

Hematology or Oncology Inpatient Wards or Consults

Learning Objectives

For Malignant Hematology:

Fellows will learn how to work-up and subsequently manage patients with known or suspected malignant hematologic disorder. Fellows will progressively learn to:

- 1) Recognize (and urgently manage) life-threatening syndromes related to acute leukemia, including leukostasis, disseminated intravascular coagulation, febrile neutropenia, spinal cord compression, bleeding, and neurological and cardiac events.
- 2) Understand the role of laboratory testing (immunohistochemistry, phenotyping/flow cytometry, karyotyping, fluorescence-in-situ-hybridization, microarray, and molecular testing).
- 3) Demonstrate knowledge and proficiency in the various principles of transfusion medicine and competence in apheresis procedures.
- 4) Demonstrate proficiency in management of patients with congenital and acquired disorders of hemostasis and thrombosis, including the use of coagulation factor replacement therapy and antithrombotic therapy.
- 5) Summarize specific prognostic factors (risk stratify) and make management decisions based on risk stratification.
- 6) Manage newly diagnosed and relapsed patients, including indications for and care of indwelling catheters, chemotherapy, immunotherapy, and clinical trial consent/enrollment, taking into account comorbidities and social factors.
- 7) Perform indicated diagnostic and therapeutic procedures.

For Non-Malignant Hematology:

Fellows will learn how to work-up and subsequently manage patients with known or suspected non-malignant hematologic disorder. Fellows will progressively learn to:

- 1) Evaluate patients with a wide variety of non-malignant hematologic disorders and formulate diagnostic and treatment plans for these patients.
- 2) Perform and interpret bone marrow biopsies and aspirates.
- 3) Recognize (and urgently manage) syndromes related to crises related to hemoglobinopathies and clotting disorders.
- 4) Demonstrate proficiency in ordering and interpreting tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy.
- 5) Demonstrate knowledge and proficiency in the various principles of transfusion medicine and competence in apheresis procedures.
- 6) Demonstrate proficiency in management of patients with acquired and congenital disorders of red cells, white cells, platelets, and stem cells.
- 7) Demonstrate proficiency in management of patients with congenital and acquired disorders of hemostasis and thrombosis, including the use of coagulation factor replacement therapy and antithrombotic therapy.

For Oncology:

Fellows will learn how to work-up and subsequently manage patients with known or suspected oncology disorder. Fellows will progressively learn to:

- 1) Provide timely and clear recommendations.
- 2) Recognize (and urgently manage) life-threatening syndromes related to solid tumor oncology, including febrile neutropenia, immune-related toxicities, spinal cord compression, superior vena cava obstruction, and neurological and cardiac events.
- 3) Assess inpatients and apply clinical guidelines on work-up and treatment.
- 4) Perform procedures required of the rotation.
- 5) Manage acute cancer pain and reassess pain management daily.

- 6) Manage the toxicities of inpatient chemotherapies and immunotherapies.
- 7) Write chemotherapy orders for inpatient chemotherapy.

For Malignant Hematology, Non-Malignant Hematology, and Oncology:

Fellows will progressively learn to:

- 1) Apply best evidence to decisions around patient care.
- 2) Work within a multi-disciplinary team exhibiting excellent interpersonal and communication skills, professionalism, and effective hand-offs.
- 3) Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
- 4) Communicate with patients and families across a broad range of socioeconomic and cultural backgrounds.

*Note: The focus of Systems-Based Practice 1 (SBP-1) is the second line. Please note that levels 1 and 2 of this line can often be mastered by having the fellow learn the “reporting system.” The first line of SBP-1 is covered in another activity.

Patient Care 1: Accesses Data Sources to Synthesize Patient and Disease Specific Information Necessary for Clinical Assessment				
Level 1	Level 2	Level 3	Level 4	Level 5
Accesses data and gathers a history standard for general internal medicine	Gathers a disease-specific history, with assistance	Accesses data from multiple sources and collects disease-specific history, including psychosocial issues, from the patient and family members	Consistently synthesizes data from multiple sources and collects a disease-specific history from the patient and family members	Role models gathering and synthesis of clinical information
Performs a physical examination standard for general internal medicine	Performs a disease-specific physical examination, with assistance	Completes a disease-specific physical examination	Consistently completes a disease-specific physical examination	
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				Not Yet Assessable <input type="checkbox"/>

Patient Care 2: Diagnoses and Assigns Stage and Severity of Hematology and Oncology Disorders				
Level 1	Level 2	Level 3	Level 4	Level 5
Generates a differential diagnosis expected of a graduating internal medicine resident	Interprets initial diagnostic studies to generate a specialty-specific differential diagnosis	Orders advanced diagnostic studies for common disorders when appropriate	Diagnoses uncommon disorders and determines disease severity using evidence-based studies	Role models the assignments of stage and disease severity, informed by evidence-based studies and guidelines for specialty disorders
Orders testing without specialty-specific differential diagnosis	Determines stage of disorder	Determines clinical comorbidities		
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Comments:				
				Not Yet Completed Level 1 <input type="checkbox"/>
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Patient Care 3: Formulates the Management Plan				
Level 1	Level 2	Level 3	Level 4	Level 5
Formulates a management plan for patients without comorbidities, with assistance	Formulates a management plan using decision-support tools for patients without comorbidities	Formulates a management plan with consideration of disease and patient factors and enrollment in clinical trials	Consistently formulates management plans that include consideration of clinical trial enrollment and conforms to patient preferences and goals of care	Serves as an expert in formulating management plans
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				Not Yet Completed Level 1 <input type="checkbox"/>
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Patient Care 4: Adjusts Management Plans for Acute and Chronic Issues

