

Complex General Surgical Oncology Milestones

The Accreditation Council for Graduate Medical Education



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The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow in key dimensions of the elements of physician competence in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competence, nor are they designed to be relevant in any other context.

Complex General Surgical Oncology Milestones Work Group

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American Board of Surgery

ACGME Review Committee for Surgery

Society of Surgical Oncology Surgical Oncology Program Directors Committee

Understanding Milestone Levels and Reporting

This document presents the Milestones, which programs use in a semi-annual review of fellow performance, and then report to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME Competencies organized in a developmental framework. The narrative descriptions are targets for fellow performance throughout their educational program.

Milestones are arranged into levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert fellow in the specialty or subspecialty. For each reporting period, the Clinical Competency Committee will review the completed evaluations to select the milestone levels that best describe each learner's current performance, abilities, and attributes for each subcompetency.

These levels *do not* correspond with post-graduate year of education. Depending on previous experience, a junior fellow may achieve higher levels early in the educational program just as a senior fellow may be at a lower level later in the educational program. There is no predetermined timing for a fellow to attain any particular level. Fellows may also regress in achievement of their milestones. This may happen for many reasons, such as over scoring in a previous review, a disjointed experience in a particular procedure, or a significant act by the fellow.

Selection of a level implies the fellow substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page v).

Additional Notes

Level 4 is designed as a graduation *goal* but *does not* represent a graduation *requirement*. Making decisions about readiness for graduation and unsupervised practice is the purview of the program director. Furthermore, Milestones 2.0 include revisions and changes that preclude using Milestones as a sole assessment in high-stakes decisions (i.e., determination of eligibility for certification or credentialing). Level 5 is designed to represent an expert fellow whose achievements in a subcompetency are greater than the expectation. Milestones are primarily designed for formative, developmental purposes to support continuous quality improvement for individual learners, education programs, and the specialty. The ACGME and its partners will continue to evaluate and perform research on the Milestones to assess their impact and value.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to ACGME supervision guidelines as described in the Program Requirements, as well as to institutional and program policies. For example, a fellow who performs a procedure independently must, at a minimum, be supervised through oversight.

A Supplemental Guide is also available to provide the intent of each subcompetency, examples for each level, assessment methods or tools, and other available resources. The Supplemental Guide, is designed only to assist the program director and Clinical Competency Committee, and is not meant to demonstrate any required element or outcome.

Supplemental Guides and other resources are available on the Milestones page of each specialty section of the ACGME website. On www.acgme.org, choose the applicable specialty under the "Specialties" menu, then select the "Milestones" link in the lower navigation bar.

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a fellow's performance on the milestones for each sub-competency will be indicated by selecting the level of milestones that best describes that fellow's performance in relation to those milestones.

Systems-based Practice	1: Patient Safety and Quali	ty Improvement		
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 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	Participates in disclosure of patient safety events to patients and families	Discloses patient safety events to patients and families	Role models or mentors others in the disclosure patient safety events
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, as assesses quality improvement initiatives the institutional or community level
Comments:			Not Yet C	ompleted Level 1
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Level 1	Level 2	Level 3	Level 4	Level 5
Identifies relevant oncologic information (e.g., clinical assessment, imaging, pathology) to develop a differential diagnosis	Discriminates the quality of the relevant information to determine if additional information (i.e., diagnostics) is needed	With assistance, integrates oncologic information with patient specific factors to design a diagnostic and work-up plan	Independently integrates oncologic information with patient specific factors to design a succinct diagnostic and work-up plan	Appraises gaps in literature and research related to diagnostic work-up and multidisciplinary treatment plans to propose future
Discusses surgical options for treatment	Discusses multidisciplinary options for treatment	With assistance, creates a multidisciplinary treatment plan	Independently creates a multidisciplinary treatment plan	investigations

Patient Care 2: Management of Intra-Operative Complications				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies types of intra- operative complications and management strategies	With assistance, recognizes and manages intra-operative complications	Independently recognizes and manages intra- operative complications	Anticipates and prevents common intra-operative complications	Anticipates and prevents rare intra-operative complications
Comments: Not Yet Completed Level 1 Not Yet Rotated				

