ACGME International

Advanced Specialty Program Requirements for Graduate Medical Education in Medical Oncology (Internal Medicine)

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Int. Introduction

Background and Intent: Programs must achieve and maintain Foundational Accreditation according to the ACGME-I Foundational Requirements prior to receiving Advanced Specialty Accreditation. The Advanced Specialty Requirements noted below complement the ACGME-I Foundational Requirements. For each section, the Advanced Specialty Requirements should be considered together with the Foundational Requirements.

Int. I. Definition and Scope of the Specialty

The specialty of medical oncology focuses on the etiology, diagnosis, prevention, and treatment of ~~tumors (cancer).~~benign and malignant neoplasms.

Int. II. Duration of Education

Int. II.A. The educational program in medical oncology must be 24 or 36 months in length.

I. Institution

I.A. Sponsoring Institution

I.A.1. A fellowship in medical oncology must function as an integral part of an ACGME-I-accredited residency in internal medicine.

I.B. Participating Sites

See International Foundational Requirements, Section I.B.

II. Program Personnel and Resources

II.A. Program Director

See International Foundational Requirements, Section II.A.

II.B. Faculty

II.B.1. Qualified faculty members in the following subspecialties should be available for the education of the fellows:

II.B.1.a) cardiovascular disease;

II.B.1.b) endocrinology;

II.B.1.c) gastroenterology;

II.B.1.d) hospice and palliative medicine;

II.B.1.e) infectious diseases; and,

II.B.1.f) pulmonary disease.

II.C. Other Program Personnel

II.C.1. The fellowship must have access to ~~Clinical specialists, including~~dermatologists, neurological surgeons, neurologists, obstetrician-gynecologists, orthopaedic surgeons, otolaryngologists, radiation oncologists, and urologists~~must participate in the education of fellows~~.

II.C.2. The fellowship must have access to surgeons in general surgery and other surgical specialties, including those with a special interest in oncology.~~must participate in the education of fellows~~.

II.C.3. Expertise in the following disciplines should be available to the program to provide multidisciplinary patient care and fellow education:

II.C.3.a) genetic counseling;

~~II.C.3.b) hospice and palliative care;~~

II.C.3.b) oncologic nursing;

II.C.3.c) pain management;

II.C.3.d) psychiatry; and,

II.C.3.e) rehabilitation medicine.

II.D. Resources

II.D.1. Laboratory ~~and imaging~~ services must be available, including:

II.D.1.a) a hematology laboratory located at the primary clinical site; and,

II.D.1.b) a specialized coagulation laboratory.

II.D.2. Imaging services must be available, including:

II.D.2.a) cross-sectional imaging, including computed tomography (CT) and magnetic resonance imaging (MRI);

II.D.2.b) nuclear medicine imaging; and,

II.D.2.c) positron emission tomography (PET) scan imaging.

II.D.3. There must be advanced pathology services, including:

II.D.3.a) blood banking;

II.D.3.b) immunopathology; and,

II.D.3.c) transfusion and apheresis.

II.D.4. There must be a hematology clinical program with which fellows ~~may~~ interact.

II.D.5. Radiation oncology facilities must be available.

III.A. Eligibility Criteria

III.A.1. Prior to appointment in the program, fellows should have completed an ACGME-I-accredited residency program in internal medicine, or an internal medicine residency program acceptable to the Sponsoring Institution's Graduate Medical Education Committee.

III.B. Number of Fellows

See International Foundational Requirements, Section III.B.

IV. Specialty-Specific Educational Program

IV.A. ACGME-I Competencies

IV.A.1. The program must integrate the following ACGME-I Competencies into the curriculum.

IV.A.1.a) Professionalism

IV.A.1.a).(1) Fellows must demonstrate a commitment to professionalism and an adherence to ethical principles. Fellows must demonstrate:

IV.A.1.a).(1).(a) personal development, attitudes, and coping skills of physicians who care for critically ill patients.

