

CHAPTER XIV

RADIOLOGY

**(Radiology, Nuclear Medicine and
Radiation Therapy)**

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VOCABULARY

Cineradiography: (Cinematography; cinematoradiography)	The making of a motion picture record of successive images appearing in a fluoroscopic screen.
Contrast medium:	A substance introduced into a structure to allow its radiographic visualization e.g. Barium sulphate given as a barium swallow or barium enema
Contrast:	The difference in optical density in a radiograph
CT Scanner:	Computed tomography machine that sends ionizing x-rays through a patient at multiple cuts to a computer that projects a single composite "slice" of the part of the body on a screen (also called CAT scanner: computerized axial tomography scanner)
Double-contrast study:	Uses both radiopaque and radiolucent contrast media IV and oral
Echocardiography:	Graphic recording of the position, motion and internal structures of the heart by the echo obtained from beams of ultrasonic waves directed through the chest wall
Fluorescence: (adj: fluorescent)	The property of emitting light while exposed to light
In vitro:	Observable in a test tube
In vivo:	Within the living body
Interventional Radiology:	A branch of radiology concerned with providing diagnosis and treatment of disease by a variety of percutaneous or vascular procedures performed under the guidance of radiologic imaging.
Ionization:	Any process by which a neutral atom or molecule gains or loses electrons and is changed to a charged particle called ion.
Ionize:	Separate into ions
Isotope:	A chemical element with the same number of nuclear protons as another, but possessing a different number of nuclear neutrons (different atomic mass)
Magnetic Imaging:	Radiography that uses electromagnetic energy No ionizing radiation (no x-rays)

MRI:	Magnetic Resonance Imaging
Nuclear Medicine:	The medical speciality that studies the characteristics and uses of radioactive substances in the diagnosis and treatment of disease.
Nuclear Physician:	A radiologist who specializes in the practice of administering diagnostic nuclear medicine procedures
Pap Smear (Pap test)	Papanicolaou test: A cytological procedure for the detection and diagnosis of several conditions especially malignant and premalignant conditions of female genital system.
Radiation Oncologist:	A physician who specializes in the practice of radiotherapy
Radioactive substances:	Are materials that emit high-speed particles and energy containing rays
Radioactivity:	The emission of electromagnetic radiation
Radiogram: (Radiograph)	A film produced by radiography
Radiographer:	A radiologic technologist who administers diagnostic x-ray procedures
Radiography: (adj: Radiographic)	The making of film records (radiographs) of structures of body by passage of x-rays or gamma rays through the body to act on a specially sensitized film.
Radioimmunoassay (RIA):	An in vitro procedure that combines the use of radioactive chemical and antibodies to detect hormones and drugs in a patient's blood
Radioisotope:	An isotope which is radioactive
Radiolabeled:	Marked by incorporation of a radioisotope
Radiologist:	A physician who specializes in the practice of diagnostic and interventional radiology
Radiology: (Roentgenology) (adj: Radiologic) (Radiological)	The medical speciality concerned with the use of radioactive substances and x-rays for the diagnosis and treatment of disease and the use of nonionizing radiations (ultrasound) for diagnostic purposes.

Radiolucent: (n: radiolucency) (syn: Radioparent) (n: radioparency)	Permitting the passage of x-rays with reduction of energy (radiolucent areas appear dark in the exposed film) (syn: Radiotransparent; n: radiotransparency)
Radiopaque: (n: radiopacity; radio-opacity)	Not penetrable by x-rays (radiopaque areas appear light or white in exposed films)
Radiotherapy: (Irradiation; radiation therapy)	The treatment of disease by ionizing radiation
Ultrasonography: (Sonography)	The visualization of body structures by recording the reflections of (echoes of) pulses of ultrasonic waves directed into the tissues

