Hematology Oncology Assessment Tools for Fellowship Programs

2020

The assessment tools in this document utilize the Accreditation Council for Graduate Medical Education (ACGME) Hematology Oncology Milestones. The Milestones provide a framework for the assessment of the fellow. They do not represent the entirety of the six domains of physician competency. These tools were designed to streamline assessment and to hopefully provide more granular data of training progress. Fellowship programs are not required to use these tools for their assessment. The ACGME requires that fellowship programs use multiple evaluators to provide information to the Clinical Competency Committee for its synthesis of performance.

Table of Contents

| Welcome Letter | 3 |
|--|----|
| Hematology or Oncology Continuity Clinic | |
| nematology or Oncology Continuity Clinic | Э |
| Hematology or Oncology Inpatient Wards or Consults | 17 |
| Bone Marrow Transplant | 28 |
| Palliative Care | 39 |
| Infusion Clinic | 50 |
| Scholarly Activity | 58 |
| Bone Marrow Aspirate and Biopsy Procedure | 59 |
| Patient Safety and Quality Improvement Activity | 61 |
| Fellow Well-Being | 63 |
| Multisource Assessment Forms | 65 |
| Fellow Assessment by Healthcare Staff | 66 |
| Communication, Interpersonal Skills, and Professionalism Evaluation (Patient Form) | 67 |
| Fellow Self-Assessment/Reflection | 68 |

Hematology Oncology Assessment Toolkit

Welcome to the American Society of Hematology (ASH) and American Society of Clinical Oncology (ASCO) toolkit for training programs in hematology, oncology and combined hematology/oncology. The Hematology Oncology Milestones are reported to the ACGME every six months effective July 2020 [1]. The Supplemental Guide provides additional guidance and examples for the Hematology and Medical Oncology Milestones [2]. Programs are encouraged to review the ACGME Program Requirements, specifically Section V, before July 2020. Programs may choose to adopt some of or all the tools in this document. Programs may use any tools or innovative techniques that they wish. This document provides our vision of tools.

This set of "Assessment Tools" is available for programs who wish to use them. The goal of this project is to streamline assessment with Milestone data. We hope that this improves the overall feedback process with more data to fellows and programs by making the system easy to work with. The Milestones, however, represent the fellow's trajectory on the core competencies and the subcompetencies. The Milestones provide a framework for assessing the development of the fellow in key dimensions of the elements of physician competency in the specialty.

For programs that wish to use these tools, the following information will guide you. The tools consist of the common clinical rotations and activities. Clinical rotations start with learning objectives. The other activities have descriptions within the tools of how to use them. The tools come directly from the Hematology Oncology Milestones subcompetency streams and can go into the program's electronic reporting system. They go directly to the faculty member or other assessor after the fellow completes his/her rotation or activity. When the faculty member or assessor returns the form electronically, the Clinical Competency Committee (CCC) sees the data for their review. The CCC makes recommendations about the fellow's progress on the Milestones and that recommendation goes to the Program Director (PD) who makes the final decision on The Milestones report to the ACGME.

We endeavored to cover all the subcompetencies in the rotations and activities (Table 1). Professionalism 1, "Professional Behavior and Ethical Principles," did not get a place in any of the rotations or activities. The work group decided that this subcompetency should be part of the general discussion at the CCC meeting with final determination by the PD. Some of the subcompetencies are represented many times and some, like Scholarship, only occur once (Table 2). Programs should make sure that if some, but not all of these tools are adopted, then they address assessment of all the subcompetencies by some means.

Work Group Members:

Martha Arellano, MD Srikanth Nagalla, MBBS, MS

Christian Cable, MD, MHPE Daniel Richardson, MD

Frances Collichio, MD Winston Tan, MD

Mary Kwok, MD Maurice Willis, MD

Editor:

Niké Alade *Program Coordinator, Professional Development* American Society of Clinical Oncology

Table 1

| Subcompet | tency | Rotation/Activity |
|-----------|---------------------|---|
| PC1 | H&P | Hem/Onc cont, Hem/Onc inpt, BMT, Pall care |
| PC2 | Dx/stage | Hem/Onc cont, Hem/Onc inpt |
| PC3 | Manage | Hem/Onc cont, Hem/Onc inpt, BMT, Pall care, Infusion |
| PC4 | Adjust plan | Hem/Onc cont, Hem/Onc inpt, BMT, Infusion |
| PC5 | Procedures | Hem/Onc inpt, BMT, Infusion, Bone mar proc |
| MK1 | Non-malignant heme | Hem/Onc cont, Hem/Onc inpt, BMT, Pall care, Infusion, Heme (ASH) ITE |
| MK2 | Malignant heme | Hem/Onc cont, Hem/Onc inpt, BMT, Pall care, Infusion, Heme (ASH) ITE and Onc (ASCO) ITE |
| MK3 | Solid tumor | Hem/Onc cont, Hem/Onc inpt, Infusion, Onc (ASCO) ITE |
| MK4 | Scholarship | Scholarship |
| SBP1 Top | Patient safety | Safety/QIP |
| SBP1 Low | Reporting events | Hem/Onc inpt, BMT, Pall care |
| SBP2 | QIP | Safety/QIP |
| SBP3 | Navigation | Hem/Onc cont, Hem/Onc inpt, BMT, Pall care |
| SBP4 | Population health | Hem/Onc cont |
| SBP5 | Health systems | Hem/Onc cont, Infusion |
| PBLI1 | Evidence | Hem/Onc inpt, BMT |
| PBLI2 | Reflection/learning | Hem/Onc cont, CCC/PD |
| PROF 1 | Ethical behavior | CCC/PD |
| PROF 2 | Accountabilty | Hem/Onc cont, Hem/Onc inpt, BMT |
| PROF 3 | Well-being | Hem/Onc cont, BMT, Pall care, Well-being |
| ICS1 | Pt/family | Hem/Onc cont, Hem/Onc inpt, BMT, Pall care, Infusion |
| ICS2 | Team | Hem/Onc inpt, BMT, Pall care |
| ICS3 | Documentation | Hem/Onc cont, BMT, Pall care, Infusion |

^{*}Note: ITE = In-Training Exam. CCC = Clinical Competency Committee. PD = Program Director.

