

## ACR TXIT™ EXAM OUTLINE

		Major Domain	Sub-Domain
<b>1</b>		<b>Statistics</b>	
	1.1		Study design
	1.2		Definitions of statistical terms
	1.3		General interpretation & analysis
	1.4		Survival curves
	1.5		Specificity/sensitivity
	1.6		Tests of significance
	1.7		Phase III studies (randomized)
	1.8		Retrospective trials/historical controls
	1.9		Phase I & II studies (nonrandomized case control studies)
	1.10		Multiple trials/meta-analysis
<b>2</b>		<b>Bone &amp; Soft Tissue</b>	
	2.1		Soft tissue sarcoma & brachytherapy
	2.2		Bone sarcomas & bone tumors
	2.3		Ewing's sarcoma
	2.4		Desmoid tumor
	2.5		Osteosarcoma and/or chondrosarcoma
	2.6		Bone metastasis from other primary/include Bone SBRT
	2.7		Heterotopic ossification
	2.8		Kaposi's sarcoma
<b>3</b>		<b>Breast</b>	
	3.1		Early-stage breast cancer
	3.2		Ductal carcinoma in situ (DCIS) & lobular carcinoma in situ (LCIS)
	3.3		Metastatic breast cancer
	3.4		Locally advanced breast cancer---possibly include inductive and pathologic CR
	3.5		Inflammatory breast cancer
	3.6		Recurrent breast cancer
	3.7		Hypofractionated /APBI
	3.8		breast brachytherapy/APBI
	3.9		Mammography screening
	3.10		Risk factors + genetics
	3.11		Breast cancer staging
	3.12		Post-mastectomy radiation therapy
	3.13		Breast cancer biomarkers
	3.14		Nodes---micrometastases
	3.15		Toxicity (heart, lymphedema, cosmesis)
	3.16		Anatomy (nodes or drainage)

<b>4</b>		<b>CNS/Eye</b>	
	4.1		Brain metastasis/leptomeningeal (CSR)
	4.2		SRS Brain
	4.3		Meningioma
	4.4		Pituitary
	4.5		Low-grade supratentorial astrocytoma
	4.6		Glioblastoma/high grade astrocytomas Include MGMT methylation/systemic therapy
	4.7		Intracranial Ependymoma
	4.8		Primary Spinal Cord Tumor
	4.9		CNS lymphoma
	4.10		Anatomy
	4.11		Medulloblastoma and Supratentorial PNET
	4.12		Eye diseases [lymphoma, melanoma, benign conditions (e.g. pterygium, Graves disease)] Include question on eye plaques for melanoma
	4.13		Oligodendroglioma (Anaplastic)
	4.14		Quantec OARs/toxicity/technique
<b>5</b>		<b>Gastrointestinal (GI) Tract</b>	
	5.1		Esophagus
	5.2		Stomach
	5.3		Anus
	5.4		Pancreas
	5.5		Biliary tract
	5.6		Liver include SBRT
	5.7		Rectum
	5.8		Quantec/toxicity OAR
<b>6</b>		<b>Genitourinary (GU) Tract</b>	
	6.1		Prostate include brachytherapy
	6.2		Kidney and renal pelvis/ureter/urethra
	6.3		Testes (Seminoma & non-seminoma)
	6.4		Bladder
	6.5		Penis
	6.6		Toxicity/OAR/anatomy
	6.7		Metastasis include radioisotopes
	6.8		Kidney transplant rejection