COMBINING FORMS

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Angio__	Blood vessel	__graphy	X-ray imaging	Angiography (adj: angiographic)	The radiographic visualization of blood vessels following introduction of contrast medium
Angio__	Blood vessel	__graph (__gram)	x-ray image	Angiogram (Angiograph)	A radiograph of blood vessels taken during angiography
Arterio__	Artery	__graphy	X-ray imaging	Arteriography	Angiography of arteries
Arthro__	Joint	__graphy	X-ray imaging	Arthrography	Radiography of a joint after injection of contrast material
Broncho__	Bronchus	__graphy	X-ray imaging	Bronchography	Radiography of bronchial tree after injecting an iodized contrast media suspension into the bronchus through the trachea
Cholangio__	Bile duct	__graphy	X-ray imaging	Cholangiography	Radiography of the biliary ducts after injecting a contrast medium, orally, intravenously or percutaneously
Cine__	Movement	radiography	Recording of radiographs	Cineradiography Cinefluorography	Cinematography Cinematradiography
Echo__	A repeated sound	cardiography	Graphic recording of the function of the heart	Echocardiography	Graphic recording of the motion and internal structure of the heart using ultrasonic waves
Hystero__	Uterus	__graphy	X-ray imaging	Hysterography	Radiography of the uterus after instillation of a contrast medium
Mucoso__	Mucosa	__itis	Inflammation of	Mucositis	Inflammation of a mucous membrane
Myelo__	Spinal cord	__graphy	X-ray imaging	Myelography	Radiography of the spinal cord after injection of a contrast medium into the subarachnoid space

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Myelo__	Bone marrow	Suppression	Holding back; checking	Myelosuppression	Bone marrow suppression
Pyelo__	Renal pelvis	__graphy	X-ray imaging	Pyelography	Radiography of the renal pelvis and ureter after they have been opacified by a contrast solution given IV or percutaneously
Radio__	Radiant energy rays	__phobia	Irrational fear	Radiophobia	Irrational fear of the damaging effects of x-rays and sources of radiation
Radio__	Radiant energy; x-rays	__resistance	Ability to resist	Radioresistance (adj: radioresistant)	Resistance to the injurious effects of radiation
Radio__	Radiant energy ; x-rays	Sensitiveness	Ability to respond	Radiosensitiveness (Radiosensitivity) (adj: Radiosensitive)	Sensitivity to radiant energy, x-rays and other radiations
Radio__	Radiant energy	__therapy	Treatment	Radiotherapy (adj: radiotherapeutic)	Treatment of disease by ionizing radiator
Radio__	Radiant energy	__therapist	Specialist in therapy	Radiotherapist	A specialist in radiotherapy
Salpingo__	Uterine tube	__graphy	X-ray recording	Salpingography	Radiography of the uterine cavity and tubes after their filling by an opaque medium
Tomo__	Cutting	__gram	Record	Tomogram	A radiograph of a selected layer of the body made by tomography
Uro__	Urinary tract	__graphy	X-ray imaging	Urography	Radiography of a part of the urinary tract rendered opaque by some opaque medium
Veno__ (phlebo__)	Vein	__graphy	X-ray imaging	Venography (Phlebography)	Angiography of veins
Xero__	Dry	stomia	mouth	Xerostomia	Dryness of mouth from salivary gland dysfunction
Xero__	Dry	osis	Disease condition	Xerosis (adj:xerotic)	Abnormal dryness, as of the eye, skin or mouth

PREFIXES

PREFIX	MEANING	COMBINED WITH	MEANING	MEDICAL TERM	MEANING
Im__	In	plant	Place	Implant	An object or material inserted into the body for prosthetic, therapeutic, diagnostic or experimental purposes
In__	Not	audible	Easily heard	Inaudible	Not heard
Inter__	In between	__stitium	Tissue	Interstitial	Situated between parts or in the interstices of a tissue
Inter__	In between	face	Surface	Interface (adj: interfacial)	Surface of separation between tissues
Intra__	Within	cavito__	Space	Intracavitary	Within a cavity
Non__	Not	injurious	Harmful	Noninjurious	Not harmful
Ultra__	Beyond	sono__	Sound	Ultrasonography (Sonography)	sound waves that are beyond the normal range of those that a human can hear

