

## **Goals and Objectives: Genitourinary (GU) Service Department of Radiation Oncology**

The resident rotating on the GU service will be thoroughly trained in the clinical management of GU malignancies. This includes primarily prostate cancer patients, but also patients with bladder, testicular, and renal malignancies.

### I. Patient Care:

1) General: Work-up, diagnosis, management options, treatment techniques, and follow-up care of patients with GU malignancies.

a. The GU cancer service provides training in the work-up, diagnosis, management, treatment, and long-term follow-up of all localized stages of prostate cancer, including low-, intermediate-, and high-risk categories. Surgery, radiation therapy, and androgen ablation, alone or in combination, will each be reviewed, discussed, and employed in the management of primary, post-operative, or recurrent disease. This clinical experience is presented and acquired in the context of a multidisciplinary approach to the care of prostate cancer patients. Thus, residents develop a strong knowledge base in the areas of urology, surgical pathology, radiology, medical oncology (chemotherapy and hormonal therapy), cancer rehabilitation, pain management, and palliative medicine.

b. The GU cancer service provides training in the diagnosis, management, treatment, and follow-up of metastatic prostate cancer. Radiation therapy, androgen ablation, surgery, and/or chemotherapy will each be reviewed, discussed, and used as indicated in the management of these patients.

c. The GU cancer service provides training in the diagnosis, management, treatment, and follow-up of patients with primary and recurrent bladder cancer. The roles of radiation therapy, chemotherapy, and surgery, alone or in combination, will each be reviewed and discussed. This clinical experience is presented and acquired in the context of a multidisciplinary approach to the care of prostate cancer patients. Thus, residents develop a strong knowledge base in the areas of urology, surgical pathology, radiology, medical oncology (chemotherapy), cancer rehabilitation, pain management, and palliative medicine.

d. The GU cancer service provides training in the diagnosis, management, treatment, and follow-up of patients with primary testicular cancer. Surgery, radiation therapy, and chemotherapy, alone or in combination, will each be reviewed, discussed, and used as indicated in the management of patients with testicular cancer.

2) Specific: Resident will acquire an in-depth understanding of the various considerations and factors that are considered when formulating treatment recommendations for primary and recurrent prostate cancer. This includes:

a. Ability to utilize pathologic findings in the treatment recommendations for prostate, bladder, and other GU cancers.

- b. Ability to utilize imaging studies such as: CT, MRI, Bone Scan, Ultrasound, and conventional X-rays, for the staging, treatment recommendations, and treatment planning for GU cancers.
- c. Knowledge of the indications for systemic therapy (chemotherapy and/or hormonal therapy), alone or in conjunction with radiation therapy, in the treatment of GU cancers.
- d. Knowledge of the current regimens or drugs being used and the mechanism of action of systemic agents.
- e. Knowledge of the surgical work-up and techniques used for diagnosis and treatment of prostate cancer.
- f. Proficiency in the use of CT-based simulation and planning for radiation therapy to the prostate and the whole-pelvis using 2-D, 3-D, and IMRT-based treatment techniques.
- g. Ability to assess the appropriate field arrangements indicated; ability to assess dose distributions and to prescribe radiation dose for the treatment of the prostate, seminal vesicles and regional nodes; ability to contour a prostate, seminal vesicles, prostate bed, pelvic lymph nodes, rectum, bladder, femoral heads and small bowels; ability to define constraints for normal tissues in the pelvis; ability to perform dose plan assessment.
- h. Proficiency in the set-up prostate fields and in assessing weekly quality assurance portal films, and to make treatment adjustments as indicated.
- i. Proficiency in the assessment and treatment of acute radiation toxicities.
- j. Proficiency in the follow-up care of prostate cancer patients including the assessment and treatment of late radiation effects and appropriate follow-up studies, in particular the assessment and treatment of radiation prostatitis, incontinence, osteoporosis, and impotence.
- k. Proficiency in the evaluation and metastatic work-up for patients with locally advanced prostate cancer.
- l. Ability to diagnose and manage local or systemic recurrence after radical prostatectomy or radiotherapy, including knowledge of surgical or medical treatment options and radiation techniques.
- m. Knowledge of specialized treatment techniques, including proton therapy and cryosurgery.
- n. Proficiency in the various criteria for selecting patients for brachytherapy; proficiency in understanding the absolute and relative contraindications for