IV.A.1.b) Patient Care and Procedural Skills

IV.A.1.b).(1) Fellows must provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows must demonstrate competence in managing the care of patients:

IV.A.1.b).(1).(a) <u>in a variety of health care settings, including inpatient and ambulatory settings;</u>~~the the practice of health promotion, disease prevention, diagnosis, care, and treatment of patients of each gender, from adolescence to old age, during health and all stages of illness;~~

IV.A.1.b).(1).(b) <u>using critical thinking and evidence-based tools;</u>

IV.A.1.b).(1).(c) using population-based data; and,

IV.A.1.b).(1).(d) with whom they have limited or no physical contact, through the use of telemedicine.

IV.A.1.b).(2). Fellows must demonstrate competence in assuming continuing responsibility for acutely and chronically ill patients with medical oncology disorders in both inpatient and outpatient settings, as well as the natural history of their cancers, and the benefits and adverse effects of their therapies.

IV.A.1.b).(3). Fellows must demonstrate competence in prevention, evaluation, diagnosis, cancer staging, and management of patients with ~~neoplastic~~malignant disorders of the:

IV.A.1.b).(3).(a) breast;

IV.A.1.b).(3).(b) cancer family syndromes;

IV.A.1.b).(3).(c) central nervous system;

IV.A.1.b).(3).(d) gastrointestinal tract (esophagus, stomach, colon, rectum, anus);

IV.A.1.b).(3).(e) genitourinary tract;

IV.A.1.b).(3).(f) gynecologic malignancies;

IV.A.1.b).(3).(g) head and neck;

IV.A.1.b).(3).(h) hematopoietic system, including myeloproliferative neoplasms, myelodysplasias, acute and chronic leukemias, Castleman disease, and dendritic cell disorders;

IV.A.1.b).(3).(i) liver;

IV.A.1.b).(3).(j) lung;

IV.A.1.b).(3).(k) lymphoid organs, including lymphomas, myeloma, and plasma cell dyscrasias;

IV.A.1.b).(3).(l) pancreas;

IV.A.1.b).(3).(m) skin, including melanoma;

IV.A.1.b).(3).(n) testes; and,

IV.A.1.b).(3).(o) thyroid and other endocrine organs, including multiple endocrine neoplasia ~~(MEN)~~ syndromes.

IV.A.1.b).(4) Fellows must demonstrate competence in pathogenesis, diagnosis, prevention, evaluation, and management of patients with disorders whose characteristics overlap with the areas of classical and malignant hematology, including:

IV.A.1.b).(4).(a) bone marrow failure syndromes;

IV.A.1.b).(4).(b) histiocytic disorders;

IV.A.1.b).(4).(c) myelodysplastic syndromes; and,

IV.A.1.b).(4).(d) myeloproliferative neoplasms.

IV.A.1.b).(5) Fellows must demonstrate competence in the diagnosis and management of classical hematologic complications of malignant disorders, including:

IV.A.1.b).(5).(a) autoimmune disorders, to include hemolytic anemia and other hematologic manifestations of autoimmune disorders;

IV.A.1.b).(5).(b) congenital and acquired thrombotic disorders;

IV.A.1.b).(5).(c) hemoglobin disorders, to include sickle cell disease and thalassemia syndromes;

IV.A.1.b).(5).(d) hemophilias, von Willebrand disease, and other inherited and acquired hemorrhagic disorders, to include platelet function defects;

IV.A.1.b).(5).(e) inherited and acquired disorders of the red blood cell membrane and of red blood cell metabolism;

IV.A.1.b).(5).(f) inherited and acquired disorders of white blood cells;

IV.A.1.b).(5).(g) nutritional anemias;

IV.A.1.b).(5).(h) platelet disorders, including idiopathic thrombocytopenic purpura~~(ITP)~~ and congenital thrombocytopenias;

IV.A.1.b).(5).(i) the porphyrias; and,

IV.A.1.b).(5).(j) thrombotic microangiopathies.

IV.A.1.b).(6) Fellows must be able to perform all medical, diagnostic, and surgical procedures considered essential to the subspecialty, including:

IV.A.1.b).(6).(a) performing diagnostic and therapeutic procedures relevant to their specific career path, to include care and management of venous access devices.

