Hematology and Oncology Curriculum

Program overview

The University of Texas Southwestern Medical Center provides a three year combined Hematology/Oncology fellowship training program in which is administered by the Department of Internal Medicine and which is accredited by the Accreditation Council for Graduate Medical Education (ACGME) following the guidelines of the American Board of Internal Medicine. Trainees must first successfully complete a three year residency in Internal Medicine at an ACGME accredited program. The fellowship therefore provides training at the PGY 4-6 levels.

Goals and Objectives

The goal of the Hematology/Oncology fellowship program is to provide quality subspecialty training to fellows in the combined disciplines of hematology and oncology so that trainees will be able to function competently as clinical consultants, provide high-quality direct patient care (both in-patient and out-patient), and perform related procedures competently. Training builds upon and extends six general, core competencies developed in residency training: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. The program seeks to prepare subspecialists for future careers in either clinical practice or in academic/research settings. The program seeks to achieve these goals through appropriate clinical experience under the supervision of qualified and dedicated faculty, through didactic exercises, and through exposure to and/or direct experience in clinical/basic science investigation.
Parkland/Zale-Lipshy hematology consult service:

Description of rotation: A team consisting of a Hematology/Oncology attending, fellow and internal medicine resident(s) are responsible for handling the Hematology consults for both hospitals. The fellow will receive the consults, and either the fellow or the resident will perform the initial consultation. The consults will then be presented to the assigned supervising attending. The attending will round with the team daily to see all new consults and prior consults that require continued follow up and will be available by pager to provide supervision and assistance at all times during the rotation.

Goals of the rotation:

Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lymphoid organs and hematopoietic system.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Management and care of indwelling access catheters
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer
- Management of pain, anxiety, and depression
- Concepts of supportive care, including hematologic, infectious disease, and nutrition
- Management of the neutropenic and immunocompromised patient
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders
- Palliative care, including hospice and home care
- Recognition and management of paraneoplastic disorders
- Cancer prevention and screening, including genetic testing
- Participation in multidisciplinary case management conference or discussion
- Personal development, attitudes, and coping skills of physicians who are for critically ill patients
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy
- Transfusion medicine
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time

Patient care

Goals

The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.
The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates.
3) Delivery of chemotherapy through all therapeutic routes and apheresis procedures.
4) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging.

Objectives
First-year fellows:

1) The first year fellow on this rotation will begin to develop the skills to independently assess and manage patients with a wide variety of hematologic disorders. The expectation is that the first year fellow will be able to collect and present the relevant patient data to the supervising attending. The first-year fellow is also expected to be able to present diagnostic and treatment recommendations to the supervising attending at the time of presentation for review and approval by the supervising attending. It is expected that (especially early in the first year) the first year fellow will require more close supervision by the attending. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The first year fellow on this rotation will also begin to acquire the skills required to perform bone marrow biopsies and aspirations. The first 5 bone marrow biopsies and aspirations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent bone marrow biopsies and aspirations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in bone marrow biopsy and aspiration.

3) The first year fellow on this rotation will develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The first year fellow is expected to be able to identify normal blood elements in the peripheral blood and bone marrow (initially with the assistance of the supervising attending). The first-year fellow is also expected to be able to begin to identify abnormalities in the blood elements (again initially with the assistance of the supervising attending). The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

4) The first year fellow is expected to develop the skills to perform serial tumor measurements. The first year fellow is expected to review relevant imaging on all patients and perform tumor measurements as indicated. This will initially be under the guidance of the supervising attending; the expectation is that the fellow will quickly gain independence in this skill. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

5) The first year fellow on this rotation will also begin to acquire the skills required to administer chemotherapy through all therapeutic routes (e.g. via lumbar puncture and Ommaya reservoir). The first 5 chemotherapy administrations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent administrations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In
addition, completion of this objective will be assessed through successful completion of the online procedure log, as required to document proficiency in administration of chemotherapy through all therapeutic routes.

**Second-year fellows:**

1) The second year fellow on this rotation will begin to develop independence in the skills of assessment and management of patients with a wide variety of hematologic disorders. The expectation is that the second year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The second year fellow will further refine the skills required to perform bone marrow biopsies and aspirates, tumor measurements, and administration of chemotherapy through all therapeutic routes. It is expected that most second year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Third year fellows**

1) The third year fellow on this rotation will further develop the skills of assessment and management of patients with a wide variety of hematologic disorders. The expectation is that third year fellow will be able to independently develop and initiate a diagnostic and therapeutic plan for most patients on the service. Supervision and feedback from the supervising attending will be available at all times. It is expected that only on the most difficult and complex cases will input from the supervising attending be required prior to the initiation and development of a diagnostic or therapeutic plan. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The third year fellow on this rotation will further refine the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The third year fellow is expected to be able to identify the majority of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Medical Knowledge**

**Goals**

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a
commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall goals of the rotation)

Objectives

First-year fellows
First-year fellows will develop basic knowledge of the molecular and pathophysiologic mechanisms, diagnosis, and treatment of benign and malignant hematological disorders. In addition, they will develop a basic understanding of the etiology, epidemiology, natural history, diagnosis, pathology, staging and management of a wide variety of neoplastic disorders. They will also be expected to develop a basic knowledge of chemotherapeutic agents and their mechanisms of action, toxicities, and administration. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second year fellows
Second year fellows will demonstrate an understanding of major developments in the recent literature on many hematological and neoplastic disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
Third year fellows will demonstrate comprehensive knowledge of most hematological and neoplastic disorders, including knowledge of the major recent reports in the literature that affect the management of the patients on the service. They will demonstrate the knowledge to independently select treatment regimens for the patients on the service, taking into account efficacy, toxicity, ease of administration, cost, toxicity, and a patient's underlying co-morbidities, performance status, and organ function. In addition, they will demonstrate extensive knowledge of the common chemotherapeutic agents and their toxicities and management. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Fellows are expected to develop the skills and habits to be able to:

- Identify strengths, deficiencies, and limits in one’s knowledge and expertise
- Locate, appraise and assimilate evidence from scientific studies related to their patient’s health problems

Objectives

First-year fellows

1) The first-year fellow will be expected to identify the strengths and limitations of their knowledge and to supplement their knowledge with review of the basic literature (textbooks, review articles) relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. They will also be expected to begin to search and review the recent scientific literature relevant to their patients and to incorporate it into their treatment plans and presentations. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The first-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They will utilize the supervising attending to assist with identification of interesting cases and the relevant teaching points. They will present 1-2 cases during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation as well as through peer and faculty evaluations of their oral presentations at conference.

Second-year fellows

1) The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They are expected to identify interesting cases and the relevant teaching points, but may utilize the supervising attending to assist when necessary. They will present 1-2 cases during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation as well as through peer and faculty evaluations of their oral presentations at conference.

Third-year fellows

1) The third-year fellow will be expected to identify the strengths and limitations of their knowledge and to consistently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The third-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They are expected to independently identify interesting cases and the relevant teaching points for presentation. They will present 1-2 cases during their month on the
rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation as well as through peer and faculty evaluations of their oral presentations at conference.

Systems Based Practice

Goal
Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:
- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

First-year fellows
First-year fellows are expected to work with the supervising attending to coordinate care of the patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The first-year fellow, with the assistance of the supervising attending, is expected to gain the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care.

The first-year fellows on this rotation also consult on patients in the university hospital. In this setting, with the assistance of the supervising physician, they are expected to develop the knowledge and skills required to communicate effectively with the primary physician and other treating services to insure coordinated care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care.

The second-year fellows on this rotation also consult on patients in the university hospital. In this setting, they are expected to begin to demonstrate the knowledge and skills required to communicate effectively with the primary physician and other treating services to insure coordinated care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third-year fellow
Third-year fellows are expected to independently coordinate care of the patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The third-year fellow is expected to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care.

The third-year fellows on this rotation also consult on patients in the university hospital. In this setting, they are expected to demonstrate the knowledge and skills required to communicate effectively with the primary physician and other treating services to insure coordinated care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:

- Compassion, integrity and respect for others
- Sensitivity and responsiveness to a diverse patient population including but not limited to diversity in gender, age, culture, race, religion, disabilities and sexual orientation

Objectives
First-year fellows
The patient population at Parkland Memorial Hospital includes a large immigrant population and a wide variety of cultures, races, and religions. The first year fellows, with the assistance of the supervising attending, are expected to begin to develop the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellows are expected to begin to demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
The third-year fellows are expected to frequently demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Interpersonal and communication skills
Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Work effectively as a member or leader of a health care team
- Act in a consultative role to other physicians and health care professionals

Objectives
First-year fellows
The consult team consists of an attending, the fellow, 1 or 2 residents, and frequently a student. The first year fellow is expected to demonstrate the skills to effectively assign the new and follow up consults to the various members of the team to insure timely and effective consult service for the patients and the consulting physician. The first year fellow is also expected to begin to develop the knowledge and skill to effectively communicate the diagnostic and treatment plan with the consulting service or physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellow is expected to demonstrate the skills to effectively assign the new and follow up consults to the various members of the team to insure timely and effective consult service for the patients and the consulting physician. The second-year fellow is also expected to begin to demonstrate the knowledge and skill to effectively communicate the diagnostic and treatment plan with the consulting service or physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
The third-year fellow is expected to demonstrate the skills to effectively assign the new and follow up consults to the various members of the team to insure timely and effective consult service for the patients and the consulting physician. The third-year fellow is also expected to demonstrate proficiency in the
knowledge and skill to effectively communicate the diagnostic and treatment plan with the consulting service or physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Teaching Methods**
- Clinical teaching
- Case-based teaching
- Role modeling

**Assessment method (fellows)**
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Program Director’s critique (during the every 6 month meeting with each fellow) of oral presentations at the Combined Modality Conference

**Assessment method**
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

**Level of supervision**
Direct supervision by the attending

**Educational Resources**
Suggested texts:
- DeVita: *Cancer Principle and Practice of Oncology*
- Abeloff: *Clinical Oncology*
- Wintrobe’s *Clinical Hematology*
- WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*

Suggested journals:
- *New England Journal of Medicine*
- *Journal of Clinical Oncology*
- *Blood*

Suggested websites:
- www.cancer.org
- www.cancer.gov
- www.asco.org
- www.hematology.org
- www.nccn.org
Parkland inpatient service

Description of rotation: A team consisting of a Hematology/Oncology attending, fellow and internal medicine resident(s) are responsible for the Hematology and Oncology inpatient service. The fellow will be called with all new admissions to the service and either the fellow or the resident will perform the initial history and physical. After 5pm, admissions will go to the hospitalist service and can be transferred to the Hematology/Oncology service the following day. The attending will round with the team daily to see all the patients on the service and will be available by pager to provide supervision and assistance at all times during the rotation.

Goals of the rotation:

Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lung, GI tract, breast, pancreas, liver, testes, lymphoid organs, hematopoietic system, central nervous system, head and neck, thyroid and other endocrine organs, skin, GU tract, and cancer family syndromes.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Management and care of indwelling access catheters
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer
- Management of pain, anxiety, and depression
- Concepts of supportive care, including hematologic, infectious disease, and nutrition
- Management of the neutropenic and immunocompromised patient
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders
- Palliative care, including hospice and home care
- Recognition and management of paraneoplastic disorders
- Cancer prevention and screening, including genetic testing
- Participation in multidisciplinary case management conference or discussion
- Personal development, attitudes, and coping skills of physicians who are for critically ill patients
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy
- Transfusion medicine
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells
- Hematopoietic and lymphopoietic and plasma cell malignancies
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time

Patient care

Goals
The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematologic and oncologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates
3) Delivery of chemotherapy through all therapeutic routes and apheresis procedures
4) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging

Objectives

First year fellows
1) The first year fellow on this rotation will begin to develop the skills to independently assess and manage patients with a wide variety of hematologic and oncologic disorders. The expectation is that the first year fellow will be able to collect and present the relevant patient data to the supervising attending. The first-year fellow is also expected to be able to present diagnostic and treatment recommendations to the supervising attending at the time of presentation for review and approval by the supervising attending. It is expected that (especially early in the first year) the first year fellow will require more close supervision by the attending. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

1) The first year fellow on this rotation will also begin to acquire the skills required to perform bone marrow biopsies and aspirations. The first 5 bone marrow biopsies and aspirations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent bone marrow biopsies and aspirations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in bone marrow biopsy and aspiration.

2) The first year fellow on this rotation will develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The first year fellow is expected to be able to identify normal blood elements in the peripheral blood and bone marrow (initially with the assistance of the supervising attending). The first-year fellow is also expected to begin to identify abnormalities in the blood elements (again initially with the assistance of the supervising attending). The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The first year fellow is expected to develop the skills require to perform tumor measurements. The first year fellow is expected to review relevant imaging on all patients and perform tumor measurements as indicated. This will initially be under the guidance of the supervising attending; the expectation is that the fellow will quickly gain independence in this skill. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

4) The first year fellow on this rotation will also begin to acquire the skills required to administer chemotherapy through all therapeutic routes (e.g. via lumbar puncture and Ommaya reservoir). The first 5 chemotherapy administrations that the fellow performs will be directly observed by the
supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent administrations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the online procedure log, as required to document proficiency in administration of chemotherapy through all therapeutic routes.