Patient Care 3: Intra-Operative Oncologic Decision Making					
Level 1	Level 2	Level 3	Level 4	Level 5	
Lists potential intra- operative findings that would require refinement of pre-operative surgical plan	Identifies intra-operative findings that require refinement of pre-operative surgical plan	With assistance, refines pre-operative surgical plan based on intra-operative findings	Independently refines pre-operative surgical plan based on common intra-operative findings	Independently refines pre- operative surgical plan based on complex intra- operative findings	
Comments:			Not Yet	Completed Level 1	

Patient Care 4: Intra-Operative Patient Care – Procedural Skills					
Level 1	Level 2	Level 3	Level 4	Level 5	
Demonstrates limited tissue-handling skills	Inconsistently demonstrates careful tissue handling	Consistently demonstrates careful tissue handling	Adapts tissue handling based on tissue quality	Identifies innovative operative techniques, instrumentation, operative approaches, or significant improvement in established techniques	
Requires prompting to identify appropriate tissue planes	Identifies appropriate plane but requires redirection to maintain dissection in the optimal tissue plane	Visualizes tissue plane, identifies and dissects relevant normal anatomy	Visualizes tissue plane, identifies and dissects relevant abnormal anatomy		
Comments: Not Yet Completed Level 1 Not Yet Rotated					

Patient Care 5: Intra-Operative Patient Care – Operative Autonomy					
Level 1	Level 2	Level 3	Level 4	Level 5	
Moves forward in the operation only with active direction	Moves fluidly through the course of the operation with minimal prompting	Independently moves fluidly through the course of common operations and anticipates next steps	Independently moves fluidly through the course of complex operations and anticipates next steps	Independently moves fluidly through the course of rare and complex operation and anticipates next steps	
Comments:			Not Yet (Not Yet I	Completed Level 1	

Patient Care 6: Immediate Post-Operative Care					
Level 1	Level 2	Level 3	Level 4	Level 5	
Manages routine post- operative course	Manages common post- operative complications	Independently manages complicated post-operative course and complications	Anticipates and provides early, effective intervention for post-operative complications	Identifies gaps in post- operative management and complications to be addressed in quality improvement/research initiatives	
Comments: Not Yet Completed Level 1 Not Yet Rotated					

Patient Care 7: Post-Operative Oncologic Management				
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes that pathologic staging impacts oncologic therapeutic decisions	Applies details of pathologic staging to oncologic therapeutic decisions	Identifies patient and tumor-specific factors relevant to oncologic therapy	Integrates patient factors, pathologic staging and tumor specific factors to select treatment options	Appraises gaps in literature and research related to oncologic therapies or surveillance plans to propose future
Identifies the rationale for a surveillance plan	Describes a general oncologic surveillance plan	Follows an evidence- based surveillance plan, when available, and recognizes need for a survivorship care plan	Integrates patient and tumor-specific factors in the construction of an evidence-based surveillance and survivorship care plan	investigations
Comments: Not Yet Completed Level 1 Not Yet Rotated				

Medical Knowledge 1: Anatomy					
Level 1	Level 2	Level 3	Level 4	Level 5	
Demonstrates knowledge of surgically relevant normal anatomy	Demonstrates knowledge of surgically relevant anatomic variations	With assistance, identifies surgically relevant anatomic variations and alters patient management accordingly	Independently identifies surgically relevant anatomic variations and alters patient management accordingly	Leads advanced anatomy discussion at a multidisciplinary conference and/or in operating room	
Comments:			Not Yet C Not Yet R	completed Level 1	

Medical Knowledge 2: Cancer Biology					
Level 1	Level 2	Level 3	Level 4	Level 5	
Demonstrates basic knowledge of cancer biology	Demonstrates comprehensive knowledge of cancer biology and clinical implications	With assistance, applies knowledge of cancer biology into medical decision making	Independently incorporates knowledge of cancer biology into medical decision making	Recommends novel investigations based on knowledge of cancer biology and clinical trial data	
Comments:			Not Yet C Not Yet A	ompleted Level 1	