IV.A.1.b).(6).(b)		treating their patients' conditions with practices that are patient-centered, safe, scientifically based, effective, timely, and cost-effective, including:
IV.A.1.b).(6).(b) (i)		care and management of the geriatric patient with malignancy and hematologic disorders, to include Castleman disease;
IV.A.1.b).(6).(b).(ii)		care of patients with human immunodeficiency virus~~(HIV)~~ related malignancies;
IV.A.1.b).(6).(b).(ii)		hematologic care of pregnant patients and women of reproductive age;
IV.A.1.b).(6).(b).(iii)		hematologic care of transgender patients;
IV.A.1.b).(6).(b).(iv)		hematologic complications of infectious diseases;
IV.A.1.b).(6).(b).(v)		management of pain, anxiety, and depression in patients with cancer;
IV.A.1.b).(6).(b).(vi)		management of the neutropenic and the immunocompromised patient;
IV.A.1.b).(6).(b).(vii)		palliative care, to include hospice and home care;
IV.A.1.b).(6).(b).(viii)		rehabilitation and psychosocial care of patients with cancer;
IV.A.1.b).(6).(b).(ix)		specific cancer prevention and screening for high-risk individuals, to include genetic testing;
IV.A.1.b).(6).(b).(x)		treatment and diagnosis of recognition and management of paraneoplastic disorders;
IV.A.1.b).(6).(b).(xi)		use of chemotherapeutic agents and biological products through all therapeutic routes;
IV.A.1.b).(6).(b).(xii)		use of chemotherapeutic drugs, biologic products, and growth factors; their mechanisms of action, pharmacokinetics, clinical indications, and limitations; to include their effects, toxicity, and interactions;
IV.A.1.b).(6).(b).(xiii)		use of hematologic, infectious disease, and nutrition support;
IV.A.1.b).(6).(b).(xiv)		use of immunotherapeutic drugs; their mechanisms of action, pharmacokinetics,

clinical indications, and limitations; and their effects, toxicity, and interactions; to include the use of cellular immunotherapies (such as, CAR-T therapies);

IV.A.1.b).(6).(b).(xv) use of multi-agent chemotherapeutic protocols and combined modality therapy of neoplastic disorders; and,

IV.A.1.b).(6).(b).(xvi) use of systemic therapies through all therapeutic routes.

IV.A.1. b).(6).(c) using diagnostic and/or imaging studies relevant to the care of the patient, including:

IV.A.1.b).(6).(c).(i) assessment of tumor burden (and response as measured by physical and radiologic exam) and tumor markers;

IV.A.1.b).(6).(c).(ii) assessment of tumor imaging by CT, MRI, PET scanning, and nuclear imaging techniques;

IV.A.1.b).(6).(c).(iii) correlation of clinical information with cytology, histology, and immunodiagnostic imaging techniques; and,

IV.A.1.b).(6).(c).(iv) indications and application of imaging techniques in patients with neoplastic disorders.

IV.A.1.c) Medical Knowledge

IV.A.1.c).(1) Fellows must demonstrate knowledge of established and evolving biomedical clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows must demonstrate knowledge of:

IV.A.1.c).(1).(a) the scientific method of problem solving and evidence-based decision-making;

IV.A.1.c).(1).(b) indications, contraindications, and techniques for, and limitations, complications, and interpretation of results of those diagnostic and therapeutic procedures integral to the discipline, including the appropriate indications for and use of screening tests and procedures;

IV.A.1.c).(1).(c) basic molecular and pathophysiologic mechanisms, diagnosis, and therapy of diseases of the blood, to include anemias, diseases of white blood cells and stem cells, and disorders of