Second-year fellows:

1) The second year fellow on this rotation will begin to develop independence in the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that the second year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspires and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The second year fellow will further refine the skills required to perform bone marrow biopsies and aspirates, tumor measurements, and administration of chemotherapy through all therapeutic routes. It is expected that most second year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows

1) The third year fellow on this rotation will further develop the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that third year fellow will be able to independently develop and initiate a diagnostic and therapeutic plan for most patients on the service. Supervision and feedback from the supervising attending will be available at all times. It is expected that only on the most difficult and complex cases will input from the supervising attending be required prior to the initiation and development of a diagnostic or therapeutic plan. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The third year fellow on this rotation will further refine the skills required for interpretation of bone marrow biopsies and aspires and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The third year fellow is expected to be able to identify the majority of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The third year fellow on this rotation will demonstrate proficiency in the skills of bone marrow biopsy and aspiration, tumor measurements, and administration of chemotherapy through all therapeutic routes. Third year fellows will also develop the skills to supervise and teach the residents and more junior fellows in these procedures. The successful completion of this
objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Medical Knowledge**

**Goals**

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall goals of the rotation)

**Objectives**

**First-year fellows**
First-year fellows will develop basic knowledge of the molecular and pathophysiologic mechanisms, diagnosis, and treatment of benign and malignant hematological disorders. In addition, they will develop a basic understanding of the etiology, epidemiology, natural history, diagnosis, pathology, staging and management of a wide variety of neoplastic disorders. They will also be expected to develop a basic knowledge of chemotherapeutic agents and their mechanisms of action, toxicities, and administration. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Second year fellows**
Second year fellows will demonstrate an understanding of major developments in the recent literature on many hematological and neoplastic disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Third year fellows**
Third year fellows will demonstrate comprehensive knowledge of most hematological and neoplastic disorders, including knowledge of the major recent reports in the literature that affect the management of the patients on the service. They will demonstrate the knowledge to independently select treatment regimens for the patients on the service, taking into account efficacy, toxicity, ease of administration, cost, toxicity, and a patient’s underlying co-morbidities, performance status, and organ function. In addition, they will demonstrate extensive knowledge of the common chemotherapeutic agents and their toxicities and management. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Practice based Learning and Improvement**

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop the skills and habits to be able to:

- Identify strengths, deficiencies, and limits in one’s knowledge and expertise
- Locate, appraise and assimilate evidence from scientific studies related to their patients health problems
Objectives

First-year fellows
1) The first year fellow will be expected to identify the strengths and limitations of their knowledge and to supplement their knowledge with review of the basic literature (textbooks, review articles) relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. They will also be expected to begin to search and review the recent scientific literature relevant to their patients and to incorporate it into their treatment plans and presentations. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The first year fellow will identify interesting cases for presentation at the weekly combined modality conference. They will utilize the supervising attending to assist with identification of interesting cases and the relevant teaching points. They will present 1-2 cases during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation as well as through peer and faculty evaluations of their oral presentations at conference.

Second-year fellows
1) The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They are expected to identify interesting cases and the relevant teaching points, but may utilize the supervising attending to assist when necessary. They will present 1-2 cases during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation as well as through peer and faculty evaluations of their oral presentations at conference.

Third-year fellows
1) The third-year fellow will be expected to identify the strengths and limitations of their knowledge and to consistently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The third-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They are expected to independently identify interesting cases and the relevant teaching points for presentation. They will present 1-2 cases during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation as well as through peer and faculty evaluations of their oral presentations at conference.

Systems Based Practice

Goal
Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:

- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

First-year fellows
First-year fellows are expected to work with the supervising attending to coordinate care of the patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The first-year fellow, with the assistance of the supervising attending, is expected to gain the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third-year fellow
Third-year fellows are expected to independently coordinate care of the patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The third-year fellow is expected to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:

- Compassion, integrity and respect for others
- Sensitivity and responsiveness to a diverse patient population including but not limited to diversity in gender, age, culture, race, religion, disabilities and sexual orientation

Objectives
First-year fellows
The patient population at Parkland Memorial Hospital includes a large immigrant population and a wide variety of cultures, races, and religions. The first year fellows, with the assistance of the supervising attending, are expected to begin to develop the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be
assessed by direct observation of the supervising attending and chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Second-year fellows**
The second-year fellows are expected to begin to demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending and chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Third year fellows**
The third-year fellows are expected to frequently demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Interpersonal and communication skills**

**Goal**
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Work effectively as a member or leader of a health care team
- Communicate effectively with patients and families across a broad range of socioeconomic and cultural backgrounds.
Objectives

First-year fellows
The inpatient team consists of an attending, the fellow, and 2 residents. The first year fellow is expected to demonstrate the skills to effectively assign the new and follow up patients to the various members of the team to insure effective and efficient patient care. The first year fellow is also expected to begin to develop the knowledge and skill to effectively communicate the diagnostic and treatment plan with the patients and their families, who come from a broad range of socioeconomic and cultural backgrounds. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellow is expected to demonstrate the skills to effectively assign the new and follow up patients to the various members of the team to insure effective and efficient patient care. The second-year fellow is also expected to begin to demonstrate the knowledge and skill to effectively communicate the diagnostic and treatment plan with the patients and their families, who come from a broad range of socioeconomic and cultural backgrounds. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
The third-year fellow is expected to demonstrate the skills to effectively assign the new and follow up patients to the various members of the team to insure effective and efficient patient care. The third-year fellow is also expected to demonstrate proficiency in the knowledge and skill to effectively communicate the diagnostic and treatment plan to the patients and their families, who come from a broad range of socioeconomic and cultural backgrounds. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurses as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Teaching Methods
- Clinical teaching
- Case-based teaching
- Role modeling

Assessment method (fellows)
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Program Director’s critique (during the every 6 month meeting with each fellow) of oral presentations at the Combined Modality Conference

Assessment method (program evaluation)
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending
Educational Resources

Suggested texts:
DeVita: Cancer Principle and Practice of Oncology
Abeloff: Clinical Oncology
Wintrobe’s Clinical Hematology
WHO: Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues

Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
Dallas Veterans Affairs Medical Center Consult Rotation

Description of rotation: A team consisting of a Hematology/Oncology attending and fellow are responsible for handling the Hematology and Oncology consults for the Veterans Hospital. The fellow will receive the consults, and will perform the initial consultation. The consults will then be presented to the assigned supervising attending. The attending will round with the team daily to see all new consults and prior consults that require continued follow up and will be available by pager to provide supervision and assistance at all times during the rotation. The fellow will also see outpatients in the Hematology/Oncology clinics two days per week and will sign out all patients to a supervising attending.

Goals of the rotation:

Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lung, GI tract, breast, pancreas, liver, testes, lymphoid organs, hematopoietic system, central nervous system, head and neck, thyroid and other endocrine organs, skin, GU tract, and cancer family syndromes.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Management and care of indwelling access catheters
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer
- Management of pain, anxiety, and depression
- Concepts of supportive care, including hematologic, infectious disease, and nutrition
- Management of the neutropenic and immunocompromised patient
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders
- Palliative care, including hospice and home care
- Recognition and management of paraneoplastic disorders
- Cancer prevention and screening, including genetic testing
- Participation in multidisciplinary case management conference or discussion
- Personal development, attitudes, and coping skills of physicians who are for critically ill patients
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy
- Transfusion medicine
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells
- Hematopoietic and lymphopoietic and plasma cell malignancies
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time

Patient care

Goals
The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematoologic and oncologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates
3) Delivery of chemotherapy through all therapeutic routes and apheresis procedures
4) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging

Objectives

First-year fellows:
1) The first year fellow on this rotation will begin to develop the skills to independently assess and manage patients with a wide variety of hematoologic and oncologic disorders. The expectation is that the first year fellow will be able to collect and present the relevant patient data to the supervising attending. The first-year fellow is also expected to be able to present diagnostic and treatment recommendations to the supervising attending at the time of presentation for review and approval by the supervising attending. It is expected that (especially early in the first year) the first year fellow will require more close supervision by the attending. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
2) The first year fellow on this rotation will also begin to acquire the skills required to perform bone marrow biopsies and aspirations. The first 5 bone marrow biopsies and aspirations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent bone marrow biopsies and aspirations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in bone marrow biopsy and aspiration.
3) The first year fellow on this rotation will develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The first year fellow is expected to be able to identify normal blood elements in the peripheral blood and bone marrow (initially with the assistance of the supervising attending). The first-year fellow is also expected to be able to begin to identify abnormalities in the blood elements (again initially with the assistance of the supervising attending). The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
4) The first year fellow is expected to develop the skills require to perform serial tumor measurements. The first year fellow is expected to review relevant imaging on all patients and perform tumor measurements as indicated. This will initially be under the guidance of the supervising attending; the expectation is that the fellow will quickly gain independence in this skill. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
5) The first year fellow on this rotation will also begin to acquire the skills required to administer chemotherapy through all therapeutic routes (e.g. via lumbar puncture and Ommaya reservoir).
The first 5 chemotherapy administrations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent administrations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the online procedure log, as required to document proficiency in administration of chemotherapy through all therapeutic routes.

Second-year fellows:
1) The second-year fellow on this rotation will begin to develop independence in the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that the second-year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second-year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second-year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The second-year fellow will further refine the skills required to perform bone marrow biopsies and aspirates, tumor measurements, and administration of chemotherapy through all therapeutic routes. It is expected that most second-year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
Third year fellows are not assigned this rotation.
Medical Knowledge

Goals

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall goals for the rotation above)

Objectives

First-year fellows
First-year fellows will develop basic knowledge of the molecular and pathophysiologic mechanisms, diagnosis, and treatment of benign and malignant hematological disorders. In addition, they will develop a basic understanding of the etiology, epidemiology, natural history, diagnosis, pathology, staging and management of a wide variety of neoplastic disorders. They will also be expected to develop a basic knowledge of chemotherapeutic agents and their mechanisms of action, toxicities, and administration. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second year fellows
Second year fellows will demonstrate an understanding of major developments in the recent literature on many hematological and neoplastic disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
Third year fellows are not assigned this rotation.

Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. Fellows are expected to develop the skills and habits to be able to:

- Identify strengths, deficiencies, and limits in one’s knowledge and expertise
- Locate, appraise and assimilate evidence from scientific studies related to their patients health problems

Objectives

First-year fellows

1) The first year fellow will be expected to identify the strengths and limitations of their knowledge and to supplement their knowledge with review the basic literature (textbooks, review articles) relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. They will also be expected to begin to search and review the recent scientific literature relevant to their patients and to incorporate it into their treatment plans and
presentations. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The first year fellow will identify interesting cases for presentation at the weekly combined modality conference. They will utilize the supervising attending to assist with identification of interesting cases and the relevant teaching points. They will present 1 case during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) **Second-year fellows**

1) The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They are expected to identify interesting cases and the relevant teaching points, but may utilize the supervising attending to assist when necessary. They will present 1 case during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) **Third-year fellows**

Third year fellows are not assigned this rotation.

**Systems Based Practice**

**Goal**

Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:

- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

**First-year fellows**

First-year fellows are expected to work with the supervising attending to coordinate care of the patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The first-year fellow, with the assistance of the supervising attending, is expected to gain the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care.

In this setting, with the assistance of the supervising physician, they are expected to develop the knowledge and skills required to communicate effectively with the primary physician and other treating services to insure coordinated care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Second-year fellows**
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. In this setting, they are expected to begin to demonstrate the knowledge and skills required to communicate effectively with the primary physician and other treating services to insure coordinated care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third-year fellow
Third year fellows are not assigned this rotation.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:
- Responsiveness to the patient that supersedes self-interest
- Respect for patient privacy and autonomy

Objectives
First-year fellows
The first year fellows, with the assistance of the supervising attending, are expected to begin to develop the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to also develop the skill to involve the patient in difficult treatment and end of life decisions. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellows are expected to begin to demonstrate the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to demonstrate the skill to involve the patient in difficult treatment and end of life decisions. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
Third year fellows are not assigned this rotation.

Interpersonal and communication skills

Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:
- Communicate effectively with physicians, other health care professionals, and health related agencies
- Maintain comprehensive, timely and legible medical records.

Objectives
First-year fellows
The consult team consists of an attending, the fellow, one Pharm.D., pharmacy residents and students. The first year fellow is expected to demonstrate the skills to effectively assign the new and follow up consults to the various members of the team to insure timely and effective consult service for the patients and the consulting physician. The first year fellow is also expected to begin to develop the knowledge and skill to effectively communicate the diagnostic and treatment plan with the consulting service or physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, the medical record at the VA is entirely electronic. The fellow is expected to identify the attending physician as a co-signer on all notes and chemotherapy orders. This allows the attending to review all the notes and chemotherapy orders for timeliness and accuracy. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellow is expected to demonstrate the skills to effectively assign the new and follow up consults to the various members of the team to insure timely and effective consult service for the patients and the consulting physician. The second-year fellow is also expected to begin to demonstrate the knowledge and skill to effectively communicate the diagnostic and treatment plan with the consulting service or physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
Third year fellows are not assigned this rotation.

Teaching Methods
- Clinical teaching
- Case-based teaching
- Role modeling

Assessment method (fellows)
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Program Director’s critique (during the every 6 month meeting with each fellow) of oral presentations at the Combined Modality Conference

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending
Educational Resources

Suggested texts:
DeVita: Cancer Principle and Practice of Oncology
Abeloff: Clinical Oncology
Wintrobe’s Clinical Hematology
WHO: Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues

Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
**Clements University Hospital Hematology Inpatient Rotation**

**Description of rotation:** A team consisting of a Hematology/Oncology attending and fellow are responsible for the Hematology inpatient/consult service. The fellow will be called with all new admissions and consults to the service and the fellow will perform the admission history and physical/initial consult. After 5pm, admissions will go to the hospitalist service and can be transferred to the Hematology service the following day. The fellow is responsible for the daily notes on all of the patients. The supervising attending will round with the team daily to see all the patients on the service and will be available by pager to provide supervision and assistance at all times during the rotation.