Medical Knowledge 3: Therapeutics					
Level 1	Level 2	Level 3	Level 4	Level 5	
Lists broad categories of multimodal oncologic therapies	Demonstrates knowledge of standard multimodal oncologic therapeutic options, including indications and contraindications	Demonstrates knowledge of data to support the use of multimodal oncologic therapies and impacts on surgical treatment	Incorporates data, patient factors, and tumor factors in the selection of multimodal oncologic therapies	Appraises gaps in literature and research related to therapies to propose future investigations	
Comments: Not Yet Completed Level 1 Not Yet Assessable					

Medical Knowledge 4: Clinical Trials					
Level 1	Level 2	Level 3	Level 4	Level 5	
Describes the basics of clinical study design and levels of evidence	Understands the different phases of oncologic clinical trials	Demonstrates general knowledge of clinical trial design and clinical trial infrastructure	Demonstrates advanced knowledge of clinical trial design and clinical trial infrastructure	Designs and proposes clinical trials	
Comments:			Not Yet Co	ompleted Level 1	

Systems-Based Practice 1: Patient Safety and Quality Improvement				
Level 1	Level 2	Level 3	Level 4	Level 5
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)	Independently discloses patient safety events to patients and families (simulated or actual)	Role models or mentors others in the disclosure of patient safety events
Demonstrates knowledge of and describes institutional quality improvement initiatives	Participates in institutional quality improvement initiatives	Demonstrates the skills required to identify, develop, implement, and analyze an institutional quality improvement project	Creates, implements, and assesses quality improvement initiatives at the institutional level	Creates, implements, and assesses national quality improvement initiatives
Comments: Not Yet Completed Level 1				

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of care coordination, including transitions of care	Coordinates care of patients in routine clinical situations effectively using the roles of the interprofessional teams, including transitions of care	Coordinates care of patients in complex clinical situations effectively using the roles of their interprofessional teams, including transitions of care	Role models effective coordination of patient- centered care among different disciplines including transitions of care	Analyzes the process of care coordination and leads in the design and implementation of improvements including transitions of care
Demonstrates knowledge of the oncologic population health needs	Identifies specific population health needs for their local oncologic population	Coordinates with local resources to effectively meet the needs of an oncologic patient population	Participates in changing and adapting individual practice to provide for the needs of specific oncologic populations	Leads innovations and advocates for oncologic populations with specific health needs

Systems-Based Practice 3: Physician Role in Health Care Systems					
Level 1	Level 2	Level 3	Level 4	Level 5	
Identifies key components of the complex health care system (e.g., hospital, skilled nursing facility, finance, personnel, technology, payment systems)	Describes how components of a complex health care system are interrelated, and how this impacts patient care	Discusses how individual practice affects the broader system (e.g., length of stay, readmission rates, clinical efficiency)	Manages various components of the complex health care system to provide efficient and effective patient care and transition of care	Advocates for or leads systems change that enhances high-value, efficient, and effective patient care and transition of care	
Comments:	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
Demonstrates how to access and use the available evidence and how to incorporate patient preferences and values into the care of patients	Articulates clinical questions and elicits patient preferences and values in order to guide evidence-based care	Locates and applies the best available evidence, integrated with patient preference, to the care of patients	Critically appraises and applies evidence, even in the face of uncertain and/or conflicting evidence, to guide care, tailored to the individual patient	Coaches others to critically appraise and apply evidence for patients; and/or participates in the development of guidelines
Comments: Not Yet Completed Level 1				

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth				
Level 1	Level 2	Level 3	Level 4	Level 5
Accepts responsibility for personal and professional development by establishing goals	Demonstrates openness to performance data (feedback and other input) in order to inform goals	Seeks performance data episodically with adaptability and humility	Consistently seeks performance data with adaptability and humility	Role models consistently seeking performance data with adaptability and humility
Identifies the factors that contribute to gap(s) between expectations and actual performance	Analyzes and reflects on the factors that contribute to gap(s) between expectations and actual performance	Analyzes, reflects on, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance	Challenges assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance	Coaches others on reflective practice
Comments: Not Yet Completed Level 1				