Table 2

| Hem/Onc Cont | Hem/Onc Inpt | BMT | Pall Care | Infusion | Scholarship | Bone Marrow Procedure | Safety/QIP | Well-being |
|--------------|--------------|--------------|--------------|--------------|-------------|-----------------------|--------------|------------|
| PC1 | PC1 | PC1 | PC1 | PC3 | MK4 | Competency form/PC5 | SBP1 top 1/2 | PROF 3 |
| PC2 | PC2 | PC3 | PC3 | PC4 | | | SBP2 | |
| PC3 | PC3 | PC4 | MK1 | PC5 | | | | |
| PC4 | PC4 | PC5 | MK2 | MK1 | | | | |
| MK1/2 | PC5 | MK1/2 | SBP1 low 1/2 | MK2 | | | | |
| MK3 | MK1/2 | SBP1 low 1/2 | SBP3 | MK3 | | | | |
| SBP3 | MK3 | SBP3 | PROF3 | SBP5 top 1/2 | | | | |
| SBP4 | SBP1 low 1/2 | PBLI1 | ICS1 | ICS1 | | | | |
| SBP5 | SPB3 | PROF 2 | ICS2 | ICS3 top 1/2 | | | | |
| PBLI2 | PBLI1 | PROF3 | ICS3 | | | | | |
| PROF2 | PROF2 | ICS1 | | | | | | |
| PROF3 | ICS1 | ICS2 | | | | | | |
| ICS1 | ICS2 | ICS3 | | | | | | |
| ICS3 | | | | | | | | |

^{[1].} Hematology and Oncology Milestones. The Accreditation Council for Graduate Medical Education https://www.acgme.org/Portals/0/PDFs/Milestones/HematologyAndMedicalOncologyMilestones2.0.pdf?ver=2019-08-22-092135-630. Accessed 11/22/2019

^{[2].} Supplemental Guide: Hematology and Oncology. The Accreditation Council for Graduate Medical Education https://www.acgme.org/Portals/0/PDFs/Milestones/HematologyAndMedicalOncologySupplementalGuide.pdf?ver=2019-08-22-092135-660. Accessed 11/22/2019

Hematology or Oncology Continuity Clinic

Learning Objectives

For Hematology:

Fellows will progressively learn to:

- 1) Demonstrate proficiency in ordering and interpreting tests of hemostasis and thrombosis for both congenital and acquired disorders and regulation of antithrombotic therapy.
- 2) Demonstrate knowledge and proficiency in the various principles of transfusion medicine and competence in apheresis procedures.
- 3) 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.
- 4) Summarize specific prognostic factors (risk stratify) and make management decisions based on risk stratification.

For Oncology:

Fellows will progressively learn to:

- 1) Assess new patients with cancer and stage them appropriately.
 - a) Assess patient performance status and comorbidities for new patients and returning patients.
- 2) Formulate a management plan for clinic patients that conforms to patient preferences and goals of care.
- 3) Adjust management plan based on response, side effects, and long-term sequelae of treatment.
- 4) Write systemic therapy for clinic patients.

For BOTH Hematology and Oncology:

Fellows will progressively learn to:

- 1) Develop expanding knowledge.
- 2) Develop relationships with the attending physician, patients, families, and clinic staff in order to provide a safe and efficient environment for the clinic patients.
- 3) Adapt practice to specific population.
- 4) Reflect on practice and develop a learning plan.
- 5) Transition patients to appropriate specialties, such as palliative care, radiation oncology, and pain management when appropriate.
- 6) Communicate well with patients, families, teams, and through the medical record.

| Patient Care 1: Accesses Assessment | s Data Sources to Synthesi | ze Patient and Disease Spe | ecific Information Necessa | ary for Clinical |
|--|---|---|--|---|
| 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 | |
| | | | | |
| Comments: | | | | ompleted Level 1 ssessable |

| 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 Orders testing without | Interprets initial diagnostic studies to generate a specialty-specific differential diagnosis Determines stage of | Orders advanced diagnostic studies for common disorders when appropriate Determines clinical | 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 | | |
| specialty-specific differential diagnosis | disorder | comorbidities | | | | |
| | | | | | | |
| Patient Care 3: Formulat | es the Management Plan | | Not Yet A | ssessable | | |
| 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 | | |
| | | | | | | |
| Comments: | | | | | | |