**Goals of the rotation:**

Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of benign and malignant hematologic disorders
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Management and care of indwelling access catheters
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer
- Management of pain, anxiety, and depression
- Concepts of supportive care, including hematologic, infectious disease, and nutrition
- Management of the neutropenic and immunocompromised patient
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders
- Palliative care, including hospice and home care
- Recognition and management of paraneoplastic disorders
- Cancer prevention and screening, including genetic testing
- Participation in multidisciplinary case management conference or discussion
- Personal development, attitudes, and coping skills of physicians who are for critically ill patients
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy
- Transfusion medicine
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells
- Hematopoietic and lymphopoietic and plasma cell malignancies
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time

**Patient care**

**Goals**
The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematologic and oncologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates
3) Delivery of chemotherapy through all therapeutic routes and apheresis procedures
4) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging

Objectives

First year fellows
1) The first year fellow on this rotation will begin to develop the skills to independently assess and manage patients with a wide variety of hematologic disorders. The expectation is that the first year fellow will be able to collect and present the relevant patient data to the supervising attending. The first-year fellow is also expected to be able to present diagnostic and treatment recommendations to the supervising attending at the time of presentation for review and approval by the supervising attending. It is expected that (especially early in the first year) the first year fellow will require more close supervision by the attending. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
2) The first year fellow on this rotation will also begin to acquire the skills required to perform bone marrow biopsies and aspirations. The first 5 bone marrow biopsies and aspirations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent bone marrow biopsies and aspirations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in bone marrow biopsy and aspiration.
3) The first year fellow on this rotation will develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The first year fellow is expected to be able to identify normal blood elements in the peripheral blood and bone marrow (initially with the assistance of the supervising attending). The first-year fellow is also expected to be able to begin to identify abnormalities in the blood elements (again initially with the assistance of the supervising attending). The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
4) The first year fellow is expected to develop the skills required to perform tumor measurements. The first year fellow is expected to review relevant imaging on all patients and perform tumor measurements as indicated. This will initially be under the guidance of the supervising attending, the expectation is that the fellow will quickly gain independence in this skill. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
5) The first year fellow on this rotation will also begin to acquire the skills required to administer chemotherapy through all therapeutic routes (e.g. via lumbar puncture and Ommaya reservoir). The first 5 chemotherapy administrations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent
administrations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the online procedure log, as required to document proficiency in administration of chemotherapy through all therapeutic routes.

**Second-year fellows:**
1) The second year fellow on this rotation will begin to develop independence in the skills of assessment and management of patients with a wide variety of hematologic disorders. The expectation is that the second year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The second year fellow will further refine the skills required to perform bone marrow biopsies and aspirates, tumor measurements, and administration of chemotherapy through all therapeutic routes. It is expected that most second year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Third year fellows**
1) The third year fellow on this rotation will further develop the skills of assessment and management of patients with a wide variety of hematologic disorders. The expectation is that third year fellow will be able to independently develop and initiate a diagnostic and therapeutic plan for most patients on the service. Supervision and feedback from the supervising attending will be available at all times. It is expected that only on the most difficult and complex cases will input from the supervising attending be required prior to the initiation and development of a diagnostic or therapeutic plan. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The third year fellow on this rotation will further refine the skills required for interpretation of bone marrow biopsies and aspirates as well as peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The third year fellow is expected to be able to identify the majority of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The third year fellow on this rotation will demonstrate proficiency in the skills of bone marrow biopsy and aspiration, tumor measurements, and administration of chemotherapy through all therapeutic routes. Third year fellows will also develop the skills to supervise and teach the residents and more junior fellows in these procedures. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
Medical Knowledge

Goals

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall goals for the rotation above)

Objectives

First-year fellows
First-year fellows will develop basic knowledge of the molecular and pathophysiologic mechanisms, diagnosis, and treatment of benign and malignant hematological disorders. In addition, they will develop a basic understanding of the etiology, epidemiology, natural history, diagnosis, pathology, staging and management of a wide variety of neoplastic disorders. They will also be expected to develop a basic knowledge of chemotherapeutic agents and their mechanisms of action, toxicities, and administration. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second year fellows
Second year fellows will demonstrate an understanding of major developments in the recent literature on many hematological and neoplastic disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
Third year fellows will demonstrate comprehensive knowledge of most hematological and neoplastic disorders, including knowledge of the major recent reports in the literature that affect the management of the patients on the service. They will demonstrate the knowledge to independently select treatment regimens for the patients on the service, taking into account efficacy, toxicity, ease of administration, cost, toxicity, and a patient’s underlying co-morbidities, performance status, and organ function. In addition, they will demonstrate extensive knowledge of the common chemotherapeutic agents and their toxicities and management. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop the skills and habits to be able to:

- Set learning and improvement goals
- Use information technology to optimize learning

Objectives

First-year fellows
1) The first year fellow will be expected to identify the strengths and limitations of their knowledge and to supplement their knowledge with review the basic literature (textbooks, review articles) relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. They will also be expected to begin to search and review the recent scientific literature relevant to their patients and to incorporate it into their treatment plans and presentations. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The first year fellow will identify interesting cases for presentation at the weekly combined modality conference. They will utilize the supervising attending to assist with identification of interesting cases and the relevant teaching points. They will present 1 case during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
1) The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They are expected to identify interesting cases and the relevant teaching points, but may utilize the supervising attending to assist when necessary. They will present 1 case during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third-year fellows
1) The third-year fellow will be expected to identify the strengths and limitations of their knowledge and to consistently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The third-year fellow will identify interesting cases for presentation at the weekly combined modality conference. They are expected to independently identify interesting cases and the relevant teaching points for presentation. They will present 1-2 cases during their month on the rotation. They will review the scientific literature for the case and will present the case and their review of the literature to the conference. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Systems Based Practice

Goal

Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:
• Work effectively in various health care delivery settings and systems relevant to their clinical specialty
• Advocate for quality patient care and optimal patient care systems

First-year fellows
First-year fellows are expected to work with the supervising attending to coordinate care of the patients on the service. Frequently, hematology/oncology patients require multi-modality care from multiple services. The first-year fellow, with the assistance of the supervising attending, is expected to gain the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. Frequently, hematology/oncology patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third-year fellow
Third-year fellows are expected to independently coordinate care of the patients on the service. Frequently, hematology/oncology patients require multi-modality care from multiple services. The third-year fellow is expected to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:
• Compassion, integrity and respect for others
• Accountability to patients, society, and the profession

Objectives

First-year fellows
The first year fellows, with the assistance of the supervising attending, are expected to begin to develop the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to also develop the skill to involve the patient in difficult treatment and end of life decisions. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellows are expected to frequently demonstrate the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to also frequently demonstrate the skill to involve the patient in difficult treatment and end of life decisions. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and
management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Third year fellows**
The third year fellows are expected to consistently demonstrate the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to also consistently demonstrate the skill to involve the patient in difficult treatment and end of life decisions. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Interpersonal and communication skills**

**Goal**

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Work effectively as a member or leader of a health care team
- Act in a consultative role to other physicians and health professionals
Objectives

First-year fellows
The inpatient fellows consist of an attending, fellow, and case manager. The first year fellow is expected to demonstrate the skills to effectively perform the new admissions/consults and follow up patients to the various members of the team to insure effective and efficient patient care. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The first year fellow is also expected to begin to develop the knowledge and skill to effectively communicate the diagnostic and treatment plan with the consulting and primary care physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellow is expected to demonstrate the skills to effectively perform the new and follow up patients to the various members of the team to insure effective and efficient patient care. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The second-year fellow is also expected to begin to demonstrate the knowledge and skill to effectively communicate the diagnostic and treatment plan with the consulting and primary care physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
The third-year fellow is expected to demonstrate the skills to effectively perform the new and follow up patients to the various members of the team to insure effective and efficient patient care. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The third-year fellow is also expected to demonstrate proficiency in the knowledge and skill to effectively communicate the diagnostic and treatment plan to the consulting and primary care physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Teaching Methods
- Clinical teaching
- Case-based teaching
- Role modeling

Assessment method (fellows)
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Program Director’s critique (during the every 6 month meeting with each fellow) of oral presentations at the Combined Modality Conference

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending

Educational Resources
Suggested texts:
DeVita: *Cancer Principle and Practice of Oncology*
Abeloff: *Clinical Oncology*
Wintrobe’s *Clinical Hematology*
WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*

Suggested journals:
- New England Journal of Medicine
- Journal of Clinical Oncology
- Blood

Suggested websites:
- [www.cancer.org](http://www.cancer.org)
- [www.cancer.gov](http://www.cancer.gov)
- [www.asco.org](http://www.asco.org)
- [www.hematology.org](http://www.hematology.org)
- [www.nccn.org](http://www.nccn.org)
Bone marrow transplant rotation (Clements University Hospital)

Description of rotation: A team consisting of a Hematology/Oncology attending, fellow and physician extender(s) are responsible for the Bone Marrow Transplant service. The fellow will be called with all new admissions to the service and will perform the admission history and physical. The fellow will work with the physician extender(s) to complete the daily work, notes and procedures for the patients. The supervising attending will round with the team daily to see all the patients on the service and will be available by pager to provide supervision and assistance at all times during the rotation.

Goals of the rotation:

Goals of the rotation include gaining experience/expertise and knowledge in the following:
- Principles of, indications for and complications of autologous and allogeneic bone marrow or peripheral blood stem cell transplantation and peripheral stem cell harvests, including the management of post transplant complications
- Clinical experience in bone marrow or peripheral stem cell harvest for transplantation
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Management and care of indwelling access catheters
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer
- Management of pain, anxiety, and depression
- Concepts of supportive care, including hematologic, infectious disease, and nutrition
- Management of the neutropenic and immunocompromised patient
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders
- Palliative care, including hospice and home care
- Participation in multidisciplinary case management conference or discussion
- Personal development, attitudes, and coping skills of physicians who care for critically ill patients
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues
- Transfusion medicine
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells
- Hematopoietic and lymphopoietic and plasma cell malignancies

Patient care

Goals

The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematologic and oncologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates
3) Delivery of chemotherapy through all therapeutic routes and apheresis procedures
4) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging

Objectives

First year fellows

1) The first year fellow on this rotation will begin to develop the skills to independently assess and manage bone marrow transplant and malignant hematology patients. The expectation is that the first year fellow will be able to collect and present the relevant patient data to the supervising attending. The first-year fellow is also expected to be able to present diagnostic and treatment recommendations to the supervising attending at the time of presentation for review and approval by the supervising attending. It is expected that (especially early in the first year) the first year fellow will require more close supervision by the attending. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The first year fellow on this rotation will also begin to acquire the skills required to perform bone marrow biopsies and aspirations. The first 5 bone marrow biopsies and aspirations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent bone marrow biopsies and aspirations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in bone marrow biopsy and aspiration.

3) The first year fellow on this rotation will develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The first year fellow is expected to be able to identify normal blood elements in the peripheral blood and bone marrow (initially with the assistance of the supervising attending). The first-year fellow is also expected to be able to begin to identify abnormalities in the blood elements (again initially with the assistance of the supervising attending). The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

4) The first year fellow on this rotation will also begin to acquire the skills required to administer chemotherapy through all therapeutic routes (e.g. via lumbar puncture and Ommaya reservoir). The first 5 chemotherapy administrations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent administrations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in administration of chemotherapy through all therapeutic routes.
Second-year fellows:

1) The second year fellow on this rotation will begin to develop independence in the skills of assessment and management of bone marrow transplant and malignant hematology patients. The expectation is that the second year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The second year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The second year fellow will further refine the skills required to perform bone marrow biopsies and aspirates and administration of chemotherapy through all therapeutic routes. It is expected that most second year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows

1) The third year fellow on this rotation will further develop the skills of assessment and management of bone marrow transplant and malignant hematology patients. The expectation is that third year fellow will be able to independently develop and initiate a diagnostic and therapeutic plan for most patients on the service. Supervision and feedback from the supervising attending will be available at all times. It is expected that only on the most difficult and complex cases will input from the supervising attending be required prior to the initiation and development of a diagnostic or therapeutic plan. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

2) The third year fellow on this rotation will further refine the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The third year fellow is expected to be able to identify the majority of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

3) The third year fellow on this rotation will demonstrate proficiency in the skills of bone marrow biopsy and aspiration and administration of chemotherapy through all therapeutic routes. Third year fellows will also develop the skills to supervise and teach the residents and more junior fellows in these procedures. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.
Medical Knowledge

Goals

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall goals for the rotation above)

Objectives

First-year fellows
First-year fellows will develop basic knowledge of the molecular and pathophysiologic mechanisms, diagnosis, and treatment of malignant hematological disorders and the bone marrow transplant procedure. In addition, they will develop a basic understanding of the etiology, epidemiology, natural history, diagnosis, pathology, staging and management of a wide variety of neoplastic disorders. They will also be expected to develop a basic knowledge of bone marrow transplant preparative regimens and their mechanisms of action, toxicities, and administration. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Second year fellows
Second year fellows will demonstrate an understanding of major developments in the recent literature on bone marrow transplant and hematological disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Third year fellows
Third year fellows will demonstrate comprehensive knowledge of most malignant hematologic disorders and bone marrow transplantation, including knowledge of the major recent reports in the literature that affect the management of the patients on the service. They will demonstrate the knowledge to independently select treatment regimens for the patients on the service, taking into account efficacy, toxicity, ease of administration, cost, toxicity, and a patient’s underlying co-morbidities, performance status, and organ function. In addition, they will demonstrate extensive knowledge of the common preparative regimens and their toxicities and management. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop the skills and habits to be able to:

- Set learning and improvement goals
- Use information technology to optimize learning

Objectives
**First-year fellows**

The first-year fellow will be expected to identify the strengths and limitations of their knowledge and to supplement their knowledge with review of the basic literature (textbooks, review articles) relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. They will also be expected to begin to search and review the recent scientific literature relevant to their patients and to incorporate it into their treatment plans and presentations. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Second-year fellows**

The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Third-year fellows**

The third-year fellow will be expected to identify the strengths and limitations of their knowledge and to consistently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Systems Based Practice**

**Goal**

Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:

- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

**First-year fellows**

First-year fellows are expected to work with the supervising attending to coordinate care of the patients on the service. Frequently, bone marrow transplant patients require multi-modality care from multiple services. The first-year fellow, with the assistance of the supervising attending, is expected to gain the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation of the fellow and the nurse’s evaluation at the end of the rotation.
Second-year fellows
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. Frequently, bone marrow transplant patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation and the nurse’s evaluation of the fellow at the end of the rotation.