Practice-Based Learning and Improvement 3: 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 Co	ompleted Level 1

Level 1	Level 2	Level 3	Level 4	Level 5
Identifies and describes potential triggers for professionalism lapses and how to report	Demonstrates professional behavior in routine situations and takes responsibility for own professionalism lapses	Demonstrates professional behavior in complex or stressful situations	Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others	Coaches others when their behavior fails to meet professional expectations
Demonstrates knowledge of the ethical principles underlying the care of cancer patients	Analyzes straightforward situations using ethical principles	Analyzes complex situations using ethical principles and recognizes need to seek help in managing and resolving complex ethical situations	Recognizes and uses appropriate resources for managing and resolving ethical dilemmas as needed	Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution

Professionalism 2: Accountability/Conscientiousness					
Level 1	Level 2	Level 3	Level 4	Level 5	
Takes responsibility for failure to complete tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future	Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations	Performs tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations	Recognizes situations that may impact others' ability to complete tasks and responsibilities in a timely manner	Takes ownership of system outcomes	
Responds promptly to requests or reminders to	Recognizes situations that may impact own	Proactively implements strategies to ensure that			
complete tasks and	ability to complete tasks	the needs of patients,			
responsibilities	and responsibilities in a timely manner	teams, and systems are met			
Comments:	Comments: Not Yet Completed Level 1				

Professionalism 3: 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	Coaches others when emotional responses or limitations in knowledge/ skills do not meet professional expectations
Recognizes limits of the team, with assistance	Independently recognizes status of personal and professional well-being of the team	With assistance, proposes a plan to optimize personal and professional well-being of the team	Independently develops a plan to optimize personal and professional well-being of the team	
Comments: Not Yet Completed Level 1				

This subcompetency is not intended to evaluate a fellow's well-being, but to ensure each fellow has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being.

Level 1	Level 2	and Family-Centered Com	Level 4	Level 5
Establishes a professional rapport with patients and communicates in a clear and understandable manner	Establishes a therapeutic relationship in straightforward patient encounters and compassionately delivers medical information	Establishes a therapeutic relationship in challenging patient encounters and acknowledges uncertainty in alignment of goals	Uses shared decision making to align patient/family values, goals, and preferences with treatment options to make a personalized care plan	Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships
Identifies common barriers to effective communication (e.g., language, disability)	Identifies complex barriers to effective communication (e.g., health literacy)	When prompted, reflects on biases while attempting to minimize communication barriers	Independently recognizes biases while attempting to proactively minimize communication barriers	Role models self- awareness while identifying a contextual approach to minimize communication barriers
Comments: Not Yet Completed Level 1				

Level 1	Level 2	Level 3	Level 4	Level 5
Uses language that values all members of the health care team	Communicates information effectively with all health care team members	Uses active listening to adapt communication style to fit team needs	Coordinates recommendations from different members of the health care team to optimize patient care and maintains effective communication in crisis situations	Role models flexible communication strategies that value input from all health care team members, resolving conflict when needed
Respectfully receives feedback on performance as a member of the health care team	Solicits feedback on performance as a member of the health care team	Communicates concerns and provides feedback to peers and learners	Communicates feedback and constructive criticism to superiors	Facilitates regular health care team-based feedback in complex situations
Comments:				

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 therapeutic reasoning through notes in the patient record	Concisely integrates all relevant data from outside systems and prior encounters and reports diagnostic and therapeutic reasoning in the patient record	Communicates clearly, concisely, timely, and in an organized written form, including anticipatory guidance	Models feedback to improve others' written communication
Communicates through appropriate channels as required by institutional policy (e.g., patient safety reports, cell phone/pager usage)	Demonstrates efficient use of electronic health record to communicate with the health care team	Appropriately selects direct (e.g., telephone, inperson) and indirect (e.g., progress notes, secure text messages) forms of communication based on context and urgency	Achieves written or verbal communication (e.g., patient notes, email) that serves as an example for others to follow	Guides departmental or institutional communication around policies and procedures
Comments: Not Yet Completed Level 1				