ACRONYMS

AP:	Anteroposterior
Ba:	Barium
CAT:	Computerized Axial Tomography
C-Spine:	Cervical Spine
CT:	Computed Tomography
CXR:	Chest x-ray
Decub:	Decubitis (lying down)
DI:	Diagnostic Imaging
DSA:	Digital Subtraction Angiography
IVP:	Intravenous Pyelogram
IVU:	Intravenous Urography
KUB:	Kidneys, Ureters, bladder (x-ray without contrast medium)
LAT:	Lateral
LGI:	Lower Gastrointestinal Series
LS Films:	Lumbosacral spine films
MRI:	Magnetic Resonance Imaging
PA:	Posteroanterior
RIA:	Radioimmunoassay
UGI:	Upper Gastrointestinal Series
US (U/S):	Ultrasound
XRT:	Radiation Therapy

VOCABULARY

Acid phosphatase:	An enzyme found in high concentration in the blood of patients with prostate cancer
Adjuvant Therapy:	Assisting primary treatment
Adjuvant:	An aid
Alkylating Agents:	Synthetic chemicals that interfere with DNA synthesis
Alpha-fetoprotein test:	Detects the presence in serum of alpha-fetoprotein, which is found in patients with liver and testicular cancer
Basal Cell Carcinoma:	Malignant tumor of the basal cell layer of the epidermis. It seldom metastasizes but has potentialities for local invasion and destruction
beta-HCG test:	Detects human chorionic gonadotropin (HCG) in the serum of patients with testicular cancer; is later used to detect recurrence
Bone marrow biopsy:	A small amount of bone marrow tissue is aspirated and examined under a microscope for evidence of cancerous cells
Carcinoma in situ:	Localized tumor that has not invaded adjacent structures
CEA test:	Tests carcinoembryonic antigen (CEA) in the blood stream of patients with tumors of gastrointestinal (GI) origin e.g. colorectal cancer
Cystic: (n: cyst)	Forming large open spaces filled with mucinous or serous fluid
Debilitated: (n: debility)	Lacks strength
Diffuse: (n: diffusion)	Spreading evenly throughout the affected tissue

Electron beams:	Low-energy beams of radiation for treatment of skin or surface tumors
En bloc resection :	Tumor is removed with a large area of surrounding tissue containing lymph nodes
Epidermoid: (n: epidermis)	Resembling squamous epithelial cells
Estrogen (Estradiol): Receptor Assay	Measures the concentration of estrogen receptor (ER) sites in tumor cells of breast cancer patients
Excisional biopsy:	Removal of tumor and a margin of normal tissue
Field:	Defined areas that will be bombarded by radiation
Follicular: (n: follicle)	Forming small, microscopic, gland-type sacs
Fractionation:	Giving radiation in small repeated doses
Fulguration: (adj: fulgurant)	Destruction of tissue by electric sparks generated by a high frequency current
Fungating: (n: fungus)	Mushrooming pattern of growth in which tumor cells pile one on top of another and project from a tissue surface, e.g. colonic tumors
Genetic Screening:	Family members are tested to determine whether they have inherited a cancer-causing gene
Incisional biopsy:	A piece of tumor is removed for examination to establish a diagnosis
Inflammatory: (n: inflammation)	Having the features of inflammation: redness, swelling and heat
Invasive: (n: invasiveness) (opp: non invasive)	Able to infiltrate and actively destroy surrounding tissues
Laparoscopy: (Peritoneoscopy) (celioscopy) (abdominoscopy)	This procedure is to inspect the abdominal (peritoneal) cavity for tumors