Third-year fellow
Third-year fellows are expected to independently coordinate care of the patients on the service. Frequently, bone marrow transplant patients require multi-modality care from multiple services. The third-year fellow is expected to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place upon discharge. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation and the nurse’s evaluation of the fellow at the end of the rotation.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:

- Compassion, integrity and respect for others
- Accountability to patients, society, and the profession

Objectives
First-year fellows
The first year fellows, with the assistance of the supervising attending, are expected to begin to develop the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to also develop the skill to involve the patient in difficult treatment and end of life decisions. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation of the fellow and the nurse’s evaluation at the end of the rotation.

Second-year fellows
The second-year fellows are expected to frequently demonstrate the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to also frequently demonstrate the skill to involve the patient in difficult treatment and end of life decisions. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation and the nurse’s evaluation of the fellow at the end of the rotation.

Third-year fellows
The third year fellows are expected to consistently demonstrate the skills and attitudes to effectively and compassionately communicate with patients that are frequently facing serious diagnoses with a poor prognosis. They are expected to also consistently demonstrate the skill to involve the patient in difficult treatment and end of life decisions. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation and the nurse’s evaluation of the fellow at the end of the rotation.
Interpersonal and communication skills

Goal

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Work effectively as a member or leader of a health care team
- Act in a consultative role to other physicians and health professionals

Objectives

First-year fellows
The bone marrow transplant team consists of an attending, the fellow, physician extenders, nurses, pharmacists, and social workers. These patients frequently require detailed and complex treatment plans and follow-up. The first year fellow is expected to begin to develop the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation and the nurse’s evaluation of the fellow at the end of the rotation.

Second-year fellows
The second-year fellow is expected to frequently demonstrate the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation and the nurse’s evaluation of the fellow at the end of the rotation.

Third year fellows
The first year fellow is expected to begin to develop the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. This includes developing skills in appropriate and effective communication with families, patients, and doctors over the phone and learning appropriate triage and management in this setting. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s evaluation and the nurse’s evaluation of the fellow at the end of the rotation.

Teaching Methods

- Clinical teaching
- Case-based teaching
- Role modeling

Assessment method (fellows)

Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Program Director’s critique (during the every 6 month meeting with each fellow).

Assessment method

Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.
Level of supervision
Direct supervision by the attending

Educational Resources

Suggested texts:
DeVita: Cancer Principle and Practice of Oncology
Abeloff: Clinical Oncology
Wintrobe’s Clinical Hematology
WHO: Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues

Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
Clinic rotation

Description of rotation: Fellows are assigned to various Hematology and Oncology clinics at Parkland Memorial Hospital, the Harold C. Simmons Cancer Center clinics, and the Dallas VAMC. In these clinics, the fellows see the patients assigned to them and all patients are signed out to the supervising attending(s) for that clinic. The fellow will also perform outpatient procedures (bone marrow biopsies and aspirations, intrathecal chemotherapy administration) approximately ½ day every other week during the month long rotation.

Goals of the rotation:

Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lung, GI tract, breast, pancreas, liver, testes, lymphoid organs, hematopoietic system, central nervous system, head and neck, thyroid and other endocrine organs, skin, GU tract, and cancer family syndromes.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders.
- Chemotherapeutic drugs, biologic products, and growth factors.
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders.
- Management and care of indwelling access catheters.
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer.
- Management of pain, anxiety, and depression.
- Concepts of supportive care, including hematologic, infectious disease, and nutrition.
- Management of the neutropenic and immunocompromised patient.
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders.
- Palliative care, including hospice and home care.
- Recognition and management of paraneoplastic disorders.
- Cancer prevention and screening, including genetic testing.
- Participation in multidisciplinary case management conference or discussion.
- Personal development, attitudes, and coping skills of physicians who are for critically ill patients.
- HIV related malignancies.
- Care and management of the geriatric patient with malignancy and hematologic disorders.
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy.
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques.
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues.
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy.
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy.
- Transfusion medicine.
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells.
- Hematopoietic and lymphopoietic and plasma cell malignancies.
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy.
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time.

Patient care

Goals
The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematologic and oncologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates
3) Delivery of chemotherapy through all therapeutic routes and apheresis procedures
4) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging

Objectives

First-year fellows:

1) The first year fellow on this rotation will begin to develop the skills to independently assess and manage patients with a wide variety of hematologic and oncologic disorders. The expectation is that the first year fellow will be able to collect and present the relevant patient data to the supervising attending. The first-year fellow is also expected to be able to present diagnostic and treatment recommendations to the supervising attending at the time of presentation for review and approval by the supervising attending. It is expected that (especially early in the first year) the first year fellow will require more close supervision by the attending. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow.

2) The first year fellow on this rotation will also begin to acquire the skills required to perform bone marrow biopsies and aspirations. The first 5 bone marrow biopsies and aspirations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent bone marrow biopsies and aspirations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in bone marrow biopsy and aspiration.

3) The first year fellow on this rotation will develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The first year fellow is expected to be able to identify normal blood elements in the peripheral blood and bone marrow (initially with the assistance of the supervising attending). The first-year fellow is also expected to be able to begin to identify abnormalities in the blood elements (again initially with the assistance of the supervising attending). The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow.

4) The first year fellow is expected to develop the skills required to perform tumor measurements. The first year fellow is expected to review relevant imaging on all patients and perform tumor measurements as indicated. This will initially be under the guidance of the supervising attending, the expectation is that the fellow will quickly gain independence in this skill. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s clinic evaluation of the fellow at the end of the rotation.

5) The first year fellow on this rotation will also begin to acquire the skills required to administer chemotherapy through all therapeutic routes (e.g. via lumbar puncture and Ommaya reservoir). The first 5 chemotherapy administrations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in
the procedure. Once 5 procedures have been completed, the fellow can perform subsequent administrations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in administration of chemotherapy through all therapeutic routes.

Second-year fellows:

1) The second year fellow on this rotation will begin to develop independence in the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that the second year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the nurse and attending’s every 6 month clinic evaluation of the fellow.

2) The second year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the nurse and attending’s every 6 month clinic evaluation of the fellow.

3) The second year fellow will further refine the skills required to perform bone marrow biopsies and aspirates, tumor measurements, and administration of chemotherapy through all therapeutic routes. It is expected that most second year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the nurse and attending’s every 6 month evaluation of the fellow.

Medical Knowledge

Goals

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall rotation goals above)

Objectives

First-year fellows

First-year fellows will develop basic knowledge of the molecular and pathophysiologic mechanisms, diagnosis, and treatment of benign and malignant hematological disorders. In addition, they will develop a basic understanding of the etiology, epidemiology, natural history, diagnosis, pathology, staging and management of a wide variety of neoplastic disorders. They will also be expected to develop a basic knowledge of chemotherapeutic agents and their mechanisms of action, toxicities, and administration.
The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Second year fellows
Second year fellows will demonstrate an understanding of major developments in the recent literature on many hematological and neoplastic disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Practice based Learning and Improvement
Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop the skills and habits to be able to:

- Identify strengths, deficiencies, and limits in one’s knowledge and expertise
- Locate, appraise and assimilate evidence from scientific studies related to their patients health problems

Objectives

First-year fellows
The first year fellow will be expected to identify the strengths and limitations of their knowledge and to supplement their knowledge with review the basic literature (textbooks, review articles) relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. They will also be expected to begin to search and review the recent scientific literature relevant to their patients and to incorporate it into their treatment plans and presentations. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Second-year fellows
The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Systems Based Practice

Goal
Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:

- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

First-year fellows
First-year fellows are expected to work with the supervising attending to coordinate care of the patients on the service. The majority of patients in these clinics are indigent and frequently have a history of poor
access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The first-year fellow, with the assistance of the supervising attending, is expected to gain the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and chief nurse as reflected in the nurse and attending’s every 6 month clinic evaluation and the chief nurse evaluation every 3-4 months.

Second-year fellows
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. The majority of patients in these clinics are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the nurse and attending’s every 6 month clinic evaluation and the chief nurse evaluation every 3-4 months.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:

- Compassion, integrity and respect for others
- Sensitivity and responsiveness to a diverse patient population including but not limited to diversity in gender, age, culture, race, religion, disabilities and sexual orientation

Objectives
First-year fellows
The patient population at Parkland Memorial Hospital includes a large immigrant population and a wide variety of cultures, races, and religions. The first year fellows, with the assistance of the supervising attending, are expected to begin to develop the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

Second-year fellows
The second-year fellows are expected to begin to demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

Interpersonal and communication skills

Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:
Objectives

First-year fellows
Hematology and Oncology patients frequently require detailed and complex treatment plans and follow up from multiple services. The first year fellow is expected to begin to develop the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

Second-year fellows
The second-year fellow is expected to frequently demonstrate the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the chief nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

Teaching Methods
- Clinical teaching
- Case-based teaching
- Role modeling

Assessment method (fellows)
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Nurse evaluation

Patient evaluations

Program Director’s critique (during the every 6 month meeting with each fellow) of oral presentations at the Combined Modality Conference

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending

Educational Resources

Suggested texts:
DeVita: *Cancer Principle and Practice of Oncology*
Abeloff: *Clinical Oncology*
Wintrobe’s *Clinical Hematology*
WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*
Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
Goals

Continuity Clinic

Rotation description: Each fellow is assigned to 2 continuity clinics during each year of their fellowship. The fellow will attend each of these clinics every week. The fellow will follow their own patients and will be the primary physician responsible for their care. The fellow will sign out each patient to the supervising attending for that clinic.

Goals of the rotation:

Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lung, GI tract, breast, pancreas, liver, testes, lymphoid organs, hematopoietic system, central nervous system, head and neck, thyroid and other endocrine organs, skin, GU tract, and cancer family syndromes.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Management and care of indwelling access catheters
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer
- Management of pain, anxiety, and depression
- Concepts of supportive care, including hematologic, infectious disease, and nutrition
- Management of the neutropenic and immunocompromised patient
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders
- Palliative care, including hospice and home care
- Recognition and management of paraneoplastic disorders
- Cancer prevention and screening, including genetic testing
- Participation in multidisciplinary case management conference or discussion
- Personal development, attitudes, and coping skills of physicians who are for critically ill patients
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy
- Treatment of patients with hemostasis disorders and the biochemical and pharmacology of coagulation factor replacement therapy
- Transfusion medicine
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells
- Hematopoietic and lymphopoietic and plasma cell malignancies
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time
Patient care

Goals

The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematologic and oncologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates
3) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging

Objectives

First-year fellows:

1) The first year fellow on this rotation will begin to develop the skills to independently assess and manage patients with a wide variety of hematologic and oncologic disorders. The expectation is that the first year fellow will be able to collect and present the relevant patient data to the supervising attending. The first-year fellow is also expected to be able to present diagnostic and treatment recommendations to the supervising attending at the time of presentation for review and approval by the supervising attending. It is expected that (especially early in the first year) the first year fellow will require more close supervision by the attending. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow.

2) The first year fellow on this rotation will also begin to acquire the skills required to perform bone marrow biopsies and aspirations. The first 5 bone marrow biopsies and aspirations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent bone marrow biopsies and aspirations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in bone marrow biopsy and aspiration.

3) The first year fellow on this rotation will develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The first year fellow is expected to be able to identify normal blood elements in the peripheral blood and bone marrow (initially with the assistance of the supervising attending). The first-year fellow is also expected to be able to begin to identify abnormalities in the blood elements (again initially with the assistance of the supervising attending). The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow.

4) The first year fellow is expected to develop the skills require to perform tumor measurements. The first year fellow is expected to review relevant imaging on all patients and perform tumor measurements as indicated. This will initially be under the guidance of the supervising attending, the expectation is that the fellow will quickly gain independence in this skill. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s clinic evaluation of the fellow at the end of the rotation.
5) The first year fellow on this rotation will also begin to acquire the skills required to administer chemotherapy through all therapeutic routes (e.g. via lumbar puncture and Ommaya reservoir). The first 5 chemotherapy administrations that the fellow performs will be directly observed by the supervising attending or another fellow or practitioner that has been designated as proficient in the procedure. Once 5 procedures have been completed, the fellow can perform subsequent administrations independently which will allow for continued refinement of his/her technique. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow. In addition, completion of this objective will be assessed through successful completion of the on-line procedure log, as required to document proficiency in administration of chemotherapy through all therapeutic routes.