Level 1	Level 2	Level 3	Level 4	Level 5
Adjusts management plans according to standard guidelines and toxicities, with assistance	Adjusts management plans according to standard guidelines and toxicities	Adjusts management plans based on response to treatment, side effects of the treatment, and comorbidities	Adjusts management plans based on anticipation and recognition of subtle toxicities and long-term sequelae and/or changes in patient preferences and goals	Serves as an expert in developing and implementing pathways that influence management plans

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Comments:

Not Yet Completed Level 1
 Not Yet Assessable

Patient Care 5: Competence in Procedures:

- Performance of Bone Marrow Biopsies and Aspirations
- Assessment and Interpretation of Complete Blood Count
- Interpretation of Peripheral Blood Smears
- Use of Systemic Therapies through all Therapeutic Routes

Level 1	Level 2	Level 3	Level 4	Level 5
Discusses the indications for and assists with all required procedures	Performs all required procedures, with direct supervision	Competently performs all required procedures, with indirect supervision	Proficiently and independently performs all required procedures	Serves as an expert for all required procedures and their complications
Discusses potential procedural complications	Recognizes complications of procedures and enlists help	Manages complications of procedures, with supervision	Anticipates and independently manages complications of procedures	
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Medical Knowledge 1/2: Non-Malignant and Malignant Hematology (includes Pathophysiology, Diagnostics, Prognostic Information, and Treatment)				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of specialty disorders	Demonstrates expanding knowledge of specialty disorders and development of clinical reasoning	Demonstrates sufficient knowledge of specialty disorders and clinical reasoning skills to determine evidence-based interventions	Synthesizes advanced knowledge of specialty disorders and uses clinical reasoning skills to develop personalized interventions	Serves as a subject matter expert
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Medical Knowledge 3: Solid Tumor Oncology (includes Pathophysiology, Diagnostics, Prognostic Information, and Treatment)				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates basic knowledge of specialty disorders	Demonstrates expanding knowledge of specialty disorders and development of clinical reasoning	Demonstrates sufficient knowledge of specialty disorders and clinical reasoning skills to determine evidence-based interventions	Synthesizes advanced knowledge of specialty disorders and uses clinical reasoning skills to develop personalized interventions	Serves as a subject matter expert
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Systems-Based Practice 1: Patient Safety

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of common patient safety events	Identifies system factors that lead to patient safety events	Participates in the analysis of patient safety events	Conducts analysis of patient safety events and offers error prevention strategies	Actively engages teams and processes to modify systems to prevent patient safety events
Demonstrates knowledge of how to report patient safety events	Reports patient safety events through institutional reporting systems (simulated or actual)	Participates in disclosure of patient safety events to patients and families (simulated or actual)	Leads disclosure of patient safety events to patients and families with documentation (simulated or actual)	Role models or mentors others in the disclosure of patient safety events

Comments:

Not Yet Completed Level 1

Systems-Based Practice 3: System Navigation for Patient-Centered Care: Coordination and Transitions of Care

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of care coordination	Coordinates care of patients in routine clinical situations effectively using the roles of their interprofessional teams	Coordinates care of patients in complex clinical situations effectively using the roles of their interprofessional teams	Role models effective coordination of patient-centered care among different disciplines and specialties	Analyzes the process of care coordination and leads in the design and implementation of improvements
Identifies key elements for safe and effective transitions of care and hand-offs	Performs safe and effective transitions of care/hand-offs in routine clinical situations	Performs safe and effective transitions of care/hand-offs in complex clinical situations	Role models and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems, including outpatient settings	Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes
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Comments:

Not Yet Completed Level 1

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice				
Level 1	Level 2	Level 3	Level 4	Level 5
With assistance, accesses available evidence and practice guidelines for patient care	Independently identifies available evidence and practice guidelines for patient care	Critically appraises evidence and applies to patient care	Applies best available evidence, even in the face of insufficient and/or conflicting information	Serves as a role model to critically appraise and apply evidence to patient care
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Professionalism 2: Accountability/Conscientiousness				
Level 1	Level 2	Level 3	Level 4	Level 5
Takes responsibility for failure to complete tasks	Performs tasks in a timely manner or provides notification when unable to complete tasks	Performs tasks in a timely manner with appropriate attention to detail in complex or stressful situations	Takes responsibility in situations that impact the ability of team members to complete tasks and responsibilities in a timely manner	Exceeds expectations for supporting team responsibilities
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Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication

Level 1	Level 2	Level 3	Level 4	Level 5
Identifies common barriers to effective communication	Identifies complex barriers to effective communication	Reflects on personal biases while attempting to minimize communication barriers	Proactively improves communication by addressing barriers including patient and personal biases	Role models communication that addresses barriers
Recognizes the need to adjust communication strategies based on context	Verifies patient/family understanding of the clinical situation to optimize effective communication	With guidance, uses shared decision making to align patient/family values, goals, and preferences with treatment options to make a personalized care plan	Independently, uses shared decision making to make a personalized care plan	Role models shared decision making in patient/family communication, including those with a high degree of uncertainty/conflict
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Interpersonal and Communication Skills 2: Interprofessional and Team Communication

Level 1	Level 2	Level 3	Level 4	Level 5
<p>Uses respectful communication (verbal, non-verbal) with all members of the health care team</p> <p>Demonstrates openness to feedback</p>	<p>Communicates effectively within and across all health care teams</p> <p>Responsive to feedback</p>	<p>Adapts communication style within and across all health care teams to ensure mutual understanding</p> <p>Seeks and provides performance feedback</p>	<p>Coordinates recommendations from different members of the health care team to optimize patient care</p> <p>Uses feedback to improve own performance and provides actionable feedback to team members</p>	<p>Role models flexible communication strategies that solicits and values input from all health care team members, resolving conflict when needed</p> <p>Role models giving and receiving of feedback</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Comments:</p> <p style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></p>				