Not Yet Completed Level 1 Not Yet Assessable

| 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 | | plans be anticipal recogni- toxicitie sequela change | 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 i developing and implementing pathwa that influence management plans | |
| | | | | | | | | |
| Comments: | | | | | | | | ompleted Level 1 (ssessable (|
| (For Hematology) Medica | | | nt and Non-M | lalignant Hem | natology (i | No | ot Yet As | ssessable (|
| (For Hematology) Medica Prognostic Information, | | | nt and Non-M | lalignant Hem | natology (i | No ncludes P | ot Yet As | ssessable (|
| Comments: (For Hematology) Medica Prognostic Information, Level 1 Demonstrates basic knowledge of specialty disorders | and Treatment) | expanding pecialty | Level 3 | es sufficient of specialty and clinical kills to evidence- | Level 4 Synthes knowled disorde clinical | ncludes P sizes advarage of spectres and uses reasoning slop personage | Pathoph nced cialty s skills | ssessable (|

| (For Oncology) 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 | | |
| | | | | | | |
| Comments: | | | Not Yet C Not Yet A | ompleted Level 1 ssessable | | |

| 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 |
| | | | | |

| Systems-Based Practice 4: System Navigation for Patient-Centered Care: Population Health | | | | | | |
|--|--|--|--|--|--|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | | |
| Demonstrates knowledge of population and community health care needs and disparities | Identifies specific population and community health care needs and disparities | Identifies local resources to meet community health care needs and disparities | Adapts practice to provide for the needs of specific populations | Leads innovations and advocates for populations and communities with health care disparities | | |
| | | | | | | |
| Comments: | | | Not Yet Co | ompleted Level 1 | | |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--|---|---|--|--|
| Identifies basic financial barriers for individual patients and basic financial components of the health care system | Considers financial barriers and quality of care when ordering diagnostic or therapeutic interventions | Incorporates value (quality/costs) into shared decision making, with interprofessional team input | Manages financial factors that affect a patient's access to care and decision making | Role models and teaches patients and interprofessional team members to consider value when making diagnostic and therapeutic recommendations |
| Identifies key components of the complex health care system | Describes how components of a complex health care system are inter-related, and how this impacts ordering therapeutic interventions | Discusses how individual practice and the broader system affect each other | Manages various components of the complex health care system to provide efficient and effective patient care | Advocates for or leads systems change that enhances high-value, efficient, and effective patient care |
| | | | | |

| Practice-Based Learning | g and Improvement 2: Refle | ctive Practice and Commit | ment to Personal Growth | | |
|--|--|---|---|--|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | |
| Identifies gaps in knowledge and performance | Reflects on the factors which contribute to gaps between expectations and actual performance | Institutes changes to narrow the gaps between expectations and actual performance | Intentionally seeks performance data to narrow the gaps between expectations and actual performance | Role models reflective practice | |
| Actively seeks opportunities to improve | Designs and implements a learning plan, with assistance | Independently creates and implements a learning plan | Measures the effectiveness of the learning plan and makes appropriate changes | Facilitates the design and implementation of learning plans for others | |
| | | | | | |
| Comments: | | | Not Yet C | ompleted Level 1 | |

| 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 | | |
| | | | | | | |
| Comments: | | | Not Yet C | Completed Level 1 | | |

| Professionalism 3: Fellow Well-Being | | | | |
|---|---|---|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Recognizes status of personal and professional well-being, with assistance | Independently recognizes status of personal and professional well-being | With assistance, proposes a plan to optimize personal and professional well-being | Independently develops a plan to optimize personal and professional well-being | Role models the continual ability to monitor and address personal and professional well-being Advocates for institutional changes to support well-being |
| | | | | |
| Comments: | | | Not Yet C | completed Level 1 |

| Interpersonal and Comm | nunication Skills 1: Patient- | and Family-Centered Com | munication | |
|---|---|---|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Identifies common | Identifies complex barriers | Reflects on personal | Proactively improves | Role models |
| barriers to effective | to effective | biases while attempting to | communication by | communication that |
| communication | communication | minimize communication barriers | addressing barriers including patient and personal biases | 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 |
| | | | | |
| Comments: | | | Not Yet C | ompleted Level 1 |

| Interpersonal and Comm | nunication Skills 3: Commu | nication within Health Care | e Systems | |
|--|---|--|--|---|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Accurately records information in the patient record | Demonstrates organized diagnostic and medical reasoning through notes in the patient record | Documentation reflects level of complexity and severity of disease | Documentation reflects medical reasoning, patient preferences, and management recommendations and plans | Role models optimal documentation |
| Safeguards patient personal health information in communications | Appropriately selects forms of communication based on context | Communication includes key stakeholders | Achieves written or verbal communication that is exemplary | Guides departmental or institutional communication policies |
| | | | | |
| Comments: | | | Not Yet C | ompleted Level 1 |

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-threating 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.

| 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 | |
| | | | | |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--------------------------|-------------------------------|------------------------|--------------------------|----------------------------|
| Generates a differential | Interprets initial diagnostic | Orders advanced | Diagnoses uncommon | Role models the |
| diagnosis expected of a | studies to generate a | diagnostic studies for | disorders and | assignments of stage and |
| graduating internal | specialty-specific | common disorders when | determines disease | disease severity, informed |
| medicine resident | differential diagnosis | appropriate | severity using evidence- | by evidence-based |
| | | | based studies | studies and guidelines for |
| Orders testing without | Determines stage of | Determines clinical | | specialty disorders |
| specialty-specific | disorder | comorbidities | | |
| differential diagnosis | | | | |
| | | | | |
| Comments: | | | | |
| | | | Not Yet C | ompleted Level 1 |
| Not Yet Assessable | | | | |

| Patient Care 3: Formula | ates 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 |
| | | | | |
| Comments: | | | Not Yet C Not Yet A | ompleted Level 1 ssessable |

| Patient Care 4: Adjusts N | lanagement Plans for Acut | e 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 |
| | | | | |
| Comments: | | | | ompleted Level 1 ssessable |

| Patient Care 5: | Competence | in Proced | lures: |
|-----------------|------------|-----------|--------|
|-----------------|------------|-----------|--------|