<b>7</b>		<b>Gynecology</b>	
	7.1		Endometrium & uterus
	7.2		Vulva
	7.3		Fallopian tube/ovary
	7.4		Quantec/OAR/toxicity
	7.5		Uterine cervix
	7.6		Vagina
	7.7		Female urethra
	7.8		Brachytherapy
<b>8</b>		<b>Head, Neck &amp; Skin</b>	
	8.1		Nasopharynx
	8.2		Oral cavity (RMT and OT)
	8.3		Oropharynx
	8.4		Thyroid gland
	8.5		Larynx (supraglottic, larynx, subglottic)
	8.6		Hypopharynx
	8.7		Unknown primary
	8.8		Salivary gland
	8.9		Paranasal sinuses
	8.10		Skin cancers
	8.11		Anatomy and syndromes
	8.12		Staging
	8.13		Chemotherapy & chemoradiation
	8.14		Risk factors/tobacco/alcohol/HPV, etc
	8.15		Quantec OAR data
<b>9</b>		<b>Lung/Mediastinum</b>	
	9.1		SCLC
	9.2		Prophylactic Cranial Irradiation
	9.3		Early Stage NSCLC
	9.4		Advanced NSCLC
	9.5		Palliation
	9.6		Chemotherapy
	9.7		OAR
	9.8		Thymoma
	9.9		Mesothelioma

<b>10</b>		<b>Leukemia &amp; Lymphoma</b>	
	10.1		Diffuse Large B cell
	10.2		Follicular
	10.3		MALT
	10.4		Other NHL
	10.5		Multiple myeloma and/or plasmacytomas
	10.6		Hodgkin disease
	10.7		Leukemia
	10.8		Total body and/or skin irradiation/transplant
	10.9		Radioimmunotherapy
	10.10		Toxicity
<b>11</b>		<b>Pediatrics</b>	
	11.1		Retinoblastoma
	11.2		Lymphomas (including Hodgkin disease)
	11.3		Neuroblastoma
	11.4		Wilms
	11.5		Rhabdomyosarcomas
	11.6		Ewings
	11.7		Leukemias
	11.8		CNS tumors
	11.9		Long term side effects
<b>12</b>		<b>Biology</b>	
	12.1		Interaction of Radiation with Biological Systems
	12.2		Molecular Mechanisms of DNA Damage
	12.3		Molecular Mechanisms of DNA Repair
	12.4		Chromosome and Chromatid Damage
	12.5		Mechanisms of Cell Death
	12.6		Cell and Tissue Survival Assays
	12.7		Models of Cell Survival
	12.8		Modifiers of Cell Survival: RBE and LET
	12.9		Modifiers of Cell Survival: Oxygen Effect
	12.10		Modifiers of Cell Survival: Cellular Recovery
	12.11		Tumor Biology
	12.12		Normal and Tumor Cell Kinetics
	12.13		Molecular Signaling
	12.14		Cancer Biology
	12.15		Total Body Irradiation
	12.16		Clinically Relevant Normal Tissue Responses to Radiation
	12.17		Mechanisms of Normal Tissue Radiation Responses
	12.18		Therapeutic Ratio

	12.19		Time, Dose and Fractionation Effects
	12.20		Nonstandard Dose Delivery Systems
	12.21		Chemotherapy Agents and Radiation Therapy
	12.22		Radiosensitizers, Radioprotectors, and Bioreductive Drugs
	12.23		Hyperthermia
	12.24		Radiation Carcinogenesis
	12.25		Heritable Effects of Radiation
	12.26		Teratogenesis: Effects on the Embryo and Fetus
	12.27		Radiation Protection
<b>13</b>		<b>Physics</b>	
	13.1		Atomic and nuclear structure
	13.2		Production of photons and electrons
	13.3		Treatment machines & generators; simulators & simulation tools
	13.4		Radiation interactions
	13.5		Radiation beam quality & dose
	13.6		Radiation measurement & calibrations
	13.7		Photons and x-ray characteristics of dosimetry
	13.8		Electron beam characteristics & planning
	13.9		External beam QA
	13.10		Informatics
	13.11		Brachytherapy, radiation protection & shielding
	13.12		Imaging for Radiation Oncology
	13.13		3D CRT Including ICRU concepts & beam related biology
	13.14		Assessment of patient setup & verification
	13.15		IMRT
	13.16		Special procedures
	13.17		Particle therapy (proton therapy)