

Study Guide:  
Clinical Oncology for Computer-Based Examination

■ This examination assesses your understanding of oncology, radiation therapy, and natural history. Included are questions related to cancers of every type:

- epidemiology and pathology
- requirements for cancer diagnosis, staging, treatment (including the utilization of modalities other than radiation therapy), and follow-up
- understanding of how radiation therapy affects normal tissues
- complications resulting from radiation
- ethics
- statistics
- anatomy
- optimum beams and radiation sources for various clinical situations
- tumor localization
- dose distribution
- selection of optimum volume, dose and fractionation
- precision and errors in treatment planning
- techniques involved in the treatment of the various anatomic and organ sites

■ Questions in any category may relate to:

- anatomy
- epidemiology/etiologic agents
- natural history
- pathology
- tumor markers
- initial clinical evaluation
- staging
- routes of local, regional and distant spread
- selection of a treatment modality
- radiation therapy techniques (including external beam, brachytherapy, and treating with unsealed radioactive agents)
- treatment results (e.g., with surgery, radiation therapy, or chemotherapy)
- patterns of failure
- complications
- normal tissue effects
- specific details of multimodality therapies and their implications for outcomes and morbidity

## Categories for Clinical Oncology

*May include, but not necessarily limited to:*

### ■ Pediatrics

- Retinoblastoma
- Wilms tumor
- Neuroblastoma
- Rhabdomyosarcoma and other soft tissue sarcomas
- Lymphomas
- Leukemias
- Histocytosis X
- Ewing sarcoma and other bone tumors
- Pediatric solid tumors
- Soft-tissue sarcoma
- Germ cell tumor
- Hepatic tumor
- Osteosarcoma
- Hodgkin lymphoma

### ■ Pediatric CNS Tumors

- Medulloblastoma
- Astrocytoma (glioma), low grade
- Astrocytoma, high grade
- Brain stem glioma
- Ependymoma
- Pineal/Germ cell
- Craniopharyngioma
- Optic tract
- Other

### ■ Gastrointestinal (GI) Tract

- Esophagus
- Stomach
- Small bowel
- Colon/rectum
- Anus
- Pancreas
- Biliary tract
- Liver
- Other

### ■ Gynecology

- Cervix
- Endometrium/uterus

- Ovaries & fallopian tubes
- Vagina
- Vulva
- Other

#### ■ Genitourinary (GU) Tract

- Prostate
- Bladder
- Testes/seminoma
- Testes/nonseminoma
- Kidneys
- Ureter
- Urethra
- Penis
- Other

#### ■ Lymphomas and Leukemias

- Hodgkin disease
- Non-Hodgkin lymphoma
- Leukemia
- Multiple myeloma/plasmacytoma
- Total body irradiation
- Total skin irradiation
- Radioimmunotherapy
- Other

#### ■ Head, Neck and Skin

- Larynx
- Oral cavity
- Oropharynx
- Hypopharynx
- Nasopharynx
- Salivary glands
- Orbits
- Temporal bone
- Skin
- Thyroid gland
- Other

#### ■ Lung/Mediastinum

- Non-small cell cancer
- Small cell cancer
- Superior sulcus tumor
- Thymomas and/or other mediastinum tumors
- Other

## ■ Breast

- Early-stage breast cancer
- Locally advanced breast cancer
- Inflammatory breast cancer
- Carcinoma in situ, ductal and lobular
- Locally recurrent breast cancer
- Metastatic breast cancer
- Other

## ■ Soft Tissue

- Osteosarcoma and/or chondrosarcoma
- Ewing sarcoma
- Other bone tumors
- Soft tissue sarcomas
- Desmoid tumor
- Kaposi sarcoma
- Other

## ■ Central Nervous System (CNS)

- Astrocytoma, low grade
- Astrocytoma, high grade
- Medulloblastoma
- Brainstem glioma
- Ependymoma
- Pineal
- Brain
- Lymphoma
- Meningioma
- Pituitary
- Spinal cord
- Craniopharyngioma
- Arteriovenous malformation (AVM)
- Optic tract
- Oligodendroglioma
- Other

## ■ Palliation

- Skeletal metastases
- Brain metastases
- Hepatic metastases
- Cord compression
- Vena cava syndrome
- Hemostases
- Relief of obstruction
- Other

## ■ Biostatistics

- Study design
- Definitions of statistical terms
- General interpretation & analysis
- Survival curves
- Specificity/sensitivity
- Tests of significance
- Phase III studies (randomized)
- Retrospective trials/historical controls
- Phase I & II studies (nonrandomized case control studies)
- Multiple trials/metaanalysis
- Lab tests/x-ray studies
- Other

## ■ Miscellaneous

- Ethics
- Intravascular brachytherapy
- Microspheres and unsealed sources
- Questions that do not relate to specific anatomical sites as listed above
- Other applications of irradiation