- 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

| • Use of Systemic Therapies through all Therapeutic Routes | | | | |
|--|---|---|---|-----------------------------|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Discusses the indications | Performs all required | Competently performs all | Proficiently and | Serves as an expert for all |
| for and assists with all | procedures, with direct | required procedures, with | independently performs | required procedures and |
| required procedures | supervision | indirect supervision | all required procedures | 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 | |
| | | | | |
| Comments: | | | | |
| | | | Not Yet C Not Yet A | ompleted Level 1 |
| | | | NOT LET A | |

| Medical Knowledge 1/2: Information, and Treatme | Non-Malignant and Maligna ent) | nnt Hematology (includes P | athophysiology, Diagnos | tics, Prognostic |
|---|---|--|--|-----------------------------------|
| 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 |
| Comments: | | | Not Yet Co Not Yet As | ompleted Level 1 ssessable |
| Medical Knowledge 3: So | olid Tumor Oncology (inclu | des Pathophysiology, Diag | nostics, Prognostic Infor | mation, 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 |
| | | | | |
| Comments: | | | Not Yet Co Not Yet As | ompleted Level 1 |

| 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 | | | | |

| 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 |
| | | | | |

| 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 | |
| | | | | | |
| Comments: | Comments: Not Yet Completed Level 1 | | | | |
| | | | | | |
| 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 | |
| | | | | | |
| Comments: | Comments: Not Yet Completed Level 1 | | | | |

| Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication | | | | |
|--|---|---|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Identifies common | Identifies complex barriers | Reflects on personal | Proactively improves | Role models |
| barriers to effective | to effective | biases while attempting to | communication by | communication that |
| communication | communication | minimize communication barriers | addressing barriers including patient and personal biases | 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 |
| | | | | |
| Comments: Not Yet Completed Level 1 | | | | |

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

Bone Marrow Transplant

Learning Objectives:

Fellows will learn how to work-up and subsequently manage patients admitted for bone marrow transplantation (BMT), peripheral blood stem cell transplantation (PBSCT), or their related complications. Fellows will progressively learn to:

- 1) Indicate stem cell transplantation (allogeneic, autologous) in newly diagnosed and relapsed/refractory patients.
- 2) Understand principles of HLA typing and donor selection.
- 3) Choose appropriate donors, taking into account disease, HLA typing, patient and donor-related information.
- 4) Choose preparative regimens for each patient based on patient and disease-related factors.
- 5) Recognize and manage common complications of transplantation (febrile neutropenia, infusion-related reactions, mucositis, and neurological and cardiac events).
- 6) Recognize and manage serious complications of transplantation, including sinusoidal obstructive syndrome (SOS) of the liver, pulmonary hemorrhage, atypical HUS, etc.
- 7) Understand rationale for choosing a specific immunosuppressive regimen in allogeneic transplantation.
- Diagnose and stage acute and chronic graft vs. host disease, and understand principles of management.
- 9) Utilize comorbidity scoring systems in decisions to proceed (or not) with transplantation.
- 10) Educate patients about potential short- and long-term complications associated with BMT/PBSCT.
- 11) Perform diagnostic and therapeutic procedures (bone aspirate/biopsy, lumbar puncture, and tap of Ommaya/Hickham catheters with and without intra-thecal chemotherapy), if procedures are performed. May wish to use separate bone marrow biopsy evaluation tool.
- 12) Work within a multi-disciplinary team to exhibit excellent interpersonal and communication skills, professionalism, and effective hand-offs.

^{*}Note: The focus of Systems-Based Practice 1 (SBP-1) is the second line. Levels 1 and 2 of the second line can be mastered by having the fellow learn the hospital 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 | |
| | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable | | | | |

| 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 | |
| | | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable | | | | | |

| Patient Care 4: Adjusts | Management Plans for A | cute 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 |
| | | | | |
| Comments: | | | | Completed Level 1 |

| Patient Care 5: | Competence | in Proced | lures: |
|------------------------|------------|-----------|--------|
|------------------------|------------|-----------|--------|

- 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

| 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 | | |
| | | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable | | | | | |

| Medical Knowledge 1/2: Malignant and Non-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 | |
| Comments: Dased interventions Interventions | | | | | |

| | | | | 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 patier 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 |

| 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 |
| | | | | |

| 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 | |
| | | | | | |
| Comments: Not Yet Completed Level 1 | | | | | |
| | | | | | |
| 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 | |
| | | | | | |
| Comments: | Comments: Not Yet Completed Level 1 | | | | |

| Professionalism 3: Fellow Well-Being | | | | | | | |
|--|---|--|---|--|--|--|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | | | |
| Recognizes status of personal and professional well-being, with assistance | Independently recognizes status of personal and professional well-being | With assistance, proposes a plan to optimize personal and professional well-being | Independently develops a plan to optimize personal and professional well-being | Role models the continual ability to monitor and address personal and professional well-being Advocates for institutional changes to support well-being | | | |
| | | | | | | | |
| Comments: Not Yet Completed Level 1 | | | | | | | |

| Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication | | | | | | |
|--|---|---|---|--|--|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | | |
| Identifies common | Identifies complex barriers | Reflects on personal | Proactively improves | Role models | | |
| barriers to effective | to effective | biases while attempting to | communication by | communication that | | |
| communication | communication | minimize communication barriers | addressing barriers including patient and personal biases | 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 | | |
| | | | | | | |
| Comments: Not Yet Completed Level 1 | | | | | | |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--------------------------------------|--------------------------|---|---|--|
| Uses respectful | Communicates effectively | Adapts communication | Coordinates | Role models flexible |
| communication (verbal, | within and across all | style within and across all | recommendations from | communication strategies |
| non-verbal) with all | health care teams | health care teams to | different members of the | that solicits and values |
| members of the health | | ensure mutual | health care team to | input from all health care |
| care team | | understanding | optimize patient care | team members, resolving conflict when needed |
| Demonstrates openness to feedback | Responsive to feedback | Seeks and provides performance feedback | Uses feedback to improve own performance and provides actionable feedback to team members | Role models giving and receiving of feedback |
| | | | | |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--|---|--|--|---|
| Accurately records information in the patient record | Demonstrates organized diagnostic and medical reasoning through notes in the patient record | Documentation reflects level of complexity and severity of disease | Documentation reflects medical reasoning, patient preferences, and management recommendations and plans | Role models optimal documentation |
| Safeguards patient personal health information in communications | Appropriately selects forms of communication based on context | Communication includes key stakeholders | Achieves written or verbal communication that is exemplary | Guides departmental or institutional communication policies |

Palliative Care

Learning Objectives:

Fellows will learn how to provide palliative care to patients with cancer and hematologic disorders. Fellows will progressively develop competence in:

- 1) Basic management of pain and symptoms in patients with cancer and hematologic disorders.
- 2) Choose opioids and dose appropriately, including switching between different types of opioids and different routes of administration (oral, parenteral).
- 3) Recognize non-pharmacologic pain management.
- 4) Diagnosis and basic management of depression and anxiety in patients with cancer and hematologic disorders.
- 5) Lead discussions with patients and their family members about prognosis, goals of treatment, and code status.
- 6) Discuss advanced directives.
- 7) Lead end-of-life discussions.
- 8) Document advance care planning.
- 9) Gain exposure to hospice and home care.
- 10) Interprofessional collaboration to exhibit excellent interpersonal and communication skills, professionalism, and hand-offs.

^{*}Note: The focus of Systems-Based Practice 1 (SBP-1) is the second line. Levels 1 and 2 can be mastered when the fellow learns the reporting system. The first line of SBP-1 is covered in another activity.

| Patient Care 1: Accesses Assessment | s Data Sources to Synthesi | ze Patient and Disease Spe | ecific Information Necessa | ary for Clinical |
|--|---|---|--|---|
| 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 | |
| | | | | |
| Comments: | | | | ompleted Level 1 ssessable |

| Patient Care 3: Formulat | es 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 |
| | | | | |
| Comments: | | | Not Yet C Not Yet A | ompleted Level 1 ssessable |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|----------------------------|-----------------------------|---|---------------------------------------|---------------------|
| Lists commonly available | Describes the indication | Describes knowledge, | Demonstrates detailed | Serves as a subject |
| medications for pain and | for medications for pain or | mechanism of action, | knowledge of | matter expert |
| non-pain symptoms | non-pain syndromes | metabolism, adverse effects, interactions and | pharmacology of opioid and non-opioid | · |
| Lists non-pharmacologic | Describes the indication | conversions of | analgesics and uses | |
| interventions for pain and | for non-pharmacologic | medications for pain or | clinical reasoning skills | |
| non-pain symptoms | interventions for pain or | non-pain syndromes | to develop personalized | |
| | non-pain syndromes | | interventions | |
| | | Describes locally | | |
| | | available non- | Demonstrates detailed | |
| | | pharmacologic | knowledge of non- | |
| | | interventions of pain | pharmacologic | |
| | | | interventions | |
| | | | | |
| Comments: | | | | |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|---|---|--|--|-----------------------------------|
| Lists commonly available medications for non-pain symptoms | Describes the indication for medications for non-pain syndromes | Describes knowledge, mechanism of action, metabolism, adverse effects, interactions and | Demonstrates detailed knowledge of pharmacology of medications for non- | Serves as a subject matter expert |
| Lists non-pharmacologic interventions for non-pain symptoms | rventions for non- for non-pharmacologic | conversions of medications for non-pain syndromes | pain symptoms and uses clinical reasoning skills to develop personalized | |
| | | Describes locally available non- | interventions | |
| | | pharmacologic interventions of non-pain | Demonstrates detailed knowledge of non- | |
| | | symptoms | pharmacologic interventions | |
| | | | | |

| 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 patien 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 |
| | | | | |

| 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 |
| | | | | |

| Professionalism 3: Fello | w Well-Being | | | |
|--|---|--|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Recognizes status of personal and professional well-being, with assistance | Independently recognizes status of personal and professional well-being | With assistance, proposes a plan to optimize personal and professional well-being | Independently develops a plan to optimize personal and professional well-being | Role models the continual ability to monitor and address personal and professional well-being Advocates for institutional changes to support well-being |
| | | | | |
| Comments: | | | Not Yet C | ompleted Level 1 |

| Interpersonal and Comn | nunication Skills 1: Patient- | and Family-Centered Com | munication | |
|---|---|---|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Identifies common | Identifies complex barriers | Reflects on personal | Proactively improves | Role models |
| barriers to effective | to effective | biases while attempting to | communication by | communication that |
| communication | communication | minimize communication barriers | addressing barriers including patient and personal biases | 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 |
| | | | | |
| Comments: | | | Not Yet C | completed Level 1 |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--------------------------------------|--------------------------|---|---|--|
| Uses respectful | Communicates effectively | Adapts communication | Coordinates | Role models flexible |
| communication (verbal, | within and across all | style within and across all | recommendations from | communication strategies |
| non-verbal) with all | health care teams | health care teams to | different members of the | that solicits and values |
| members of the health | | ensure mutual | health care team to | input from all health care |
| care team | | understanding | optimize patient care | team members, resolving conflict when needed |
| Demonstrates openness to feedback | Responsive to feedback | Seeks and provides performance feedback | Uses feedback to improve own performance and provides actionable feedback to team members | Role models giving and receiving of feedback |
| | | | | |