Malignant Melanoma: (syn: Melanocarcinoma; Melanoepithelioma)	Cancerous growth composed of melanocytes, usually developing from a nevus
Mammography :	X-ray examination of the breast
Medullary: (n: medulla) (pl:medullae)	Pertaining to medulla, bone marrow and spinal cord. Pertains to large soft, fleshy tumor e.g. thyroid and breast tumors.
Mitosis : (adj : mitotic)	Process of cell division
Modality:	Method of application of any therapeutic agent e.g. chemotherapy, radiotherapy and biological therapy
Mutation : (adj : mutational)	Change in form, quality or some other characteristic
Necrotic: (n: necrosis)	Containing dead tissue
Needle biopsy :	A core of tissue is removed by a needle from the area in question
Neuroblastoma:	Sarcoma of nervous tissue origin composed chiefly of neuroblasts
Nodular: (nodulated) (n: nodule, nodulus)	Forming multiple areas of tightly packed clusters of cells with lightly populated areas in between
Papillary: (n: papilla)	Forming small, finger-like or nipple-like projections of cells (pl: papillae)
Pleomorphic: (n: pleomorphism)	Composed of a variety of types of cells (pleo + morph + ic) e.g. mixed cell tumors composed of epithelial as well as connective tissue cells
Polypoid: (n: polyp)	Sessile or pedunculated growth that projects outward as a polyp
Protocol:	A plan that details exactly how treatment will be given
Regimen:	A strictly regulated scheme designed to achieve a certain end

Relapse: (recurrence; recrudescence)	Return of symptoms of a disease
Remission:	Absence of symptoms of a disease
Retinoblastoma: (glioma retinae)	A tumor arising from retinal germ cells or retinoblasts; malignant
Scirrhous: (adj: scirrhous)	Hard cancer
Squamous Cell Carcinoma:	Carcinoma development from squamous epithelium and having cuboidal cells.
Ulcerating: (n: ulcer)	Marked by open, exposed surface resulting from the death of overlying tissue
Verrucous: (n: verruca) (syn: verruga)	Resembling a wart-like growth; rough (pl: verrucae)
Viral Oncogenes:	Pieces of DNA from viruses that infect a normal cell and cause it to become malignant

COMBINING FORMS

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Adeno__	Gland	__oma	Tumor	Adenoma (adj: adenomatous)	A benign epithelial tumor Derived from glandular epithelium
Adeno__	Gland	carcinoma	Malignant tumor	Adenocarcinoma	Carcinoma derived from glandular tissue
Brachy__	Short	therapy	Treatment	Brachytherapy	Implantation of seeds of radioactive material directly into the tumor
Carcino__	Cancer	__gen	Producing	Carcinogen (adj: carcinogenic) (n: carcinogenesis)	Cancer producing substance
Carcino__	Cancer	__oma	Tumor	Carcinoma	A malignant growth made up of epithelial cells tending to infiltrate the surrounding tissues and give rise to metastasis
Cryo__	Cold	surgery	Treatment by operative methods	Cryosurgery	Destruction of tissue by application of extreme cold
Dys__	Abnormal	__plasia	Formation	Dysplasia (adj: dysplastic)	Abnormal formation of cells
Electro__	Electricity	cauterization	Destruction of tissue with a hot iron, an electric current or a caustic substance	Electrocauterization	Destruction of tissue with an electric current
Histo__	Tissue	__genesis	Production	Histogenesis (adj: histogenetic) (syn: histogeny)	The formation of tissues from the undifferentiated cells of the germ layers of the embryo
Neo__	New or strange	__plasm	Growth	Neoplasm (syn: Tumor) (adj: neoplastic)	Any new and abnormal growth
Neo__	New or strange	__plasia	Formation	Neoplasia (Adj: neoplastic)	Formation of a neoplasm

