

## Goals and Objectives

### Radiation Oncology Rotation on Lung and Sarcoma Service and PDT

This service involves the treatment of patients with lung cancer (non-small cell lung cancer and small cell lung cancer), malignant mesothelioma, soft tissue sarcoma, and prostate cancer. Patients on this service will be referred for radiation therapy as well as for photodynamic therapy. Low dose rate brachytherapy will be used on occasion to treat patients with soft tissue sarcoma, lung cancer, and recurrent gastrointestinal cancers. Typical diseases that will be treated with photodynamic therapy (PDT) include non-small cell lung cancer and other thoracic malignancies, Barrett's esophagus, prostate cancer and intraperitoneal malignancies. A significant proportion of patients treated on this service will be enrolled on clinical trials.

1. Residents will understand the clinical presentation, natural history, staging, and treatment options for patients with lung cancer, mesothelioma, soft tissue sarcoma, prostate cancer, Barrett's esophagus, and various intraperitoneal malignancies.
2. Residents will master the radiotherapy principles for the treatment of lung cancer, mesothelioma, soft tissue sarcoma, and prostate cancer. This will include a) the use of CT simulation, outlining normal tissues, GTV, & CTV, b) knowledge of relevant normal tissue tolerances, c) appropriate treatment fields and doses, and d) the appropriate role of IMRT in the treatment of mesothelioma and prostate cancer.
3. Residents will understand the treatment principals of photodynamic therapy including a) the types and routes of administration for common photosensitizers, b) the dose parameters used for non-ionizing radiation, and c) the role of intra-operative PDT.
4. Residents will be able to identify when patients need acute or emergent medical attention and will recognize common oncologic emergencies including, but not limited to fever & neutropenia, spinal cord compression, brain metastases, and superior vena cava syndrome. Residents will be expected to formulate a differential diagnosis and a treatment plan for these problems.
5. Residents will be expected to read the appropriate reference materials pertaining to the diseases and treatment modalities listed above. Assessment of the resident's knowledge base will be done through periodic teaching sessions.
6. Residents will understand the basics of clinical trial methodology. This will include the basics of informed consent, regulatory and reporting requirements, and the differences among Phase I, II, and III trials. Residents will also become familiar with the indications for clinical trials as part of routine patient care in radiation oncology.
7. Residents will master the art of communicating with patients and families in a professional and compassionate way. The attending physician will monitor the interactions of residents with patients and their families.