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--|---|--|--|---|
| Accurately records information in the patient record | Demonstrates organized diagnostic and medical reasoning through notes in the patient record | Documentation reflects level of complexity and severity of disease | Documentation reflects medical reasoning, patient preferences, and management recommendations and plans | Role models optimal documentation |
| Safeguards patient personal health information in communications | Appropriately selects forms of communication based on context | Communication includes key stakeholders | Achieves written or verbal communication that is exemplary | Guides departmental or institutional communication policies |

Infusion Clinic

We developed this tool to for programs that have an "infusion" rotation, based on Duff et al [1]. Many programs may have their fellows work with Advanced Practice Providers (Pharm Ds, NPs or PAs) whose main role may be to run infusion centers. For programs like that, the assessment could go to them, rather than a faculty member. For programs who assess the competency of prescribing systemic therapy in other contexts, such as in conjunction with continuity clinics or by way of separate activities, this tool may not be helpful.

The red outline on the PC5, SBP5 and IPCS 3 subcompetencies shows which skill is being assessed. In PC5, the "use of systemic therapies through all routes" is meant to say "prescribing the systemic therapy through all routes." The fellow is not required to actually administer the systemic therapy through all routes. Programs are encouraged to assess the information from ASCO's 2019 Program Directors' Retreat here. A couple options are provided in that hyperlink that can help teach and assess the competency of ordering/writing systemic therapy.

Learning Objectives:

Fellows on the infusion clinic will see a variety of patients with hematology and progressively learn to:

- 1) Formulate a treatment plan for a specific patient by having knowledge of the disorder and reviewing all comorbidities, contraindications, and patient preferences.
- 2) Adjust the management plan at point of care.
- Demonstrate proficiency in management of patients with hemoglobinopathies.
- 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) Demonstrate knowledge and proficiency in the various principles of transfusion medicine and competence in apheresis procedures.
- 6) Demonstrate knowledge of systemic therapy for malignant disorders.
- 7) Incorporate financial aspects into treatment plans.
- 8) Discuss the treatment plan with the patient and family so they come away from the discussion with a clear understanding of goals of care.
- 9) Document informed consent in the medical record.

[1]. Duff JM, Markham MJ, George TJ Jr, Close JL. Infusion room based transition to practice; model for teaching cancer systemic therapy management. J Oncol Pract 2017 Nov; 13 (110 e 909-e 915.)

| 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 |
| | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable | | | | |

| 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 |
| | | | | |
| Comments: | | | Not Yet C Not Yet A | ompleted Level 1 ssessable |

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 | | |
| | | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable | | | | | |

| Medical Knowledge 1: Non-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 | |
| | | | | | |
| Comments: | | | Not Yet Co Not Yet As | ompleted Level 1 ssessable | |
| Medical Knowledge 2: Ma | alignant Hematology (inclu | des Pathophysiology, Diag | nostics, Prognostic Infor | mation, 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 | |
| | | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable | | | | | |

| Medical Knowledge 3: So | olid Tumor Oncology (inclu | des Pathophysiology, Diag | gnostics, Prognostic Infor | mation, 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 |
| | | | | |
| Comments: | | | Not Yet Co Not Yet As | ompleted Level 1 |

Systems-Based Practice 5: Physician Role in Health Care Systems

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--|---|---|--|--|
| Identifies basic financial barriers for individual patients and basic financial components of the health care system | Considers financial barriers and quality of care when ordering diagnostic or therapeutic interventions | Incorporates value (quality/costs) into shared decision making, with interprofessional team input | Manages financial factors that affect a patient's access to care and decision making | Role models and teaches patients and interprofessional team members to consider value when making diagnostic and therapeutic recommendations |
| Identifies key components of the complex health care system | Describes how components of a complex health care system are inter-related, and how this impacts ordering therapeutic interventions | Discusses how individual practice and the broader system affect each other | Manages various components of the complex health care system to provide efficient and effective patient care | Advocates for or leads systems change that enhances high-value, efficient, and effective patient care |
| | | | | |
| Comments: Not Yet Completed Level 1 | | | | |

| Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication | | | | |
|--|---|---|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Identifies common | Identifies complex barriers | Reflects on personal | Proactively improves | Role models |
| barriers to effective | to effective | biases while attempting to | communication by | communication that |
| communication | communication | minimize communication barriers | addressing barriers including patient and personal biases | 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 |
| | | | | |
| Comments: Not Yet Completed Level 1 | | | | |

Interpersonal and Communication Skills 3: Communication within Health Care Systems

| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|--|---|--|---|---|
| Accurately records information in the patient record | Demonstrates organized diagnostic and medical reasoning through notes in the patient record | Documentation reflects level of complexity and severity of disease | Documentation reflects medical reasoning, patient preferences, and management recommendations and plans | Role models optimal documentation |
| Safeguards patient personal health information in communications | Appropriately selects forms of communication based on context | Communication includes key stakeholders | Achieves written or verbal communication that is exemplary | Guides departmental or institutional communication policies |
| Comments: | | | | |
| Comments: Not Yet Completed Level 1 | | | | |