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Neo__	New or strange	plastigenic	Tending to produce	Neoplastigenic	Tending to produce neoplasms
Onco__	Tumor	__gene	Biologic unit of heredity	Oncogene (adj: oncogenic) (n: oncogenecity)	Viral genetic material carrying the potential of cancer and passed from parent to offspring
Pharmaco__	Drug or medicine	kinetics	Rate of change	Pharmacokinetics	The study of the action of a drugs in the body over a period of time
Radio__	Radiation	resistant (n: resistance)	Has ability to remain unaffected by noxious agents	Radioresistant (n: radioresistance)	Ability to remain unaffected by radiation
Radio__	Radiation	sensitive (n: sensitivity)	Responding quickly and acutely	Radiosensitive (n: radiosensitivity) (n: radiosensitiveness)	Sensitive to radiant energy
Radio__	Radiation	curable	Can be cured	Radiocurable	Curable by radiation therapy
Radio__	Radiation	responsive	Reacting favorably	Radioresponsive (n: radioresponsiveness)	Reacting favorably to radiation
Radio__	Radiation	sensitizer	Drug that increases the sensitivity of tumors	Rediosensitizer	Drugs that increase the sensitivity of tumors to x-rays
Sarco__	Flesh	__oma	Tumor	Sarcoma (pl: sarcomata) (adj: sarcomatous)	A malignant tumor of connective tissue
Terato__	Monster	__oma	Tumor	Teratoma (adj: teratomatous) (pl: teratomata)	A neoplasm made up of a number of tissues (bone, muscle, skin, gland cells, cartilage, etc.)

PREFIXES

PREFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
Ana__	Backward	__plasia	Formation	Anaplasia (syn: Anaplastia) (adj: anaplastic)	Loss of differentiation of cells and of their orientation to one another and to their axial framework and blood vessels, characteristic of tumor tissue
Anti__	Against	metabolite	Substance produced by a metabolic process	Antimetabolite	Drugs that inhibit the synthesis of substances that are necessary components of DNA i.e. they block replication of DNA
Anti__	Against	mitotic	Pertaining to mitosis	Antimitotic	Substances that block the function of cell structural protein essential for mitosis
Anti__	Against	angiogenic	Pertaining to angiogenesis	Antiangiogenic	Drug that inhibits growth of new blood vessels
Apo__	Off	__ptosis	To fall	Apoptosis	Programmed cell death: cancer cells have lost the ability to undergo apoptosis
Ben__	Good	__ignis	Fire	Benign	Not malignant; favorable for recovery
De__	Down	differentiation	Process of acquiring individual characters	Dedifferentiation	Anaplasia
Ex__	Outside	enteron	Bowel	Exenteration (adj: exenterative)	Surgical removal of the inner organs; radical excision of the contents of a body cavity e.g. pelvis
Hyper__	Beyond	nephroma	Kidney tumor	Hypernephroma	Renal cell carcinoma whose structure resembles that of the cortical tissue of the adrenal gland
Hyper__	Excess	__plasia	Formation	Hyperplasia (adj: Hyperplastic)	The abnormal increase or multiplication of normal cells
Mal__	Bad	__ignis	Fire	Malignant (syn: cancerous) (n: malignancy)	Having the properties of anaplasia, invasion, metastasis
Meta__	Beyond	__stasis	Stoppage	Metastasis (pl: metastases) (adj: metastatic) (verb: metastasize)	Transfer of disease from one organ or part to another not directly connected to it (metastatic: opp: nonmetastatic)

PREFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
Meta__	Beyond	__plasia	Formation	Metaplasia (adj: Metaplastic)	Abnormal transformation of adult differentiated cells to differentiated tissue of another kind
Micro__	Small	tubule	A small tube	Microtubule	A cylindrical hollow-appearing structure in the cytoplasm of a cell
Pro__	Before	__gnosis	Knowledge	Prognosis (adj: prognostic)	The forecast as to the possible outcome of a disease (verb: to prognose)
Re__	Again	plication	Fold	Replication	The process of duplicating or reproducing
Trans__	Beyond	__formation	Process of forming	Transformation	Conversion from one form to another. In oncology: the change that a normal cell undergoes as it becomes malignant
Trans__	Across	location	Position	Translocation	Removal to another place. In genetics the shifting of a segment or a fragment of one chromosome into another chromosome
Ultra__	Beyond	violet	The hue seen at the refracted end of the spectrum	Ultraviolet	Beyond the violet end of the spectrum
Un__	Not	differentiated	Having individual characteristics	Undifferentiated	Anaplastic