prostate brachytherapy; proficiency in the knowledge of the various brachytherapy techniques; ability to plan and execute an acceptable brachytherapy plan for localized prostate cancer.

- o. Knowledge of the patterns of failure in prostate and bladder cancers.
- p. Ability to work-up metastases to bone, lymph nodes, brain and other sites.
- q. Proficiency in the treatment of metastases to bone, brain or CNS, including ability to design and set-up treatment fields, prescribe dose, evaluate dose plans, assess set-up and weekly quality assurance portals.
- r. Ability to manage acute toxicities of palliative radiation fields, such as steroid implementation and tapers for CNS disease, and to manage pain and fatigue.

## II. Medical Knowledge:

1. Knowledge of the pertinent peer-reviewed medical literature pertaining to the diagnosis and management of all stages of prostate, bladder and testicular cancers, including major randomized clinical trials and important institutional series, in the following disciplines:
  - a. radiation therapy
  - b. surgical management
  - c. systemic therapy
  - d. palliation, pain management and rehabilitation
  - e. psychosocial issues
  - f. cancer biology
  - g. cancer epidemiology and genetics
2. Ability to apply this knowledge base acquired from the medical literature in the management of prostate, bladder and testicular cancers patients
3. Ability to critically review the medical literature as it pertains to prostate, bladder and testicular cancers management and applies new research findings to clinical practice

## III. Practice-Based Learning and Improvement:

1. Proficiency in the quality assurance process in prostate, bladder and testicular cancers treatment including dosimetry, dose plan assessment and optimization, and portal film assessment
2. Ability to discuss and critique the prostate, bladder and testicular cancers medical literature in the conference series, including didactic conference, case conference, morbidity and mortality conference, journal club
3. Proficiency in the multidisciplinary care of prostate, bladder and testicular cancers patients in cooperation with colleagues in medical oncology, surgery, pathology, diagnostic radiology, and in multidisciplinary conferences

## IV. Interpersonal and Communication Skills:

1. Ability to clearly explain the rationale, procedures, potential side effects and follow-up care after radiation therapy for prostate, bladder and testicular cancers treatment to patients and families, colleagues, peers, and ancillary personnel (nurses, therapists, dosimetrists, physicists)
2. Ability to clearly discuss the disease process of prostate, bladder and testicular cancers, treatment options and outcomes for the various stages of these cancers to patients and families, peers and colleagues
3. Ability to assess and discuss patient's psychosocial or end of life issues
4. Ability to express empathy and caring in communications with patients and families

#### V. Professionalism:

1. Maintains a professional appearance that is neat, clean and appropriate in dress.
2. Demonstrates sensitivity to ethnic, social and psychological concerns.
3. Demonstrates ethical principles in personal behavior and in interactions with patients and colleagues.
4. Fulfills commitments to patients needs in a timely manner.
5. Completes documentation in a thorough and timely manner.
6. Attends to clinical responsibilities punctually and efficiently.
7. Demonstrates a respectful demeanor towards patients, families, colleagues, and staff.

#### VI. Systems-Based Practice:

1. Ability to coordinate appointments with other physicians, or schedule appropriate tests as indicated with an understanding of the patient's insurance issues and geographical preferences.
2. Ability to assess psychosocial needs and to refer the patient to appropriate services for social, psychological or financial assistance.
3. Ability to coordinate the patient's comprehensive cancer care and other medical needs during their radiation therapy.
4. Proficiency with departmental and hospital-based computer data systems and medical records databases.