Scholarly Activity

| Medical Knowledge 4: Scholarly Activity | | | | |
|--|---|---|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Identifies areas worthy of scholarly investigation | Formulates a scholarly plan under supervision of a mentor | Presents products of scholarly activity at local meetings | Disseminates products of scholarly activity at regional or national meetings, and/or submits an abstract to regional, state, or national meetings | Publication of independent research that has generated new medical knowledge, educational programs, or process improvement |
| | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable Faculty Mentor: Project: | | | | |
| Domain of Scholarly Activity (indicate best category): Research in basic science, education, translational science, patient care or population health Peer-reviewed grants Quality improvement and/or patient safety initiatives Systematic reviews, meta-analyses, review articles, chapters in medical textbooks or case reports Creation of curricula, evaluation tools, didactic educational activities or electronic educational materials Contribution to professional committees, educational organizations or editorial boards Innovations in education | | | | |

Feedback to Fellow (required):

Bone Marrow Aspirate and Biopsy Procedure

Name of the Fellow: Successfully completed a bone marrow biopsy simulation course? YES NO N/A I. Procedure Preparation: ☐ List indications. ☐ Check labs, medications (including anticoagulants), and allergies. ☐ Determine type of sedation. □ Verify written consent. ☐ Order appropriate tests. ☐ Gather appropriate supplies. **II. Before Procedure:** □ Verify correct patient and perform time out. ☐ Verify position and landmarks. ☐ Observe sterile technique. III. Bone Marrow Aspirate/Biopsy ☐ Adequately numbs patient with lidocaine (local and at periosteum). Insert aspirate and/or biopsy needle perpendicular to skin with steady and straight insertion pressure. ☐ Bone marrow aspirate withdrawn in sufficient quantity in proper collection tubes. Spicules verified with first aspirate. ☐ Adequate bone marrow biopsy sample obtained. ☐ Able to troubleshoot as needed. ☐ Pressure applied to achieve initial hemostasis. ☐ Bandage applied to insertion site. **Competency per Milestones 2.0** ☐ Level 1- Consistently completes all of I independently, and completes II and III with assistance ☐ Level 2- Consistently completes all of I and II independently, but regularly needs some assistance with III or completed the bone marrow biopsy simulation course ☐ Level 3- Consistently completes all of I and II independently, but occasionally needs some assistance with ☐ Level 4- Consistently completes all of I, II and III independently

☐ Level 5- Consistently completes all of I, II and III independently and performed > 20 procedures

| Patient Care 5: | Competence | in Proced | lures: |
|-----------------|------------|-----------|--------|
|-----------------|------------|-----------|--------|

- 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

| • 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 | |
| | | | | |
| Comments: Not Yet Completed Level 1 Not Yet Assessable | | | | |

Patient Safety and Quality Improvement* Activity

The following tool is to assess the fellow's skill set on patient safety and participation in quality improvement projects (QIP). Please consider the top lines of Systems-Based Practice 1 (SBP-1) and the entire Systems-Based Practice 2 (SBP-2) subcompetency in your assessment of the fellow. The second line of SBP-1 is covered in another activity.

| 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 | 2: Quality Improvement | | | |
|---|---|---|---|---|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Demonstrates knowledge of basic quality improvement methodologies and metrics | Describes local quality improvement initiatives | Participates in local quality improvement initiatives | Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project | Creates, implements, and assesses quality improvement initiatives at the institutional or community level |
| | | | | |
| Comments: | | | Not Yet C | ompleted Level 1 |

^{*}Note: Fellowship programs need to have specific activities to assess these competencies since clinical rotations may not include safety events that could lead to a QIP. In order for assessment to take place on both SBP-1 and SBP-2 in one activity, it will be necessary for the fellow to show a patient-related event, not just a topic. For example, if the QIP is on chemotherapy safety around blood work parameters, the fellow should demonstrate the factors that affected safety on a particular case (SBP-1), and then show how this case serves as an example for multiple cases in the QIP (SBP-2). Examples of activities that fellowship programs can adopt to assess this include:

^{[1].} According MK, Heaney ML. Quality improvement and safety curriculum for hematology/oncology fellows at Columbia University. Journal of Clinical Oncology. JCO.2018.36.30 suppl.247.

^{[2].} Rosenfield JC. Using the Morbidity and Mortality conference to teach and assess the ACGME General Competencies. Curr Surg. 62(6):664-9. 2005

Fellow Well-Being

Learning Objectives:

The responsibility for completing this objective is shared among several evaluators. Ideally, this objective would be completed by the program director, a formative/personal mentor, and the outpatient continuity clinic mentor. Optimal timing for completing this objective would be quarterly. At minimum, it should be completed semi-annually. This could be included in the quarterly evaluation completed by the continuity clinic mentor.

