

Education Goals for Radiation Oncology Residents

CORE COMPETENCY	PGY-2	PGY-3	PGY-4 and PGY-5
Patient Care	<p>Develop/refine skills in:</p> <ul style="list-style-type: none"> •Gyn, rectal, head and neck, lymphatic and breast examinations •Catheterization of the bladder, insertion of rectal tubes/markers, vaginal markers, administration of IV contrast, performing urethrograms •The basic management of spinal cord compression and other oncologic emergencies • Palliative management of patients with metastatic disease such as brain and bone metastases •Differing approaches to the curative and palliative patient. •Formulation, evaluation and defense of a treatment plan, including the basic uses of combined chemotherapy and radiotherapy. • Assessment of follow-up patients; ability to distinguish recurrence from late effects of therapy •Counsel patients with assistance regarding treatment options and obtain informed consent. 	<p>Further develop understanding of prior objectives and skills:</p> <ul style="list-style-type: none"> • Perform an evaluation, presentation, work-up, simulation and treatment of a range of common tumors. • Carry a full service of patients with efficiency and order. • Present and defend cases at tumor boards. • Brachytherapy: gyn, prostate, head and neck, sarcoma, intravascular, unsealed sources. • Ability to pre-plan and present a plan for simulation. •Counsel patients with straightforward problems independently. Work towards independent counseling of patients with complex problems. 	<p>Further develop understanding of prior objectives and skills and:</p> <ul style="list-style-type: none"> • Demonstrate independence and responsibility in work-up, treatment planning and simulation and patient counseling. • Run simulation with attending as 'back-up' only. • Perform brachytherapy with attending as 'back-up' only. • Assume greater responsibility for administering a course of radiotherapy, including determining dose prescription, managing side effects, and deciding when patients need to go on break. • Be able to counsel all patients and obtain full informed consent independently.

<p>Medical Knowledge</p>	<p>Begin to develop understanding of:</p> <ul style="list-style-type: none"> • SSD and isocentric technique, AP/PA, oblique, 3 and 4 field set-ups, rotational fields, conformal therapy and basics of stereotactic therapy. • Interpretation of cross-sectional imaging anatomy. • Basic principles of cancer care and oncology and modes of spread of cancer by type. • Natural history and basic principles of treatment for common cancers. • The principles of radiation physics and radiation biology • Acute toxicities of radiation treatment and their management. • The rationale for the "set-up" of patients for a range of cancer sites, ex. head and neck, lymphoma, breast, prostate including basic principles of conventional and CT-simulation. • The basics of pediatric oncology and use of radiotherapy for pediatric malignancies. • Ability to identify and manage late complications of treatment and tumor recurrences. • Comparison of portal and simulation films, basic anatomy and radiographic correlation. 	<p>Further develop understanding of prior objectives and:</p> <ul style="list-style-type: none"> • Continue to expand knowledge of radiotherapy via textbooks, one-on-one teaching and journal review. • Learn the technical nuances of the more difficult set-ups: e.g. 4-field breast, mantle - periaortic match, cranio-spinal, other junctioned fields, thyroid, paranasal sinus, stereotactic therapy. • Expand knowledge of pediatric radiotherapeutic management. • Learn/refine the rationale for the "set-up" of patients with other cancer sites, ex. GYN, GI, sarcomas including basic principles of conventional and CT-simulation. • Improve knowledge and understanding of complimentary and alternative medicine as it applies to oncology. • Indications for treatment of selected benign conditions 	<p>Further develop understanding of prior objectives and:</p> <ul style="list-style-type: none"> • Familiarity with the likelihood of the long term potential toxicity of radiation related to dose and volume. • Further refine knowledge of physics and radiobiology.
<p>Practice-Based Learning and Improvement</p>	<p>Develop the ability to or increase ability to:</p> <ul style="list-style-type: none"> • Identify and use sources for information, including textbooks and journals, computer - based resources and means of finding appropriate references. • Read and analyze the literature critically. • Learn principles of evidence-based medicine and statistics 	<p>Further develop understanding of prior objectives and:</p> <ul style="list-style-type: none"> • Critically evaluate clinical studies with regard to their design, statistics, and the validity of their conclusion. • Develop familiarity with alternative forms of cancer treatment, including surgery and chemotherapy, as well as the benefits and toxicities of combined modality treatment. • Appreciate the limitations and value of diagnostic studies (pathology and imaging) related to cancer management and apply to patients. • Understand the basic tools of statistical analysis and their limitations. 	<p>Further develop understanding of prior objectives and:</p> <ul style="list-style-type: none"> • Develop and execute clinical research projects as means of assessing practice outcomes and developing practice improvements. • Analyze practice experience and perform practice-based improvement activities using a systematic methodology

Professionalism	<p>Develop:</p> <ul style="list-style-type: none"> •A commitment to professional competence •A commitment to honesty with patients •A commitment to patient confidentiality •A commitment to maintaining appropriate relations with patients. •A commitment to maintaining trust by managing conflicts of interest 	<p>Continue to develop the professional ideals previously enumerated and:</p> <ul style="list-style-type: none"> •Identify of ethical problems that arise in cancer treatment and the means available to resolve them •Develop familiarity with the role of health care provider as an advocate for patients with cancer and their families. •Develop familiarity with the role of consultant, including the preparation of concise and specific consultation notes. •Determine career goals as a radiation oncologist. 	<p>Continue to develop the professional ideals previously enumerated and:</p> <ul style="list-style-type: none"> •Participate in teaching junior residents. •Solidify clear career goals as a radiation oncologist •Assume greater independence in resolution of social and ethical problems.
Interpersonal and Communication Skills	<p>Develop the ability to:</p> <ul style="list-style-type: none"> •Write a therapy prescription to effectively communicate the details of treatment delivery to the technical staff. •Understand and work with the 'team' aspect of radiation oncology in which the physician interacts effectively with physicists, nurses, therapists, administrative and secretarial staff. •Interact as part of the team including other physician colleagues, nurses, social workers dieticians, etc. •Communicate effectively with patients and families with respect to their emotional needs, intellectual capabilities/understandings, ethnic/racial backgrounds 	<p>Continue to develop the skills previously enumerated and:</p> <ul style="list-style-type: none"> •Articulate the options, as well as their risks and benefits, in the management of common malignancies, with emphasis on the use of radiation therapy. •Develop the ability to interact in a positive fashion with patients who may be angry, distraught, depressed, etc. •Develop the ability to deliver bad news in an appropriately caring fashion. 	<p>Continue to develop the skills previously enumerated and:</p> <ul style="list-style-type: none"> •Participate in conferences, learning to articulate and defend an opinion. •Work effectively with ancillary support services. •Develop communication skills to inspire confidence of colleagues in multi-disciplinary patient care.
Systems-Based Practice	<p>Develop:</p> <ul style="list-style-type: none"> •A commitment to improving quality of care •A commitment to improving access to care •A commitment to just distribution of finite resources •An understanding of the methodology to analyze system problems and initiate change. •Knowledge of types of medical practices and delivery systems including methods of controlling health care costs and allocating resources. •Practice cost-effective health care and resource allocation that does not compromise the quality of care. •An understanding of the interdependencies of health care systems of series of systems and one's own practice impact on them. •Ability to advocate for quality patient care and assist patients in dealing with system complexities. 		