SUFFIXES

SUFFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
__genesis	Production	Onco__	Tumor	Oncogenesis (adj: oncogenetic)	The causation or production of tumors
__genesis	Production	Mutation	Change	Mutagenesis (adj: mutagenic)	The production of change; the induction of genetic mutation
__genesis	Production	Sarcoma	Malignant tumor of connective tissue	Sarcomagenesis (adj: sarcomagenic)	Production of sarcoma
__genous	Produced by	Onco__	Tumor	Oncogenous	Arising in or originating from a tumor
__hexia	Habit	Cac__	Bad	Cachexia (adj: cachectic)	General ill health and malnutrition
__logist	Specialist in	Onco__	Tumor	Oncologist	Specialist in study of tumors
__logy	Study of	Onco__	Tumor	Oncology (carcinology)	The study of tumors
__logy	Study of	Terato__	Monster	Teratology	The study of abnormal development and congenital malformations
__lysis	Destruction	Onco__	Tumor	Oncolysis (adj: oncolytic)	Dissolution or destruction of tumor cells
__megaly	Enlargement	Adeno__	Gland	Adenomegaly	Enlargement of a gland
__oid	Resembling	Sarcomato	Sarcoma	Sarcomatoid	Resembling sarcoma
__oid	Resembling	Polypo__	Polyp	Polypoid	Resembling a polyp
__osis	Disease process	Onco__	Tumor	Oncosis	Morbid condition characterized by the development of tumors
__therapy	Treatment	Onco__	Tumor	Oncotherapy	The treatment of tumors
__tomy	Incision	Onco__	Tumor	Oncotomy	Incision of a tumor

ACRONYMS & ABBREVIATIONS

BMT:	Bone Marrow Transplantation
bx:	Biopsy
Ca:	Cancer
CEA:	Carcinoembryonic Antigen
Chem:	Chemotherapy
CR:	Complete Response (disappearance of all the tumor)
ER:	Estrogen Receptor
Meta:	Metastases
NED:	No evidence of disease
Pap smear:	Papanicolaou smear
PD:	Progressive Disease (tumor increasing in size)
PR:	Partial Response
SD:	Stable Disease (tumor does not shrink but does not grow)
TNM:	Tumor, nodes, metastases
XRT:	Radiation Therapy

DICTATION

Ultrasound technique employs high-frequency, inaudible sound waves that bounce off body tissues and are then recorded to give information about the anatomy of an internal organ. The instrument used emits sound waves in short, repetitive pulses. These ultrasound waves move with different speeds through body tissues and detect interfaces between tissues of different densities. An echo reflection of the sound waves are then recorded by the ultrasound monitor as a composite picture of the area of the body over which the instrument has passed as a sonogram or echogram.

Ultrasound is used as a diagnostic and therapeutic tool by radiologists, neurosurgeons, ophthalmologists, cardiologists, gastroenterologists, obstetricians and gynecologists.

Ultrasound has several advantages as the sound waves are nonionizing and noninjurious to body tissues at the energy ranges utilized for diagnostic purposes.

Ultrasound, like fluoroscopy has been used in interventional radiology to guide needle biopsies, for the puncture of cystic or solid lesions and for the placement of needles for amniocentesis.

Magnetic Resonance Imaging, on the other hand, uses electromagnetic energy. It produces sagittal, coronal and cross-sectional images. The latter are similar to computed tomography scanning. MRI does not use x-rays and does not need a contrast medium.

MRI is useful for providing soft-tissue images. It is contraindicated for patients with pacemakers or metallic implants.

Nuclear medicine studies the characteristics and uses of radioactive substances in diagnosis of disease.

Radiation therapy (radiation oncology) is the treatment of disease using an external source of high-energy rays or internally implanted radioactive substances.

ASSIGNMENT # 20

Match the term and acronyms in column I with the relevant term or statement in column II. Write the letter of the answer in the space provided.

1. Arthrography	_____	A. Radioisotope
2. Recumbent	_____	B. Lying on the side
3. AP	_____	C. High energy radiation used in curative x-ray therapy for cancer
4. Prone	_____	D. Lying on the back (face-up)
5. Myelography	_____	E. A machine used in radiotherapy
6. PA	_____	F. Baldness
7. Lateral decubitus	_____	G. Joints
8. Supine	_____	H. Turning outward
9. Barium Enema:	_____	I. Lying down (prone or supine)
10. Hysterosalpingography	_____	J. Posterior to anterior view
11. Eversion	_____	K. Low-energy radiation used in palliative radiation therapy
12. Cobalt-60	_____	L. Spinal cord
13. Betatron	_____	M. Lower Gastrointestinal Tract
14. Lethal	_____	N. Lying on the belly (face down)
15. Sonogram	_____	O. Deadly or fatal
16. Palliative	_____	P. Anterior to posterior view
17. Radionuclide	_____	Q. Uterus and fallopian tube
18. Alopecia	_____	R. A radioactive substance used in radiotherapy
19. Extension	_____	S. Turning inward
20. Inversion	_____	T. Bending a part of the body
21. Megavoltage	_____	U. Echogram
22. Orthovoltage	_____	V. X-ray image of blood vessels
		W. Relieving symptoms but not curing
		X. Ionization
		Y. Straightening a flexed limb

QUIZ # 30

I. Write one SYNONYM for each of the following terms:

1. Radiology: _____
2. Radiosensitivity: _____
3. Radiotherapy: _____
4. Radiolucent: _____
5. Endogenous: _____
6. Cineradiography: _____
7. Radioisotope: _____
8. Venography: _____
9. Sonography: _____
10. Angiogram: _____

II. Write the OPPOSITE term for each of the following:

11. Radiolucent: _____
12. Radioresistant: _____
13. External beam radiation: _____
14. Audible: _____
15. Injurious: _____
16. Anterograde: _____
17. Endogenous: _____
18. Differentiated: _____
19. Malignant: _____
20. Stable: _____
21. Plasia: _____
22. Invasive: _____
23. Localized: _____
24. Progressive: _____

III. Write the ADJECTIVE for each of the following terms:

25. Precocity: _____
26. Radioactivity: _____
27. Fluorescence: _____
28. Intervention: _____
29. Radiophobia: _____
30. Angiography: _____

31. Radiotherapy: _____
 32. Radiopacity: _____
 33. Radiosensitivity: _____
 34. Radiology: _____
 35. Interstitium: _____

V. Write the PLURAL for each of the following meanings:

36. Sarcoma: _____
 37. Necrosis: _____
 38. Alveolus: _____
 39. Therapy: _____
 40. Metastasis: _____
 41. Teratoma: _____

V. Write the medical term for each of the following meanings:

42. The medical speciality that studies uses of radioactive substances in the diagnosis of disease: _____
 43. A physician who specializes in the practice of diagnostic radiology: _____
 44. The treatment of diseases by ionizing radiation: _____
 45. A radiologic technologist who administers diagnostic x-ray procedures: _____
 46. Marked by incorporation of a radioisotope: _____
 47. The difference in optical density in a radiograph: _____
 48. Observable in a test tube: _____
 49. Dryness of the mouth from salivary glands dysfunction _____
 50. Inserted into the body for therapeutic, diagnostic and experimental purposes: _____
 51. Surface of separation between tissues: _____
 52. Graphic recording of the heart using ultrasonic waves: _____