Fellows will learn how to monitor and address personal well-being in the context of caring for cancer patients and handling an increasing amount of responsibility. Ideally, this should be accomplished in community with other fellows and faculty. While this process will be variable across fellows, generally fellows will:

- 1) Become aware of their own well-being as evidenced by reflective responses when prompted.
- 2) Develop, adapt and refine practices within a well-being plan to adjust to changing needs and circumstances.
- 3) Regularly engage in practices that promote well-being.
- 4) Progressively develop a community that can provide support when needed.
- 5) Recognize the need for a formative mentor(s) who can guide them on how to flourish in the practice of oncology.
- 6) Initiate and foster a regular relationship with a formative mentor(s).
- 7) Develop a strategy to care for patients in the midst of their suffering.
- 8) Become advocates for well-being, both from a systems and personal perspective.

| Formative Mentor: |
|--|
| Date of Established Relationship: |
| Frequency of Meetings: |
| Identified Areas to Address Within Personal and Professional Well-being: |
| Specific Practices to Improve Well-being: |
| Date of Well-being Plan: |
| Specific Institutional Changes Advocated for: |
| Feedback to Fellow (required): |

| Professionalism 3: Fello | w Well-Being | | | |
|--|---|--|---|--|
| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
| Recognizes status of personal and professional well-being, with assistance | Independently recognizes status of personal and professional well-being | With assistance, proposes a plan to optimize personal and professional well-being | Independently develops a plan to optimize personal and professional well-being | Role models the continual ability to monitor and address personal and professional well-being Advocates for institutional changes to support well-being |
| | | | | |
| Comments: | | | Not Yet C | ompleted Level 1 |

Multisource Assessment Forms

Here are three multisource assessment tools that programs may use. The first is the assessment by the patients of the fellow's performance, the second is the assessment by co-workers of the fellow's performance, and the third is a self-assessment for the fellow on their performance. The forms can be collated by the coordinator and included at the CCC for review.

Fellow Assessment by Healthcare Staff

As part of the assessment process, you are being asked to complete this brief questionnaire about the physician named below. Please note that the goal of our training program is to train blood (Hematologists) and cancer (Oncologists) doctors who are excellent at what they do and who place the patient first. These evaluations will help us to guide the fellow in his/her trajectory toward becoming an excellent Hematologist/Oncologist.

| Your answers to the following questions wi | II remain | confidential. |
|--|-----------|---------------|
|--|-----------|---------------|

General Internal Medicine. 1991:6:IS5-61.

| | Never | Rarely | Sometimes | Usually | Always | Unable to asse |
|---|------------|------------|---------------|------------|------------|-------------------|
| Respects your role in patient care. | | | | | | |
| istens to and considers your opinions about patients' comfort and concerns. | | | | | | |
| s supportive of you and other health care staff. | | | | | | |
| s honest and trust-worthy in demonstrating and evaluating his or her skills and abilities. | | | | | | |
| Handles complex interpersonal situations with staff in a respectful and effective manner. | | | | | | |
| s courteous to patients and their families. Responds to patient's needs for comfort and | | | | | | |
| encouragement. Responds to family's needs for information and encouragement. | | | | | | |
| Respects the patient's right to privacy whenever possible. | | | | | | |
| Respects the rights and choices of patients regarding their care. | | | | | | |
| Handles complex interpersonal situations with patients/families in a respectful and effective manner. | | | | | | |
| Considering both professional and patient/family | | | | | | |
| relationships, how would you rate the fellow's ove ability to act with integrity, respect, and compassio | | Poor | Fair | Go | od E | xceptional |
| lease comment on any positive or negative ex | perience (| or observa | tion you have | had with t | his fellow | ·. |

Communication, Interpersonal Skills, and Professionalism Evaluation (Patient Form)

As part of the assessment process, you are being asked to complete this evaluation about our fellows. The goal of this evaluation is to help the program assess each fellow's competency in the areas of Patient Care, Professionalism, and Interpersonal & Communication Skills. Your feedback will help us to guide the fellow on his/her trajectory toward becoming an excellent Hematologist/Oncologist.

Your answers to the following questions will remain confidential. Participation will not affect your current or future care at our hospital or clinics.

| | | evaluat |
|--|---------------|---------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | amily member? | |

Fellow Self-Assessment/Reflection

| The Hematology and Medical Oncology Fellowship Training Program is committed to the fellows' development of ongoing self-assessment and self-reflection skills. Each fellow needs to complete the following self-assessment form prior to each 6-month semi-annual review meeting with the program's leadership. |
|--|
| Date: |
| Fellow Name: |

Patient Care

Accesses data and synthesizes information, diagnoses and assigns stage, formulates a management plan, adjusts management plan for acute and chronic issues, and competence in procedures.

Area(s) I need to keep improving:

Specific objectives for the next 6 months and strategies to achieve objectives:

Medical Knowledge

Knowledge in non-malignant hematology, malignant hematology, and solid tumor oncology.

Area(s) in which I feel strong:

Area(s) I need to keep improving:

Specific objectives for the next 6 months and strategies to achieve objectives:

Medical Knowledge

Scholarly Activity.

Area(s) in which I feel strong:

| Area(s) I need to keep improving: |
|--|
| Specific objectives for the next 6 months and strategies to achieve objectives: |
| Systems-Based Practice Patient safety, quality improvement, coordination and transitions in care, population health, and physician's role in the health care system. |
| Area(s) in which I feel strong: |
| Area(s) I need to keep improving: |
| Specific objectives for the next 6 months and strategies to achieve objectives: |
| Practice-Based Learning and Improvement Evidence-based medicine, informed practice, reflective practice, and commitment to personal growth. |
| Area(s) in which I feel strong: |
| Area(s) I need to keep improving: |
| Specific objectives for the next 6 months and strategies to achieve objectives: |
| Professionalism Professional behavior and ethical principles, accountability/conscientiousness, and fellow well-being. |
| Area(s) in which I feel strong: |

| Specific objectives for the next 6 months and strategies to achieve objectives: |
|--|
| Interpersonal and Communications Skills Patient- and family-centered communication, inter-professional and team communication, and communication within health care systems. |
| Area(s) in which I feel strong: |
| Area(s) I need to keep improving: |
| Specific objectives for the next 6 months and strategies to achieve objectives: |
| |

Area(s) I need to keep improving: