

Bone Marrow Transplantation

1. Rotation Name

Bone Marrow Transplantation

2. Educational Purpose of the Rotation

The overall goal of this rotation is not to provide the resident with the skills necessary to become a primary operator in the bone marrow transplantation process but rather to allow them to have an increased understanding of the eligibility requirements, indications and side effects for bone marrow transplantation. Included in this rotation are the techniques used in bone marrow transplantation inclusive of harvesting stem cells, the critical steps required in post transplantation care and hematotherapy support. Residents will also gain knowledge in expected microbial problems associated with bone marrow transplantation.

3. Staffing of the Rotation

Faculty members at the Fred Hutchinson Cancer Research Institute, University of Washington; Wayne State University at the Karmanos Institute; the University of Nebraska or Massachusetts General Hospital

4. Resources

This rotation provides experiences at the one of the above four sites. The Fred Hutchinson Cancer Research Center at the University of Washington, the Karmanos Cancer Center at Wayne State University, the University of Nebraska or Massachusetts General Hospital. In either case, sub-specialty residents are provided with inpatient and outpatient experiences.

5. Patients

Ultimate and primary responsibility for patient care rests upon the attending physician. In this rotation sub-specialty residents never have the opportunity to serve as primary care giver but, as their level of skill progresses so does their level of participation. This particular procedure requires additional training beyond this three-year educational program.

6. Responsibilities

Goal: The resident will gain exposure to the practices of bone marrow transplantation. The sub-specialty resident will participate as a member of the primary patient care team and assumes responsibilities for four to eight bone marrow transplant patients.

Duties: The sub-specialty resident is expected to:

- a. Care for patients including a complete work-up with a history and physical examination in both the inpatient and outpatient settings.
- b. Be responsible for daily patient follow up including appropriate medical record documentation.
- c. Be prepared to discuss all aspects of a patients' illness as it relates to significant findings, progress and treatment plans.
- d. Attend inpatient rounds with the attending physician on weekdays and assigned weekends.
- e. Present significant patient related events that occur during nighttime hours to ensure information transfer and continuity of care.
- f. Prepare case presentations for conferences including Grand Rounds, weekly Sub-specialty Resident Teaching Conferences and monthly Morbidity/Mortality Rounds.
- g. Participate in the above named conferences as well as attend other related conferences.
- h. Learn by observing and assisting related procedures.
- i. Participate in outpatient clinics and patient management under the supervision of an attending physician.
- j. Read and be prepared to discuss key literature including articles as recommended.

8. Instructional Methods

Faculty members teaching the resident are responsible for:

- a. Supervision of the resident in accordance with the supervision policy.
- b. Respond promptly to the resident's questions/concerns.
- c. Organize and conduct four hours of formal teaching/week, utilizing appropriate lectures, teaching material and literature.
- d. Provide the resident with ongoing performance feedback and skill progression.
- e. Increase the resident's level of responsibility as individual skill levels progress.

9. Evaluation

At the conclusion of each rotation faculty members will summarize and accurately describe the resident's performance on the provided form, discuss this evaluation with the resident and return the form to the residency director. In addition, the resident will summarize and accurately describe faculty performance and return it to the program office for inclusion in a computer generated report to insure resident anonymity. Residents are further evaluated twice per year by the program director. These evaluation sessions include a formal, written evaluation which is signed by both the director and the resident.

10. Schedule

The schedule for the resident on the bone marrow transplantation service varies according to the site but includes inpatient and outpatient experiences, daily ward and x-ray rounds, weekly Grand Rounds, weekly Sub-specialty Resident Teaching Conferences and monthly Morbidity/Mortality Rounds. Night call, if required, averages six nights per month which includes one weekend each month.

11. Bone Marrow Transplantation - Rotation Competency Objectives

1. Patient Care

- a) By the conclusion of the rotation, the Hematology/Oncology Resident will have gained exposure as a member of the primary care team and have assumed responsibility for four to eight bone marrow transplant patients.
- a) The subspecialty resident will care for patients including a complete work-up with a history and physical examination in both the inpatient and outpatient settings.
- b) Attend in-patient rounds
- c) Resident will be responsible for daily patient follow up including appropriate medical record documentation.
- d) Residents will observe and assist with related procedures.
- e) Demonstrate the ability to complete an efficient work up inclusive of history and physical, diagnostic procedures, problem list, working diagnosis and treatment plan.
- f) Follow assigned patients appropriately
- g) Demonstrate the ability to respond appropriately to abnormal test results.

2. Medical Knowledge

- a) Residents will develop a knowledge base pertinent to the practice of bone marrow transplantation.
- b) Residents will be exposed to the techniques used in bone marrow transplantation such as harvesting of stem cells, knowledge in expected microbial problems associated with bone marrow transplantation, and the critical steps required in post transplantation care and hematotherapy support.
- c) Demonstrate a sound knowledge base pertinent to the practice of bone marrow transplantation.
- d) Demonstrate the ability to effectively work with other members of the health care team including other residents, attending physicians and other health care providers

3. Interpersonal and Communication Skills

- a) Residents are expected to demonstrate professional communication skills throughout their interactions with other members of the health care team including other residents, attending physicians and other health care providers participating in the Bone Marrow Transplantation program to develop a comprehensive treatment plan.
- b) Residents will be expected to communicate effectively with patients and their families.
- c) Communicate effectively with patients and their families.
- d) Work effectively with residents on other services as well as residents participating in the Bone Marrow Transplantation program to develop a comprehensive treatment plan.

4. Professionalism

- a) Throughout the rotation, residents are expected to exhibit reliability in their clinical duties, as well as integrity and respect in their interactions with patients and colleagues.
- b) Residents will be able to demonstrate appropriate consultative principles of communication and responsiveness to professional consultative requests.

5. Practice Based Learning and Improvement

- a) Rotating residents will demonstrate self-initiative in the use of information technology available via the MSU electronic library to access and retrieve materials for self-education regarding bone marrow transplantation.
- b) Rotating residents will be expected to show progressive learning throughout the rotation, with emphasis on learning from any cognitive or procedural errors. They are also expected to facilitate any quality improvement initiatives in place at the marrow transplantation facility.

6. Systems Based Practice

- a) All residents will demonstrate conscientious awareness of the impact of their professional activities at the marrow transplantation office practice site, and will conscientiously avoid inappropriate use of the practice resources.
- b) Residents must demonstrate understanding of cost-effectiveness of care incorporating cost-effectiveness into their development of diagnosis and treatment plans.