Second-year fellows:

1) The second year fellow on this rotation will begin to develop independence in the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that the second year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow.

2) The second year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow.

3) The second year fellow will further refine the skills required to perform bone marrow biopsies and aspirates, tumor measurements, and administration of chemotherapy through all therapeutic routes. It is expected that most second year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month evaluation of the fellow.

Third year fellows

1) The third year fellow on this rotation will further develop the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that third year fellow will be able to independently develop and initiate a diagnostic and therapeutic plan for most patients on the service. Supervision and feedback from the supervising attending will be available at all times. It is expected that only on the most difficult and complex cases will input from the supervising attending be required prior to the initiation and development of a diagnostic or therapeutic plan. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

2) The third year fellow on this rotation will further refine the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The third year fellow is expected to be able to identify the majority of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.
Medical Knowledge

Goals

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall rotation goals above)

Objectives

First-year fellows
First-year fellows will develop basic knowledge of the molecular and pathophysiologic mechanisms, diagnosis, and treatment of benign and malignant hematological disorders. In addition, they will develop a basic understanding of the etiology, epidemiology, natural history, diagnosis, pathology, staging and management of a wide variety of neoplastic disorders. They will also be expected to develop a basic knowledge of chemotherapeutic agents and their mechanisms of action, toxicities, and administration. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Second year fellows
Second year fellows will demonstrate an understanding of major developments in the recent literature on many hematological and neoplastic disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Third year fellows
Third year fellows will demonstrate comprehensive knowledge of most hematological and neoplastic disorders, including knowledge of the major recent reports in the literature that affect the management of the patients on the service. They will demonstrate the knowledge to independently select treatment regimens for the patients on the service, taking into account efficacy, toxicity, ease of administration, cost, toxicity, and a patient’s underlying co-morbidities, performance status, and organ function. In addition, they will demonstrate extensive knowledge of the common chemotherapeutic agents and their toxicities and management. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.
Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. Fellows are expected to develop the skills and habits to be able to:

- Identify strengths, deficiencies, and limits in one’s knowledge and expertise
- Locate, appraise and assimilate evidence from scientific studies related to their patients’ health problems

Objectives

First-year fellows
The first-year fellow will be expected to identify the strengths and limitations of their knowledge and to supplement their knowledge with review of the basic literature (textbooks, review articles) relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. They will also be expected to begin to search and review the recent scientific literature relevant to their patients and to incorporate it into their treatment plans and presentations. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Second-year fellows
The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Third-year fellows
The third-year fellow will be expected to identify the strengths and limitations of their knowledge and to consistently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation.

Systems Based Practice

Goal

Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:

- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

First-year fellows
First-year fellows are expected to work with the supervising attending to coordinate care of the patients on the service. The majority of patients in these clinics are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The first-year fellow, with the assistance of the supervising attending, is expected to gain the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place. In this way, they serve as advocates for quality patient care.
The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months.

**Second-year fellows**
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. The majority of patients in these clinics are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months.

**Third-year fellow**
Third-year fellows are expected to independently coordinate care of the patients on the service. The majority of patients on this service are indigent and frequently have a history of poor access to health care and lack the resources to participate in their care. Frequently, hematology/oncology patients require multi-modality care from multiple services. The third-year fellow is expected to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months.

**Professionalism**
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:
- Compassion, integrity and respect for others
- Sensitivity and responsiveness to a diverse patient population including but not limited to diversity in gender, age, culture, race, religion, disabilities and sexual orientation

**Objectives**

**First-year fellows**
The patient population at Parkland Memorial Hospital includes a large immigrant population and a wide variety of cultures, races, and religions. The first year fellows, with the assistance of the supervising attending, are expected to begin to develop the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

**Second-year fellows**
The second-year fellows are expected to begin to demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

**Third year fellows**
The third-year fellows are expected to frequently demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

**Interpersonal and communication skills**

**Goal**

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Communicate with patients and families across a broad range of socioeconomic and cultural backgrounds
- Act in a consultative role to other physicians and health care professionals

**Objectives**

**First-year fellows**

Hematology and Oncology patients frequently require detailed and complex treatment plans and follow up from multiple services. The first year fellow is expected to begin to develop the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

**Second-year fellows**

The second-year fellow is expected to frequently demonstrate the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

**Third year fellows**

The third-year fellow is expected to consistently demonstrate the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending and the chief nurse as reflected in the attending’s every 6 month clinic evaluation and the nurse evaluation every 3-6 months. In addition, this will be assessed by every 3-6 month anonymous patient evaluations of the fellow.

**Teaching Methods**

- Clinical teaching
- Case-based teaching
- Role modeling
Assessment method (fellows)

Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Program Director’s critique (during the every 6 month meeting with each fellow) of oral presentations at the Combined Modality Conference

Nurse evaluation every 3 - 6 months

Patient evaluations every 3-6 months

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending

Educational Resources

Suggested texts:
DeVita: Cancer Principle and Practice of Oncology
Abeloff: Clinical Oncology
Wintrobe’s Clinical Hematology
WHO: Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues

Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
Radiation Oncology

The fellow will participate in this month-long rotation once during their second or third year. The fellow will meet with the director of the rotation at the Moncrief Radiation Oncology Center at the beginning of the month and will be assigned to work with various members of the radiation oncology faculty in their clinics. This Center handles all of the radiation for the University Hospitals, Parkland Memorial Hospital and Children’s Hospital. The fellow will see patients in those clinics under the supervision of the radiation oncology faculty member. The fellow will also be given a tour of the facility to review the equipment and how patients receive treatment on it. When possible, the fellow will also attend weekly chart rounds in the department where the radiation plans for each patient are presented and discussed.

Goals

The fellows will gain an understanding of the radiation technologies available, their implementation and toxicity.

Patient care

The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

Management of patients on the radiation oncology service.

Objectives

Second and third year fellows

The fellow will acquire a basic understanding of how radiation treatment plans are developed and implemented and the basic skills required to manage radiation toxicity. The successful completion of this objective will be assessed by the evaluation of the director of the rotation at the end of the rotation.

Medical knowledge

Goal

Fellows must demonstrate of established and evolving biomedical, clinical, epidemiological, and social behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows are expected to:

Develop a basic understanding of the radiation technologies available, their implementation, and their toxicity.

Objectives

Second and third year fellows

The fellow will demonstrate basic knowledge of radiation technologies, radiation doses and plans and radiation toxicity and its management. The successful completion of this objective will be assessed by the evaluation of the director of the rotation at the end of the rotation.

Interpersonal and communication skills
Goal

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Communicate with patients and families across a broad range of socioeconomic and cultural backgrounds
- Act in a consultative role to other physicians and health care professionals

Objectives

Second and third fellow
Radiation Oncology patients frequently require detailed and complex treatment plans and follow up from multiple services. The fellow is expected to begin to frequently demonstrate the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by the evaluation of the director of the rotation at the end of the rotation.

Teaching Methods

- Clinical teaching
- Case-based teaching
- Role modeling

Assessment method (fellows)

Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending

Educational Resources

Suggested texts:
DeVita: Cancer Principle and Practice of Oncology
Abeloff: Clinical Oncology
Wintrobe’s Clinical Hematology
WHO: Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues

Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
Hematopathology

**Rotation description:** Each first year fellow spends one month rotating through hematopathology. During that rotation, they spend part of their time during this 4 weeks with the hematopathology residents, fellows and attending reviewing bone marrow biopsies and abnormal peripheral blood smears daily.

**Goals** – to develop a general understanding of basic normal and abnormal morphology of blood, bone marrow, lymphatic tissue and spleen

Medical Knowledge

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Residents are expected to develop a general understanding of:

- basic normal and abnormal morphology of blood, bone marrow, lymphatic tissue and spleen
- cytogenetics and molecular genetics derangements and nomenclature in hematologic malignancies
- complete blood count, including platelets and white cell differential, by means of automated or manual techniques, with appropriate quality control
- preparation, staining, and interpretation of blood smears, bone marrow aspirates, and touch preparations, as well as the interpretation of bone marrow biopsies

Objectives

**First year fellow**
The first year fellow will obtain basic knowledge of normal and abnormal morphology of blood, bone marrow, lymphatic tissue, and spleen. These objectives will be assessed by the hematopathology attendings at the end of the rotation.

Interpersonal and Communication Skills

**Goal**

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

- Communicate effectively with physicians, other health professionals, and health related agencies
**Objectives**
Hematopathology has a unique and complex nomenclature. It is expected that the fellow will develop a basic knowledge of this nomenclature and the skill to communicate with hematopathologists. The successful completion of this objective will be assessed by the hematopathology attending evaluation at the end of the rotation.

**Teaching Methods**
- Clinical teaching
- Case-based teaching
- Didactic conferences

**Assessment method (fellows)**
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Assessment method**
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

**Level of supervision**
Direct supervision by the attending

**Educational Resources**

**Suggested texts:**
DeVita: *Cancer Principle and Practice of Oncology*
Abeloff: *Clinical Oncology*
Wintrobe’s *Clinical Hematology*
WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*

**Suggested journals:**
*New England Journal of Medicine*
*Journal of Clinical Oncology*
*Blood*

**Suggested websites:**
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
Transfusion Medicine and Coagulation

Rotation description: During their second or third year, a fellow may elect to perform an elective rotation on the transfusion medicine and coagulation service. Typically, the fellow will split time on each service, but they may focus on one particular area if desired. The rotation will be organized as follows:

Transfusion Medicine:
1. Daily morning (8:15-9:00) rounds to discuss transfusion therapy, antibody and transfusion reaction work-ups, therapeutic apheresis patients.
2. Introduction to blood components-
   a. Preparation and storage
   b. Indications for special needs like irradiation and leukoreduction
   c. Adverse effects of transfusion
4. Transfusion management of patients with:
   a. Warm autoimmune hemolytic anemia
   b. Cold autoimmune hemolytic anemia
   c. Refractoriness to platelet transfusion
   d. Massive transfusion
   e. Coagulopathy of liver disease, DIC and others
   f. Sickle cell disease
   g. Platelet dysfunction
   h. Congenital bleeding disorders
   i. ABO incompatible hematopoietic stem cell transplantation
5. Therapeutic Apheresis: Introduction to apheresis techniques, various indications, important technical and clinical aspects of apheresis that include management of anticoagulation, side effects etc. Specific procedures/diseases covered:
   a. TTP
   b. Red cell exchange for Sickle cell crises – acute chest syndrome, stroke etc
   c. Cell depletion – WBC, platelets
   d. Plasmapheresis for hematological disorders
   e. Photopheresis for immune modulation to treat CGVHD post stem cell transplant

Sign outs and teaching – each afternoon sign out of antibody work up in blood bank, transfusion reactions, and interpretation of special coagulation tests. Case-oriented teaching for 1 to 1 and half hour.

Hemostasis: The fellow on this service will also field hemostasis related inpatient consults from all UT Southwestern affiliated hospitals (Zale-Lipsy, Clements, Parkland) and will be responsible for seeing those patients and signing out those cases to the attending on the service (who will provide supervision for those consults). The fellow and attending will round daily on these patients as necessary on a schedule to be worked out by the attending and fellow.

Goals

- To develop a general understanding of how to interpret and perform coagulation studies and how to apply them to patient care
- To develop a general understanding of how to perform and interpret basic transfusion medicine procedures, such as the type and cross as well as antibody detection and evaluation of antibodies, blood compatibility and the use of blood component therapy and apheresis procedures
- To develop further expertise in the diagnosis and management of coagulation disorders

Medical Knowledge and Patient Care
Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Residents are expected to develop a general understanding of:

- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy
- Transfusion medicine
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time
- Diagnosis and management of:
  - abnormal coagulation parameters such as prothrombin time (PT), activated partial thromboplastin time (aPTT), thrombin time (TT), fibrinogen, PFA-100; arterial or venous thromboembolism; heparin-induced thrombocytopenia; thrombotic thrombocytopenic purpura; inherited or acquired thrombophilias (factor V Leiden, prothrombin gene mutation, hyperhomocysteinemia, antiphospholipid antibodies/lupus anticoagulant, protein C/S deficiencies, antithrombin deficiency, elevated factor VIII, myeloproliferative disorders); inherited or acquired hemophilia (congenital factor deficiencies [VIII, IX, XI, fibrinogen, von Willebrand factor], inhibitors); inherited or acquired platelet dysfunctions; unexplained thrombocytopenia; management of actively bleeding patients – appropriate blood component therapy

Objectives

Second and third fellows
The fellow will obtain basic knowledge of coagulation and transfusion medicine, and how to perform and interpret the most common studies performed in those laboratories. This will be assessed by the attendings on the coagulation and transfusion medicine service in their evaluation at the end of the rotation.

Interpersonal and Communication Skills

Goal
Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Residents are expected to:

- Communicate effectively with physicians, other health professionals, and health related agencies

Objectives
Both transfusion medicine and the coagulation laboratory have unique and complex nomenclature. It is expected that the fellow will develop a basic knowledge of this nomenclature and the skill to communicate with pathologists and technicians from these laboratories. The successful completion of this objective will be assessed by the blood bank and coagulation attending’s evaluation at the end of the rotation.

