearest 100 Units.

PEG-Asparaginase Please round doses to the nearest multiple of 75 Units (we'll help you with this one!)

Bleomycin: Round doses to the nearest 1 Unit

Dexamethasone: Round doses to the nearest 0.5 mg for children able/preferring to take tablets.
Round doses to the nearest 0.1 mg for children taking in suspension form. (Strength is 1 mg/mL)

Doxorubicin: Round doses to the nearest 1 mg

Filgrastim (G-CSF) Round doses to nearest multiple of 3 mcg (i.e. 86 mcg is not, but 87 mcg is evenly divisible by 3)

- Gentamicin:** We dose @ 6 mg/kg Q24H. For infants dose to the nearest 1 mg, for older kids round doses to the nearest 5 mg. Levels are NOT required. On your Neonatal rotations, levels will probably be checked.
- Methotrexate:** Round doses to the nearest 2.5 mg
- Mercaptopurine:** Available as 50 mg tablets that can be quartered, for bigger kids that can take tablets, doses need to be rounded to the nearest 12.5 (1/4) tablet. For smaller children unable to swallow tablets there is a 50 mg/mL suspension, please round liquid doses to the nearest 5 mg.
- Ondansetron:** 4 or 8 mg tabs, not scored, not breakable. Liquid available as 0.8 mg/mL; round liquid doses to the nearest 0.4 mg (0.5 mL)
- Piperacillin:** Dosed @ 75 mg/kg/dose (Max 3 Gm/dose if < 60 kg, 4 Gm/dose if > 60 kg) Q6H. Round doses to the nearest 100 mg.
- Tazocin:** Dosed at 100 mg/kg/dose (Max 4.5 Gm/dose) **Q8H**. Round doses to the nearest 100 mg.
- Vancomycin:** Dosed at 20 mg/kg/dose **Q12H**; 30 mg/kg/dose for suspected Meningitis. A pre-dose (trough) level may be checked after 4 or 5 doses.
- Vincristine:** Round doses to the nearest 0.1 mg; as with Asparaginase, there may be the odd infant whose dose will be calculated to the nearest 0.01 mg

A couple of other (practical) pointers around ordering drugs in general; please take these to heart and use them on all of your rotations.

- 1) Use leading zeros for doses < 1 mg Write 0.15 mg Morphine IV NOT .15 mg Morphine IV.
- 2) Don't use trailing zeros for integer doses. Write Insulin 2 Units Subcut ; NOT Insulin 2.0 Units. You'd be surprised how many times the decimal in 2.0 is missed/doesn't appear and a child gets 10x the dose of a drug. While we're on it, for drugs that come in Units...write UNITS after the dose not U...again, "U's" are easily mistaken for a 0 (zero).
- 3) With the exception of Septra suspension, all other oral meds should be dosed in mg, mcg, Units etc. Please don't order liquid meds in mLs!

When writing admission notes for children being admitted for chemotherapy, please include their Ht and Wt in your admission note! You won't be required to order chemo for these kids, we do that, but need that piece of information to calculate BSA

Hematology/Oncology On-call Coverage (revised June 2013)

Pager 5304 is the heme/onc pager. You will only carry the heme/onc pager if you have already completed your heme/onc rotation.

For Weekdays (Monday-Friday):

- The day-time ward resident must provide a verbal handover, patient list and physical handover of pager 5304 to the resident covering Heme-Onc nights at 16:30. This usually occurs on Ward 3C. The plan for handover the following morning should be clarified at this time (i.e. who will be taking over the next morning)
- If there is no resident available, then the Heme-Onc fellow, ACNP or Staff on service will carry the pager during the day and be responsible for handover at 16:30 before CTU handover.
- The following morning, the on-call resident will contact the Heme-Onc ward resident, fellow, ACNP or Staff (in that order of availability) for a verbal & physical pager handover; this ~~should~~ will preferably occur before 8am (ideally at 7:50am), as the resident must attend teaching from 8-9am.

Obviously patient care takes priority, and thus, if there is a sick child, appropriate handover and care of the child may occur between 8 and 9am, if necessary.

Please note:

- The Heme-Onc dedicated *clinic* resident **IS NOT** to handover patients on the ward to the night-resident while they are not doing ward service due to issues with handover quality and patient safety
- To identify the appropriate Night resident for handover, refer to the Resident On-Call schedule posted on Sharepoint

For Weekends (Saturday & Sunday) and STAT holidays (including the Christmas/New Year's Holiday period):

Morning Handover:

- On Saturday, Sunday & Holidays during General Pediatrics handover at 8:30 am, the outgoing Night resident covering Heme-Onc will handover to either 1) a peds resident who is assigned to cover the weekend day shift from 8:30-4:30 or the heme/onc fellow on-call at 8:30am and pass on the 5304 pager to them to carry until they handover to the night resident at 4:30pm.
- If there is ever a situation when there is no day resident or fellow on-call, the night resident is responsible for paging the on-call Heme-Onc Staff at 8:30 am to update them on night issues and make arrangements for the staff to pick up the pager. The staff will be responsible for giving handover and passing the pager to the resident who will take over call at 4:30pm.

Daytime Coverage Responsibilities:

- From 8:30 am – 4:30 pm the on-call Heme-Onc resident or fellow is responsible for all in-patient issues (patients admitted under H/O, including those on other wards and in step-down), as well as admissions and consults. New admissions and consults should be reviewed by the staff in-person or by telephone. If the resident/fellow feels that the consultation is not-urgent or if they are busy with in-patient issues, they should page the staff to discuss deferral of the consultation to the next day
- The heme-onc staff on-call will attend the ward for rounds on both Saturday and Sunday and statutory holidays at 10:30 am. It is expected that the resident/fellow will have reviewed the patients' labs and issues prior to rounds and have examined the sicker patients. During rounds, plans will be made for the day and orders can be written. A progress note for each patient should be written each day by the oncall resident/fellow.
- If the resident feels that the workload is too onerous, or that there is an issue pertaining to patient safety, the staff should be called immediately. The resident should also notify the attending if a PACE consult is made (please note: permission to call PACE is NOT needed, but is at the discretion of the resident on-call.)
- If the day-time work is completed, the resident/fellow is encouraged to read the papers provided on the resident website. Learning modules will be developed during the 2013-2014 academic year.
- The resident should NOT take any outside calls from parents or outside physicians. These calls should always be re-directed to the staff on-call.
- At 4:30pm, a formal handover should occur between the daytime resident/fellow and the resident who is covering overnight.

Oncall paging issues.

Should the resident have difficulty reaching the on-call staff, they should follow this algorithm:

1. Page the staff on call through Hospital Locating (x76443)
2. If no response after 15 minutes, then page the staff on call again via locating
3. If no response after 15 minutes, then ask locating to call the staff on call via home or cell number (locating has access to these numbers)

Inability to reach staff should never delay activation of the PACE team in clinical emergencies.

All issues with paging/problems reaching staff should be reported to Dr. Ladhani, Dr. Breakey and the chief residents within 24 hours of the issue.