		hemostasis and thrombosis;
IV.A.1.c).(1).(d)		clinical epidemiology and biostatistics, including clinical study and experimental protocol design, data collection, and analysis;
IV.A.1.c).(1).(e)		functional characteristics, indications, risks, and process of using indwelling venous access devices.
IV.A.1.c).(1).(f)		genetics and developmental biology, including;
IV.A.1.c).(1).(f).(i)		cytogenetics;
IV.A.1.c).(1).(f).(ii)		molecular genetics; and,
IV.A.1.c).(1).(f).(iii)		the nature of oncogenes and their products.
IV.A.1.c).(1).(g)		gene therapy;
IV.A.1.c).(1).(h)		immune markers, immunophenotyping, flow cytometry, cytochemical studies, and cytogenetic and DNA analysis of neoplastic disorders;
IV.A.1.c).(1).(i)		indications for, complications of, and risks and limitations associated with:
IV.A.1.c).(1).(i).(i)		lesion biopsy detection of circulating DNA for disease-specific markers;
~~IV.A.1.c).(1).(m).(ii)~~		~~lumbar puncture;~~
IV.A.1.c).(1).(i).(ii)		paracentesis;
IV.A.1.c).(1).(i).(iii)		skin biopsies; and,
IV.A.1.c).(1).(i).(iv)		thoracentesis.
IV.A.1.c).(1).(j)		malignant and hematologic complications of organ transplantation;
IV.A.1.c).(1).(k)		management of post-transplant complications;
IV.A.1.c).(1).(l)		mechanisms of action, pharmacokinetics, clinical indications for, and limitations of chemotherapeutic drugs, and biologic products including cellular immunotherapies (such as CAR-T therapies); ~~and growth factors,~~ including their effects, toxicity, and interactions,
IV.A.1.c).(1).(m)		pathogenesis, diagnosis, and treatment of disease, including etiology, epidemiology, natural history, diagnosis, pathology, staging, and management

of neoplastic diseases of the blood, blood-forming organs, and lymphatic tissues.

IV.A.1.c).(1).(n) physiology and pathophysiology, including:

IV.A.1.c).(1).(n).(i) basic and clinical pharmacology, pharmacokinetics, and toxicity;

IV.A.1.c).(1).(n).(ii) cell and molecular biology;

IV.A.1.c).(1).(n).(iii) hematopoiesis;

IV.A.1.c).(1).(n).(iv) molecular mechanisms of hematopoietic and lymphopoietic malignancies;

IV.A.1.c).(1).(n).(v) pathophysiology and patterns of tumor metastases;

IV.A.1.c).(1).(n).(vi) principles of oncogenesis; and,

IV.A.1.c).(1).(n).(vii) tumor immunology.

IV.A.1.c).(1).(o) principles of, indications for, and complications of ~~autologous and allogeneic bone marrow or~~ peripheral blood stem cell transplantation;

IV.A.1.c).(1).(p) principles of, indications for, and complications of peripheral stem cell harvests;

IV.A.1.c).(1).(q) principles of, indications for, and limitations of:

IV.A.1.c).(1).(q).(i) surgery in the treatment of cancer; and,

IV.A.1.c).(1).(q).(ii) radiation therapy in the treatment of cancer.

IV.A.1.c).(1).(r) the basic principles of laboratory and clinical testing, quality control, quality assurance, and proficiency standards.

IV.A.1.c).(2) Fellows must demonstrate sufficient knowledge specific to the subspecialty of medical oncology, including application of technology appropriate for the clinical context, to include evolving technologies.

IV.A.1.d) Practice-Based Learning and Improvement

IV.A.1.d).(1) Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

IV.A.1.e) Interpersonal and Communication Skills

IV.A.1.e).(1) Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, patients' families, and health professionals. Fellows must demonstrate:

IV.A.1.e).(1).(a) team leadership skills and the ability to work with an interdisciplinary team by:

IV.A.1.e).(1).(a).(i) identifying essential team members;

IV.A.1.e).(1).(a).(ii) defining the roles of team members; and,

IV.A.1.e).(1).(a).(iii) evaluating the role of the interdisciplinary team.

IV.A.1.f) Systems-Based Practice

IV.A.1.f).(1) Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, including the social determinates of health, as well as the ability to call effectively on other resources in the system to produce optimal care.

IV.B. Regularly Scheduled Educational Activities

IV.B.1. The educational program must include didactic instruction based on the core knowledge content in medical oncology.

IV.B.1.b) Fellows must have a sufficient number of didactic sessions to ensure fellow-fellow and fellow-and-faculty member interaction.