Teaching Methods
- Clinical teaching
- Case-based teaching
- Didactic conferences
Assessment method (fellows)

Direct observation of the supervising attending as reflected in the attendings’ evaluation of the fellow at the end of the rotation.

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending

Educational Resources

Suggested texts:
DeVita: Cancer Principle and Practice of Oncology
Abeloff: Clinical Oncology
Wintrobe’s Clinical Hematology
WHO: Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues

Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
Gynecologic Oncology

Description of rotation
Each fellow will rotate on gynecologic oncology for one month during either their second or third year. During this rotation, the fellow will spend 2-4 days per week attending clinic with the gynecologic oncology attendings (final schedule dependent on the fellow’s continuity clinic schedule) in the Simmons Cancer Center and/or Parkland Memorial Hospital. In these clinics, they will see patients and present those patients to the supervising attending. They will also attend the multi-modality gynecologic oncology tumor board.

Goal
The fellow will obtain basic knowledge of
- the most common gynecologic malignancies, including their diagnosis, staging, and treatment.
- The principles of multidisciplinary management of gynecologic malignancies

Patient care
Goal
The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:
- Diagnosis, staging, and management of the patients on the gynecologic oncology service

Objectives
Second and third year fellows
The fellow will develop the basic skill to diagnose, stage and formulate treatment plans for patients with the most common gynecologic malignancies. The successful completion of this objective will be assessed by the evaluation of the director of the rotation at the end of the rotation.

Medical knowledge
Goal
Fellows must demonstrate of established and evolving biomedical, clinical, epidemiological, and social behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows are expected to:
- Develop a basic understanding of the pathogenesis and treatment of the most common gynecologic malignancies

Objectives
Second and third year fellows
The fellow will begin to demonstrate basic knowledge of the pathogenesis, diagnosis, staging, treatment, and prognosis of the most common gynecologic malignancies. The successful completion of this objective will be assessed by the evaluation of the director of the rotation at the end of the rotation.

Teaching Methods
- Clinical teaching
- Case-based teaching

Assessment method (fellows)
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

**Assessment method (program evaluation)**
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

**Level of supervision**
Direct supervision by the attending

**Educational Resources**

Suggested texts:
DeVita: *Cancer Principle and Practice of Oncology*
Abeloff: *Clinical Oncology*
Wintrobe’s *Clinical Hematology*
WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*

Suggested journals:
*New England Journal of Medicine*
*Journal of Clinical Oncology*
*Blood*

Suggested websites:
[www.cancer.org](http://www.cancer.org)
[www.cancer.gov](http://www.cancer.gov)
[www.asco.org](http://www.asco.org)
[www.hematology.org](http://www.hematology.org)
[www.nccn.org](http://www.nccn.org)
Research Rotation

Description of rotation:
Each fellow will have 2 -3 months during their second year and at least 9 months during their third year to devote to research. They will be asked to identify a research mentor and to develop a research plan during their second year of fellowship. The fellow is asked to discuss this with the Fellowship Director for approval. The project can either be clinical or basic science research. Clinical responsibilities are limited to only the continuity clinics to allow as much time as possible for productive research. Ideally, successful completion of the project is demonstrated through submission or publication of an abstract or article.

Goal
Successful completion of a clinical or basic science research project.

Objectives

Second and third year fellows
The fellow involved in clinical research will develop knowledge of protocol development and submission, IRB and regulatory activities, basic clinical trial design and statistics, interpretation of data and writing of a scientific paper. This will be assessed by successful completion of Good Clinical Practices examination and the HIPAA privacy exam as well as the evaluation of their mentor.

The fellow involved in basic science research will develop knowledge of basic science techniques, writing of a research proposal, interpretation of a scientific data and writing of a scientific paper. This will be assessed by the evaluation of their mentor at the end of the rotation.

Practice based learning and improvement

Goal

Objectives

Second and third year fellows
Fellows on their research rotation will develop the skills to identify and critically assess the literature relevant to their proposed research project in order to successfully develop a research proposal. Their success will be judged by their research mentor at the end of the rotation.

Interpersonal and communication skills

Goal

Objectives

Fellows on their research rotation will develop their skills in effective communication with collaborators. In addition, they will develop the skills necessary for effective written communication of a research proposal as well as the skills necessary to develop a successful written research presentation (abstract, poster, manuscript). Their success will be evaluated by their research mentor at the end of the rotation.

Teaching Methods

- Role modeling
- Mentoring
Assessment method (fellows)
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending

Educational Resources
To be determined by the research mentor and the project selected
Simmons Cancer Center Clinic Elective

Description of rotation: Second and third year fellows may elect to work with one or more attending physicians in their Simmons Cancer Center clinic. In these clinics, the fellows see the patients assigned to them and all patients are signed out to the supervising attending(s) for that clinic. The schedule must be approved by the supervising attending and the program director prior to the start of the rotation.

Goals of the rotation:
Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lung, GI tract, breast, pancreas, liver, testes, lymphoid organs, hematopoietic system, central nervous system, head and neck, thyroid and other endocrine organs, skin, GU tract, and cancer family syndromes.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders.
- Chemotherapeutic drugs, biologic products, and growth factors.
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders.
- Management and care of indwelling access catheters.
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer.
- Management of pain, anxiety, and depression.
- Concepts of supportive care, including hematologic, infectious disease, and nutrition.
- Management of the neutropenic and immunocompromised patient.
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders.
- Palliative care, including hospice and home care.
- Recognition and management of paraneoplastic disorders.
- Cancer prevention and screening, including genetic testing.
- Participation in multidisciplinary case management conference or discussion.
- Personal development, attitudes, and coping skills of physicians who are for critically ill patients.
- HIV related malignancies.
- Care and management of the geriatric patient with malignancy and hematologic disorders.
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy.
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques.
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues.
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy.
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy.
- Transfusion medicine.
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells.
- Hematopoietic and lymphopoietic and plasma cell malignancies.
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy.
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time.
Patient care

Goals

The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain expertise/experience in the following:

1) Evaluation of patients with a wide variety of hematologic and oncologic disorders, and the formulation of diagnostic and treatment plans for these patients.
2) Performance and interpretation of bone marrow biopsies and aspirates
3) Delivery of chemotherapy through all therapeutic routes and apheresis procedures
4) Serial measurement of tumor masses and assessment of tumor imaging by CT, MRI, PET and other nuclear imaging

Objectives

Second-year fellows:

1) The second year fellow on this rotation will begin to develop independence in the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that the second year fellow will be able to perform initial assessment and management of routine cases without the assistance of the supervising attending (though that assistance will be available if needed). The second-year fellow may still need assistance from the supervising attending on complex or difficult cases that require more experience. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation of the fellow.

2) The second year fellow on this rotation will further develop the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The second year fellow is expected to be able to identify many of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of rotation.

3) The second year fellow will further refine the skills required to perform bone marrow biopsies and aspirates, tumor measurements, and administration of chemotherapy through all therapeutic routes. It is expected that most second year fellows will already be qualified to perform these procedures independently, but have the opportunity to further develop these skills. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of rotation.

Third year fellows

1) The third year fellow on this rotation will further develop the skills of assessment and management of patients with a wide variety of hematologic and oncologic disorders. The expectation is that third year fellow will be able to independently develop and initiate a diagnostic and therapeutic plan for most patients on the service. Supervision and feedback from the supervising attending will be available at all times. It is expected that only on the most difficult and complex cases will input from the supervising attending be required prior to the initiation and development of a diagnostic or therapeutic plan. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of rotation.
2) The third year fellow on this rotation will further refine the skills required for interpretation of bone marrow biopsies and aspirates and peripheral blood smears. Bone marrow biopsies and aspirations as well as peripheral blood smears will be reviewed on all patients for whom they are relevant. The third year fellow is expected to be able to identify the majority of the common abnormalities in the bone marrow and peripheral blood. It is expected that consultation with the supervising attending may be required for less common or more difficult cases. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of rotation.

Medical Knowledge

Goals

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Fellows will demonstrate knowledge in the following: (see overall rotation goals above)

Objectives

Second year fellows
Second year fellows will demonstrate an understanding of major developments in the recent literature on many hematological and neoplastic disorders. They will demonstrate the ability to apply the knowledge they have obtained from the literature to the management of the patients on the service. In addition, they will be able to select and adjust treatment regimens with consideration given to underlying co-morbidities and organ function. They will also demonstrate knowledge of appropriate management of most treatment-related toxicities. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of rotation.

Third year fellows
Third year fellows will demonstrate comprehensive knowledge of most hematological and neoplastic disorders, including knowledge of the major recent reports in the literature that affect the management of the patients on the service. They will demonstrate the knowledge to independently select treatment regimens for the patients on the service, taking into account efficacy, toxicity, ease of administration, cost, toxicity, and a patient’s underlying co-morbidities, performance status, and organ function. In addition, they will demonstrate extensive knowledge of the common chemotherapeutic agents and their toxicities and management. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of rotation.

Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. Fellows are expected to develop the skills and habits to be able to:

- Identify strengths, deficiencies, and limits in one’s knowledge and expertise
- Locate, appraise and assimilate evidence from scientific studies related to their patients health problems

Objectives

Second-year fellows
The second-year fellow will be expected to identify the strengths and limitations of their knowledge and to frequently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation at the end of the rotation.

Third-year fellows
The third-year fellow will be expected to identify the strengths and limitations of their knowledge and to consistently supplement their basic knowledge with review of the most recent scientific literature relevant to the patients on the service. They are expected to incorporate their review of that literature into the development of a treatment plan and their presentations to the supervising attending physician. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation at the end of the rotation.

Systems Based Practice

Goal

Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:

• Coordinate patient care within the health care system relevant to their clinical specialty
• Advocate for quality patient care and optimal patient care systems

Second-year fellows
Second-year fellows are expected to independently coordinate care of the majority of patients on the service. Frequently, hematology/oncology patients require multi-modality care from multiple services. The second-year fellow is expected to begin to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation at the end of the rotation.

Third-year fellow
Third-year fellows are expected to independently coordinate care of the patients on the service. The third-year fellow is expected to demonstrate the knowledge and skills to insure that the patient can effectively navigate the system and that appropriate follow up plans are in place. In this way, they serve as advocates for quality patient care. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s every 6 month clinic evaluation at the end of the evaluation.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows are expected to demonstrate:

• Compassion, integrity and respect for others
• Sensitivity and responsiveness to a diverse patient population including but not limited to diversity in gender, age, culture, race, religion, disabilities and sexual orientation

Objectives

Second-year fellows
The second-year fellows are expected to begin to demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation at the end of the rotation.
Third year fellows
The third-year fellows are expected to frequently demonstrate the skills and attitudes to effectively and compassionately communicate with this diverse group of patients. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation at the end of the rotation.

Interpersonal and communication skills

Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:
- Communicate with patients and families across a broad range of socioeconomic and cultural backgrounds
- Act in a consultative role to other physicians and health care professionals

Objectives

Second-year fellows
The second-year fellow is expected to frequently demonstrate the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending and the as reflected in the attending’s evaluation at the end of the rotation.

Third year fellows
The third-year fellow is expected to consistently demonstrate the knowledge and skill to effectively communicate the diagnostic, treatment and follow up plans with the patients, families and the referring physicians. The successful completion of this objective will be assessed by direct observation of the supervising attending as reflected in the attending’s evaluation at the end of the rotation.

Teaching Methods
- Clinical teaching
- Case-based teaching
- Role modeling

Assessment method (fellows)
Direct observation of the supervising attending as reflected in the attending’s evaluation of the fellow at the end of the rotation.

Assessment method
Fellows are able to critique each educational experience in the yearly anonymous program evaluation and at the end of the month through the anonymous rotation evaluation.

Level of supervision
Direct supervision by the attending

Educational Resources
Suggested texts:
DeVita: *Cancer Principle and Practice of Oncology*
Abeloff: *Clinical Oncology*
Wintrobe’s Clinical Hematology
WHO: Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues

Suggested journals:
New England Journal of Medicine
Journal of Clinical Oncology
Blood

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
www.nccn.org
**Educational Activities**

**Combined Modality Conference**

**Description of activity:**
A weekly conference where 1-2 cases are presented by the fellows for discussion of management and treatment decisions. This is a multimodality conference attended by medical oncology, radiation oncology, surgery, pathology and radiology. The pathology and radiology studies for each case are reviewed and presented by the appropriate service. The fellow is then responsible for presenting a brief review of the literature on a topic related to the case, and the floor is opened for discussion of patient management by the attendees. In addition, one additional fellow each week is assigned a topic on which they present a 20 minute review.

**Goals of the rotation:**
Goals of the rotation include gaining experience/expertise and knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lung, GI tract, breast, pancreas, liver, testes, lymphoid organs, hematopoietic system, central nervous system, head and neck, thyroid and other endocrine organs, skin, GU tract, and cancer family syndromes.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Principles of, indications for, and limitations of surgery and radiation in the treatment of cancer
- Management of pain, anxiety, and depression
- Concepts of supportive care, including hematologic, infectious disease, and nutrition
- Management of the neutropenic and immunocompromised patient
- Rehabilitation and psychosocial aspects of clinical management of patients with cancer and hematologic disorders
- Palliative care, including hospice and home care
- Recognition and management of paraneoplastic disorders
- Cancer prevention and screening, including genetic testing
- Participation in multidisciplinary case management conference or discussion
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- The appropriate use of tumor markers for cancer screening and monitoring cancer therapy
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques

**Patient care**

**Goals**
The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.
Objectives

First year fellows
The fellow will develop the skills required to formulate and discuss a multi-modality patient care plan with their colleagues from multiple medical specialties. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skills required to formulate and discuss a multi-modality patient care plan with their colleagues from multiple medical specialties. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation and by the Program Director during the every 6 month evaluation meeting.

Third year fellows
The fellow will consistently demonstrate the skills required to formulate and discuss a multi-modality patient care plan with their colleagues from multiple medical specialties. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation and by the Program Director during the every 6 month evaluation meeting.

Medical Knowledge

Goals

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Objectives

First year fellows
The fellow will begin to demonstrate the skill and knowledge to review and understand the medical literature and to apply it to patient care. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skill and knowledge to review and understand the medical literature and to apply it to patient care. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Third year fellow
The fellow will frequently demonstrate the skill and knowledge to review and understand the medical literature and to apply it to patient care. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop the skills and habits to be able to:

- Locate, appraise and assimilate evidence from scientific studies related to their patients’ health problems
- Use information technology to optimize learning

Objectives
First year fellows
The fellow will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the patient they are presenting. In addition, they will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the topic about which they are giving a presentation. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the patient they are presenting. In addition, they will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the topic about which they are giving a presentation. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Third year fellow
The fellow will consistently demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the patient they are presenting. In addition, they will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the topic about which they are giving a presentation. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Systems Based Practice
Goal
Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:
- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

Objectives
First year fellows
The fellow will begin to demonstrate the skill and attitude to advocate for quality care for their patient in diverse health care systems and to discuss coordination of care with multiple services in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skill and attitude to advocate for quality care for their patient in diverse health care systems and to discuss coordination of care with multiple services in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Third year fellows
The fellow will consistently demonstrate the skill and attitude to advocate for quality care for their patient in diverse health care systems and to discuss coordination of care with multiple services in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Interpersonal and communication skills
Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Communicate effectively with physicians, other health care professionals, and health related agencies

**Objectives**

**First year fellows**
The fellow will begin to demonstrate the skills to effectively convey what they have learned from the literature in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

**Second year fellows**
The fellow will frequently demonstrate the skills to effectively convey what they have learned from the literature in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

**Third year fellows**
The fellow will consistently demonstrate the skills to effectively convey what they have learned from the literature in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

**Teaching Methods**
- Clinical teaching
- Case-based teaching

**Assessment method (fellows)**
Fellow and attending evaluations of oral presentations

**Assessment method (program evaluation)**
Fellows are able to critique each educational experience in the yearly anonymous program evaluation.

**Level of supervision**
n/a

**Educational Resources**

Suggested texts:
DeVita: *Cancer Principle and Practice of Oncology*
Abeloff: *Clinical Oncology*
Wintrobe’s *Clinical Hematology*
WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*

Suggested journals:
*New England Journal of Medicine*
*Journal of Clinical Oncology*
*Blood*

Suggested websites:
www.cancer.org
www.cancer.gov
www.asco.org
www.hematology.org
Hematology/hematopathology rounds

Description of educational activity:
This conference has several different formats. Once per month the fellows and faculty present brief synopses of clinical cases and the hematopathology and molecular genetics services present all relevant studies (bone marrow biopsies, peripheral blood smears, flow cytometry, cytogenetics). Once per month, the fellows present a more detailed clinical presentation of a case, including diagnosis, staging and management. The hematopathology and molecular genetics services again present the relevant studies. Once per month, a fellow presents a comprehensive review of a hematology topic. Once per month, one of the faculty (or a visiting professor) presents a didactic lecture on a hematologic topic.

Goals of the activity:
Goals of the activity include gaining knowledge in the following:

- Diagnosis, pathology, staging, and management of neoplastic disorders of the lymphoid organs and the hematopoietic system.
- Indications and application of imaging techniques in patients with neoplastic and blood disorders
- Chemotherapeutic drugs, biologic products, and growth factors
- Multiagent chemotherapeutic protocols and combined modality therapy of neoplastic disorders
- Management of the neutropenic and immunocompromised patient
- Palliative care, including hospice and home care
- Recognition and management of paraneoplastic disorders
- Participation in multidisciplinary case management conference or discussion
- HIV related malignancies
- Care and management of the geriatric patient with malignancy and hematologic disorders
- Correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques
- Effects of systemic disorders and drugs on the blood, blood-forming organs, and lymphatic tissues
- Tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy
- Treatment of patients with hemostasis disorders and the biochemistry and pharmacology of coagulation factor replacement therapy
- Transfusion medicine
- Acquired and congenital disorders of red cells, white cells, platelets, and stem cells
- Hematopoietic and lymphopoietic and plasma cell malignancies
- Congenital and acquired disorders of hemostasis and thrombosis including the use of antithrombotic therapy
- Interpretation of partial thromboplastin time, prothrombin time, platelet aggregation and bleeding time

Patient care

Goals
The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.
Objectives

First year fellows
The fellow will develop the skills required to formulate and discuss a multi-modality patient care plan with their colleagues from multiple medical specialties. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skills required to formulate and discuss a multi-modality patient care plan with their colleagues from multiple medical specialties. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Third year fellows
The fellow will consistently demonstrate the skills required to formulate and discuss a multi-modality patient care plan with their colleagues from multiple medical specialties. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Medical Knowledge

Goals

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Objectives

First year fellows
The fellow will begin to demonstrate the skill and knowledge to review and understand the medical literature and to apply it to patient care. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skill and knowledge to review and understand the medical literature and to apply it to patient care. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Third year fellow
The fellow will frequently demonstrate the skill and knowledge to review and understand the medical literature and to apply it to patient care. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation and by the Program Director during the every 6 month evaluation meeting.

Practice based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life long learning. Fellows are expected to develop the skills and habits to be able to:

- Locate, appraise and assimilate evidence from scientific studies related to their patients’ health problems
- Use information technology to optimize learning

Objectives
First year fellows
The fellow will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the patient they are presenting. In addition, they will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the topic about which they are giving a presentation. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the patient they are presenting. In addition, they will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the topic about which they are giving a presentation. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Third year fellow
The fellow will consistently demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the patient they are presenting. In addition, they will begin to demonstrate the skill to utilize information technology to identify the recent scientific literature relevant to the topic about which they are giving a presentation. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Systems Based Practice

Goal
Fellows must demonstrate awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Fellows are expected to:
- Coordinate patient care within the health care system relevant to their clinical specialty
- Advocate for quality patient care and optimal patient care systems

Objectives

First year fellows
The fellow will begin to demonstrate the skill and attitude to advocate for quality care for their patient in diverse health care systems and to discuss coordination of care with multiple services in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skill and attitude to advocate for quality care for their patient in diverse health care systems and to discuss coordination of care with multiple services in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation and by the Program Director during the every 6 month evaluation meeting.

Third year fellows
The fellow will consistently demonstrate the skill and attitude to advocate for quality care for their patient in diverse health care systems and to discuss coordination of care with multiple services in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

Interpersonal and communication skills

Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Communicate effectively with physicians, other health care professionals, and health related agencies

**Objectives**

**First year fellows**
The fellow will begin to demonstrate the skills to effectively convey what they have learned from the literature in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

**Second year fellows**
The fellow will frequently demonstrate the skills to effectively convey what they have learned from the literature in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

**Third year fellows**
The fellow will consistently demonstrate the skills to effectively convey what they have learned from the literature in a multimodality conference setting. This will be assessed by informal feedback from the faculty, by fellow and faculty formal evaluation, and by the Program Director during the every 6 month evaluation meeting.

**Teaching Methods**
- Clinical teaching
- Case-based teaching

**Assessment method (fellows)**
Fellow and attending evaluations of oral presentations

**Assessment method (program evaluation)**
Fellows are able to critique each educational experience in the yearly anonymous program evaluation.

**Level of supervision**
n/a

**Educational Resources**

Suggested texts:
- DeVita: *Cancer Principle and Practice of Oncology*
- Abeloff: *Clinical Oncology*
- Wintrobe’s *Clinical Hematology*
- WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*

Suggested journals:
- *New England Journal of Medicine*
- *Journal of Clinical Oncology*
- *Blood*

Suggested websites:
- [www.cancer.org](http://www.cancer.org)
- [www.cancer.gov](http://www.cancer.gov)
- [www.asco.org](http://www.asco.org)
- [www.hematology.org](http://www.hematology.org)
Journal Club

Description of educational activity:
Once per month, a fellow is assigned to select an article to review at journal club. The article is provided to the other fellows prior to the conference, and the fellow discussing the article selects a faculty member to assist with the discussion.

Goals

The goals of this activity include gaining expertise in review and critique of clinical trial design and biostatistics as well as applying the results of clinical trials to patient care.

Medical Knowledge

Goals

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows are expected to learn the scientific method of problem solving, evidence based decision making, a commitment to lifelong learning, and an attitude of caring that is derived from humanistic and professional values.

Objectives

First year fellows
The fellow will begin to demonstrate the skills required to review clinical trials or basic science articles and to identify the strengths and weaknesses of the study. They will also begin to demonstrate the skills to present this information to their peers and the knowledge to identify how to apply this data to patient care. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skills required to review clinical trials or basic science articles and to identify the strengths and weaknesses of the study. They will also begin to demonstrate the skills to present this information to their peers and the knowledge to identify how to apply this data to patient care. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Third year fellows
The fellow will frequently demonstrate the skills required to review clinical trials or basic science articles and to identify the strengths and weaknesses of the study. They will also begin to demonstrate the skills to present this information to their peers and the knowledge to identify how to apply this data to patient care. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Practice based learning

Fellows must demonstrate the ability to investigate and evaluate care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning. Fellows are expected to develop the skills and habits to be able to:

- Identify strengths, deficiencies and limits in one’s knowledge and expertise
- Set learning and improvement goals
Objectives

First year fellows
The fellow will begin to demonstrate the skill to identify articles to review at journal club that are relevant to patient care. They will also begin to display the attitude required to identify and investigate what they do not understand about clinical trial design, data interpretation and biostatistics in order to formulate a thorough and educational review of an article. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skill to identify articles to review at journal club that are relevant to patient care. They will also frequently display the attitude required to identify and investigate what they do not understand about clinical trial design, data interpretation and biostatistics in order to formulate a thorough and educational review of an article. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Third year fellows
The fellow will consistently demonstrate the skill to identify articles to review at journal club that are relevant to patient care. They will also consistently display the attitude required to identify and investigate what they do not understand about clinical trial design, data interpretation and biostatistics in order to formulate a thorough and educational review of an article. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Interpersonal and communication skills

Goal
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Fellows are expected to:

- Communicate effectively with physicians, other health care professionals, and health related agencies

Objectives

First year fellows
The fellow will begin to demonstrate the skills to effectively convey strengths and weaknesses of a clinical trial or basic science article to their peers. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Second year fellows
The fellow will frequently demonstrate the skills to effectively convey strengths and weaknesses of a clinical trial or basic science article to their peers. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Third year fellow
The fellow will consistently demonstrate the skills to effectively convey strengths and weaknesses of a clinical trial or basic science article to their peers. This will be assessed by informal feedback from the faculty and by the Program Director during the every 6 month evaluation meeting.

Teaching Methods
- Journal Club

Assessment method (fellows)
Assessed by the Program Director at the every 6 month evaluation.
Assessment method (program evaluation)
Fellows are able to critique each educational experience in the yearly anonymous program evaluation.

Level of supervision
n/a

Educational Resources

Suggested texts:
DeVita: *Cancer Principle and Practice of Oncology*
Abeloff: *Clinical Oncology*
Wintrobe’s *Clinical Hematology*
WHO: *Classification of tumours, pathology and genetics of tumours of hematopoietic and lymphoid tissues*

Suggested journals:
*New England Journal of Medicine*
*Journal of Clinical Oncology*
*Blood*

Suggested websites:
[www.cancer.org](http://www.cancer.org)
[www.cancer.gov](http://www.cancer.gov)
[www.asco.org](http://www.asco.org)
[www.hematology.org](http://www.hematology.org)
[www.nccn.org](http://www.nccn.org)
Ancillary Services Curriculum

At any point during their training, a Fellow may elect to perform a rotation with Ancillary Services in the Simmons Comprehensive Cancer Center. In this rotation the fellow will experience the combined services of Cancer Genetics, Nutrition, Social Work and Chaplaincy.

The goal of this rotation is for the Fellow to develop an understanding of the variety of Ancillary Services provided to cancer patients and their role in cancer care and prevention.

Ancillary Services is a 1-month rotation. The rotation will be observational and/or participatory depending on the service and/or situation. On Monday of each week, the Fellow will be provided with a clinic schedule from Cancer Genetics and Nutrition. Social Work and the Chaplain work largely as an on-call service therefore the Fellow will be paged to those services as necessary. The Fellow will be supervised and evaluated independently in each specialty and is expected to spend a minimum amount of time at all services.

- **Cancer Genetics**
  - Supervised by Linda Robinson, MS, CGC Senior Certified Genetic Counselor
  - The Fellow is expected to observe/participate in at least 15 cases

- **Nutrition**
  - Supervised by one of the Simmons Cancer Center dieticians
  - The Fellow will spend up to 24 hours with the oncology dietitian

- **Social Work**
  - Supervised by Dinah Foster, Social Worker
  - The Fellow will observe a Social Worker and Psychologist for 12 hours

- **Chaplaincy**
  - Supervised by a chaplain designated by the chaplain
  - The Fellow will be able to observe/assist the chaplains in spiritual care visits, advance directive discussions, family conferences and support groups
Clinical Cancer Genetics Rotation

Rotation description: At any point during their training, a fellow may elect to perform a rotation with the Clinical Cancer Genetics service. The Genetics rotation can be done at the Dallas, Fort Worth and/or Richardson genetic counseling offices. The fellow will work with the genetic counselors first, observing and then taking a more active role in the genetic counseling session. The fellow will also participate in Monday morning case review with the genetic counselors and Dr. Theodora Ross, MD. The fellow is invited to attend outreach events and patient conferences/support groups held during the rotation.