IV.B.2. The program must ensure that fellows have an opportunity to review all knowledge content from conferences that they could not attend.

IV.B.3. Fellows must participate in multidisciplinary case management or tumor board conferences and in protocol studies.

IV.B.4. Fellows must receive instruction in practice management relevant to medical oncology.

IV.C. Clinical Experiences

IV.C.1. Assignment of rotations must be structured to minimize the frequency of rotational transitions, and rotations must be of sufficient length to provide a quality educational experience, defined by continuity of patient care, ongoing supervision, longitudinal relationships with faculty members, and meaningful assessment and feedback.

IV.C.2. Rotations must be structured to allow fellows to function as a part of an

effective interprofessional team that works together toward the shared goals of patient safety and quality improvement.

IV.C.3. Rotations must be structured to minimize conflicting inpatient and outpatient responsibilities.

IV.C.4. At least 12 months of education must be devoted to clinical experience.

IV.C.4.a) At least 50 percent of the clinical experience must occur in the outpatient setting.

IV.C.4.b) ~~The program must provide at least one month of clinical experience in autologous bone marrow transplantation~~.

IV.C.5. Inpatient assignments should be of sufficient duration to permit continuing care of a majority of a fellow's patients throughout their hospitalization.

IV.C.6. The program must provide educational experiences in team-based care that allow fellows to interact with and learn from other health care professionals.

IV.C.7. The educational program must provide fellows with elective experiences relevant to their future practice or to further skill/competence development.

IV.C.7.a) Fellows should have the opportunity to develop competence in performing thoracentesis, paracentesis, and skin and lesion biopsies.

IV.C.7.b) Additional training and experiences should be made available for those fellows who request the need to perform specified procedures in their post-fellowship careers (such as bone marrow aspirates, lumbar punctures for diagnosis and/or administration of intrathecal chemotherapy, administering therapeutics through Ommaya reservoirs).

IV.C.8. Fellows must participate in training using simulation.

IV.C.9. Fellows should have a structured continuity ambulatory clinic experience for the duration of the program that exposes them to the breadth and depth of medical oncology.

~~IV.C.9.a) This should include an appropriate distribution of patients of each gender and a diversity of ages.~~

IV.C.9.a) The experience should average one half-day each week throughout the education program.

~~IV.C.9.a).(1) Each fellow should, on average, be responsible for four to eight patients during each half-day session.~~

~~IV.C.9.a).(1).(a) Each fellow should, on average, be responsible for no more than eight to 12 patients during~~

~~each half-day ambulatory session~~.

IV.C.9.b) The continuing patient care experience should not be interrupted by more than one month, excluding a fellow's vacation.

IV.D. Scholarly Activity

IV.D.1. Fellows' Scholarly Activity

IV.D.1.a) While in the program, each fellow must complete at least one of the following scholarly activities: participation in grand rounds; poster presentations; workshops; quality improvement presentations; podium presentations; grant leadership; non-peer-reviewed print/electronic resources; articles or publications; book chapters; textbooks; webinars; service on professional committees; or service as a journal reviewer, journal editorial board member, or editor.

IV.D.2. Faculty Scholarly Activity

See International Foundational Requirements, Section IV.D.2.

V. Evaluation

See International Foundational Requirements, Section V.

VI. The Learning and Working Environment

VI.A. Principles

See International Foundational Requirements, Section VI.A.

VI.B. Patient Safety

See International Foundational Requirements, Section VI.B.

VI.C. Quality Improvement

See International Foundational Requirements, Section VI.C.

VI.D. Supervision and Accountability

VI.D.1. Direct supervision of procedures performed by each fellow must occur until competence has been acquired and documented by the program director.

VI.E. Professionalism

See International Foundational Requirements, Section VI.E.

VI.F. Well-being

See International Foundational Requirements, Section VI.F.

VI.G. Fatigue

See International Foundational Requirements, Section VI.G.

VI.H. Transitions of Care

See International Foundational Requirements, Section VI.H.

VI.I. Clinical Experience and Education

See International Foundational Requirements, Section VI.I.

VI.J. On-Call Activities

See International Foundational Requirements, Section VI.J.