Goals

- To develop an understanding of how to perform a hereditary cancer risk assessment.
- To develop the skills to conduct a cancer genetic counseling session.

Interpersonal and Communication Skills

Goal

The fellow is expected to be able to successfully establish rapport with the patient in order to gather and document pertinent information and educate the patient in a culturally responsive manner as to the benefits and limitations of genetic testing and management options.

Objectives

- Can establish a mutually agreed upon genetic counseling agenda with the patient
  The fellow is able to contract with a patient or family throughout the relationship; explain the genetic counseling process; elicit expectations, perceptions and knowledge; and establish rapport through verbal and non-verbal interaction.
- Can elicit an appropriate and inclusive family history
  The fellow is able to construct a complete pedigree; demonstrate proficiency in the use of pedigree symbols, standard notation, and nomenclature; structure questioning for the individual case and probable diagnosis; use interviewing skills; facilitate recall for symptoms and pertinent history by pursuing a relevant path of inquiry; and in the course of this interaction, identify family dynamics, emotional responses, and other relevant information.
- Can elicit medical information pertinent for hereditary cancer risk assessment
  The fellow is able to apply knowledge of the inheritance patterns, etiology, clinical features, and natural history of a variety of hereditary cancer syndromes to obtain appropriate medical histories.
- Can elicit a social and psychosocial history
  The fellow is able to conduct a patient or family interview that demonstrates an appreciation of family systems theory and dynamics. The fellow is able to listen effectively, identify potential strengths and weaknesses, and assess individual and family support systems and coping mechanisms.
- Can convey genetic, medical, and technical information including but not limited to diagnosis, etiology, natural history, prognosis, and treatment/management of hereditary cancer syndromes to patients with a variety of educational, socioeconomic, and ethno-cultural backgrounds
  The fellow is able to demonstrate knowledge of clinical genetics and relevant medical topics by effectively communicating this information in a given session.
- Can explain the technical and medical aspects of diagnostic and screening methods including associated risks, benefits, and limitations
  The fellow is able to demonstrate knowledge of diagnostic and screening procedures and clearly communicate relevant information to patients. The fellow is able to facilitate the informed consent process. The fellow is able to determine patient comprehension and adjust counseling accordingly.
- Can understand, listen, communicate, and manage a genetic counseling case in a culturally responsive manner
  The fellow can care for patients using cultural self-awareness and familiarity with a variety of ethnocultural issues, traditions, health beliefs, attitudes, lifestyles, and values.
**Medical Knowledge and Patient Care**

**Goal**

The fellow will gain basic knowledge of the characteristics of hereditary cancer syndromes, as well as how to conduct a risk assessment. The fellow will become experienced in patient education and assessing patient understanding. The fellow will become familiar with laboratories and research groups conducting genetic testing, in addition to local and regional support groups for individuals with hereditary cancer syndromes.

**Objectives**

- **Can assess and calculate genetic risks**
  The fellow is able to calculate risks based on pedigree analysis and knowledge of inheritance patterns, genetic epidemiologic data, and quantitative genetics principles. The fellow understands the application and limitations of various models for predicting breast cancer risk (i.e. Gail and Claus models) and BRCA1/2 carrier status (i.e. BRCAPRO and Myriad models).

- **Can evaluate a social and psychosocial history**
  The fellow demonstrates understanding of family and interpersonal dynamics and can recognize the impact of emotions on cognition and retention, as well as the need for intervention and referral.

- **Can identify, synthesize, organize and summarize pertinent medical and genetic information for use in genetic counseling**
  The fellow is able to use a variety of sources of information including patient/family member(s), laboratory results, medical records, medical and genetic literature and computerized databases. The fellow is able to analyze and interpret information that provides the basis for differential diagnosis, risk assessment and genetic testing. The fellow is able to apply knowledge of the natural history and characteristics/symptoms of hereditary cancer syndromes.

- **Can assess patient understanding and response to information and its implications to modify a counseling session as needed**
  The fellow is able to respond to verbal and nonverbal cues and to structure and modify information presented to maximize comprehension by patients.

- **Can identify and access local, regional, and national resources and services**
  The fellow is familiar with local, regional, and national support groups and other resources.

- **Can identify and access information resources pertinent to clinical genetics and counseling**
  The fellow is able to demonstrate familiarity with the genetic, medical and social-science literature, and on-line databases. The fellow is able to review the literature and synthesize the information for a case in a critical and meaningful way.

**Professionalism and Systems Based Practice**

**Goal**

The fellow will develop skills to identify barriers in comprehension, utilization, and acquisition of cancer genetic services and other medical options available to high-risk individuals. The fellow will develop an appreciation of the psychosocial implications of a familial cancer syndrome on the individual and the family.

**Objectives**

- **Can establish rapport, identify major concerns, and respond to emerging issues of a patient or family**
  The fellow is able to display empathic listening and interviewing skills and address patients’ concerns.

- **Can elicit and interpret individual and family experiences, behaviors, emotions, perceptions, and attitudes that clarify beliefs and values**
  The fellow is able to assess and interpret verbal and non-verbal cues and use this information in the genetic counseling session. The fellow is able to engage patients in an exploration of their responses to risks and options.
- **Can use a range of interviewing techniques**
  The fellow is able to identify and select from a variety of communication approaches throughout a counseling session.

- **Can provide short-term, patient-centered counseling and psychological support**
  The fellow is able to assess patients’ psychosocial needs and recognize psychopathology. The fellow can demonstrate knowledge of psychological defenses, family dynamics, coping models, the grief process, and reactions to illness. The fellow can use open-ended questions; listen empathically; and provide anticipatory guidance.

- **Can promote patient decision-making in an unbiased, non-coercive manner**
  The fellow understands the philosophy of non-directiveness and is able to recognize his or her values and biases as they relate to genetic counseling issues. The fellow is able to recognize and respond to dynamics, such as counter transference, that may affect the counseling interaction.

**Teaching Methods**
Clinical teaching
Case-based teaching

**Assessment method (fellows)**
Direct observation of the supervising genetic counselor as reflected in the genetic counselors’ evaluation of the fellow at the end of the rotation.

**Assessment method (program evaluation)**
Fellows are able to critique each educational experience in the yearly anonymous program evaluation.

**Level of supervision**
Direct supervision by the genetic counselors

**Educational Resources**
Fellows will be provided with a binder of cancer genetics and genetic counseling articles.

Suggested texts:
Baker: A Guide to Genetic Counseling
Patenaude: Genetic Testing for Cancer
Schneider: Counseling About Cancer
Weil: Psychosocial Genetic Counseling

Suggested journals:
American Journal of Human Genetics
Community Genetics
Genetics in Medicine
Journal of Genetic Counseling

Suggested websites:
www.cancer.gov
www.facingourrisk.org
www.genetests.org
www.nccn.org
www.nsgc.org
**Oncology Nutrition**

Description: At any point during their training, a fellow may elect to perform an elective experiential rotation with Ancillary services, which includes Nutrition, Social Work, Genetics and Chaplainship. The fellow will work with the oncology dietitian at Simmons Comprehensive Cancer Center. The fellow will spend up to 24 hours with the oncology dietitian during this rotation.

Goals of the rotation include gaining experience and knowledge in the following:

- Cancer treatment on nutrition status
- Interactions among drugs, botanicals and nutrients that can impact nutrition status of cancer patients
- Physical signs and treatment of cancer-related malnutrition or cancer cachexia.
- Indications, benefits and risks of enteral and parenteral nutrition support
- Malnutrition and nutrition impact symptoms in adult cancer patients.
- Nutrition strategies for managing complications of chemotherapy
- Alternations in metabolism in cancer patients.
- Nutrition related treatment side effects that impact quality of life issues.
- Nutrition and lifestyle issues related to survivorship
- Effect of diet, body weight and physical activity on risk for cancer and other chronic diseases

Objectives

The fellow will obtain a basic understanding of the role of the oncology dietitian in an outpatient setting. The fellow will also develop basic knowledge of medical nutrition therapy and its role in managing cancer treatment toxicity. The fellow with obtain basic knowledge the role of nutrition and its role in cancer risk, cancer prevention and survivorship. These objectives will be assessed by the oncology dietitian at the end of the rotation.

Teaching Methods

Clinical Teaching

Assessment method (fellows)
Direct observation of the supervising dietitian as reflected in the dietitian’s evaluation of the fellow at the end of the rotation.

Assessment method (program evaluation)
Fellows are able to critique each education experience in the yearly anonymous program evaluation.

Level of Supervision
Direct supervision by the oncology dietitian

Educational Resources

**Suggested texts:**
Heber: Nutritional Oncology

**Journals**
Journal of the American Dietetic Association
Nutrition and Cancer
The American Journal of Clinical Nutrition
Suggested websites:
www.cancer.gov
www.cancer.org
www.aicr.org
http://nccam.nih.gov
www.naturaldatabase.com
www.dietandcancerreport.org
Clinical Care Psychosocial Rotation

Rotation Description: At any point during his or her training, a fellow may elect to perform an elective experiential rotation with Ancillary Services at the Harold C. Simmons Comprehensive Cancer Center, which includes Clinical Cancer Genetics, Nutrition, Social Work, Psychology, and Chaplaincy. The fellow will meet with a Licensed Clinical Social Worker and/or a Licensed Master Social Worker under Clinical Supervision at the beginning of the rotation.

Goals of the rotation include gaining knowledge in the following:
• For a total of 12 hours (to be interspersed throughout the month-long rotation), the fellow will observe psychosocial evaluations, consults and support groups, and will meet with a Social Worker and Psychologist.
• The fellow will be exposed to a broad spectrum of problems in patients with cancer: Emotional and mental problems; family problems; existential and spiritual problems; problems with the health care system; social, financial, and occupational strain; and physical symptoms and subsequent problems.

Objectives:
• Through initial meetings with a Social Worker and a Psychologist, the fellow will gain an understanding of the services offered by each discipline and circumstances warranting referrals to each discipline.
• The fellow will understand the appropriate utilization of multidisciplinary team members.
• The fellow will understand the benefits of psychosocial support to the patient, physician, and healthcare system.
• The fellow will observe a bone marrow transplant evaluation.
• The fellow will observe a hospice consult and demonstrate an ability to discuss the benefits that hospice can provide to the patient, family, and medical care team.
• The fellow will attend and observe at least one support group for cancer survivors and will gain an understanding of the benefits such support groups can provide to the patient and the healthcare system.
• The fellow will learn personal self-care and coping skills for physicians who work with chronically ill patients.
• The fellow will gain an understanding of the NCCN Guidelines for Distress Management in patients with cancer.

Teaching Methods
• Observation
• Reading/Viewing material relevant to the discipline

Assessment Method (program evaluation)
• Fellows are able to critique each educational experience in the yearly anonymous program evaluation.

Level of Supervision
Direct supervision by a LCSW or by a LMSW undergoing Clinical Supervision
Chaplain Services Curriculum

Chaplain Services Overview

Pastoral, spiritual, religious and/or emotional support, including crisis intervention and counsel are offered. We offer Patient Rights, Ethics services, Advance Directives Consultation, General Orientation (as requested), and educational in-services for patients, families and staff. Chaplain Services does not provide long term or extended term services.

The Chaplain Services Department ministers in the belief that God always works in the lives of all people whether in sickness, death or crisis. It is through a pastoral or spiritual ministry that meaning can be discerned, thus enabling persons in crisis to grow, to live with limitations, to face death or to become reconciled with God, with other persons and with themselves. We believe it essential that human and spiritual values be recalled, reaffirmed, and integrated within each person.

The Chaplains Services department strives to assist in the articulation of ethical and moral issues that arise in ministry and to provide appropriate counsel, programs and services to address these issues.

Rotation Description: At any point during their training, a fellow may elect to perform an elective experiential rotation with Ancillary Services at the Harold C. Simmons Comprehensive Cancer Center, which includes Clinical Cancer Genetics, Nutrition, Social Work, Psychology, or through Chaplain Services which will be primarily hospital based. The fellow will work with the Manager of Chaplain Services or a Staff Chaplain at the beginning of the rotation.

Goals of the rotation:

Goals of the rotation include gaining experience/expertise and knowledge in the following:
   a. Advance Directives, Medical Power of Attorney, Living Will
   b. Family Conferences (sometimes known as Case or Care Conferences)
   c. Spiritual Care visits
   d. Support Groups (Outpatient based groups for ongoing medical/social support)
   e. Ethics consults

Patient care

Goals

The fellows must be able to provide patient healthcare that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows are expected to learn the practice of health promotion, disease prevention, diagnosis, care and treatment of men and women from adolescence to old age, during health and all stages of disease.

The fellows on this rotation are expected to gain better understanding of how faith impacts
   1. healing and recovery
   2. attitude toward disease
   3. trust in the physician/healthcare team

Teaching Methods
Direct observation and Clinical Teaching

Assessment method (fellows)
Direct observation of the supervising chaplain as reflected in the chaplain’s evaluation of the fellow at the end of the rotation.

Assessment method (program evaluation)
Fellows are able to critique each education experience in the yearly anonymous program evaluation.

Level of Supervision
Direct supervision by the chaplain