- 53. Benign tumor of the adrenal cortex: _____
- 54. The property of emitting light while exposed to light: _____
- 55. Irrational fear of the damaging effect of x-rays: _____
- 56. Change in form, quality or some other characteristic: _____
- 57. Localized (malignant) tumor that has not invaded adjacent structures: _____
- 58. Spreading evenly throughout the affected tissue: _____
- 59. Hard cancer: _____
- 60. Method of application of any therapeutic agent: _____
- 61. Formation of a tumor: _____
- 62. Viral genetic material carrying the potential of cancer and passed from parent to offspring: _____
- 63. Cancer producing substance: _____
- 64. The formation of tissues from undifferentiated cells of the germ layers of the embryo: _____
- 65. A malignant tumor of connective tissue: _____
- 66. A benign epithelial tumor derived from glandular tissue: _____
- 67. Abnormal formation of cells: _____
- 68. Implantation of seeds of radioactive material directly into the tumor: _____
- 69. Loss of differentiation of cells and their orientation to one another: _____
- 70. Conversion from one form to another: _____
- 71. Transfer of disease from one organ or part to another not directly connected to it: _____

72. Programmed cell death: _____
73. Specialist in study of tumors: _____
74. Enlargement of a gland: _____
75. The production of tumors: _____
76. General ill health and malnutrition: _____
77. Composed of a variety of types of cells: _____
78. A strictly regulated scheme designed to achieve a certain end: _____
79. Giving radiation in a small repeated doses: _____
80. Tumor is removed with a large area of surrounding tissue containing lymph nodes: _____

VI. Write the following abbreviations and acronyms in full:

1. CEA: _____
2. ER: _____
3. BMT: _____
4. CR: _____
5. NED: _____
6. PD: _____
7. PR: _____
8. TNM: _____
9. SD: _____
10. XRT: _____
11. bx: _____
12. Chem: _____
13. Ca: _____
14. Meta: _____

Answers to Assignment 20

- | | |
|---------------------------|---|
| 1. Arthrography | G A. Radioisotope |
| 2. Recumbent | I B. Lying on the side |
| 3. AP | P C. High energy radiation used in curative x-ray therapy for cancer |
| 4. Prone | N D. Lying on the back (face-up) |
| 5. Myelography | L E. A machine used in radiotherapy |
| 6. PA | J F. Baldness |
| 7. Lateral decubitus | B G. Joints |
| 8. Supine | D H. Turning outward |
| 9. Barium Enema: | M I. Lying down (prone or supine) |
| 10. Hysterosalpingography | Q J. Posterior to anterior view |
| 11. Eversion | H K. Low-energy radiation used in palliative radiation therapy |
| 12. Cobalt-60 | R L. Spinal cord |
| 13. Betatron | E M. Lower Gastrointestinal Tract |
| 14. Lethal | O N. Lying on the belly (face down) |
| 15. Sonogram | U O. Deadly or fatal |
| 16. Palliative | W P. Anterior to posterior view |
| 17. Radionuclide | A Q. Uterus and fallopian tube |
| 18. Alopecia | F R. A radioactive substance used in radiotherapy |
| 19. Extension | Y S. Turning inward |
| 20. Inversion | S T. Bending a part of the body |
| 21. Megavoltage | C U. Echogram |
| 22. Orthovoltage | K V. X-ray image of blood vessels |
| | W. Relieving symptoms but not curing |
| | X. Ionization |
| | Y. Straightening a flexed limb |

Answers to Quiz 30

I. Synonyms:

1. Roentgenology
2. Radiosensitiveness
3. Irradiation; radiation therapy
4. Radiotransparent
5. Endogenic; endogenetic
6. C i n e m a t o g r a p h y ;
cinematoradiography
7. Radionuclide
8. Phlebography
9. Ultrasonography
10. Angiograph

II. Opposites

11. Radiopaque
12. Radiosensitive
13. Brachytherapy
14. Inaudible
15. Noninjurious
16. Retrograde
17. Exogenous
18. Undifferentiated; Dedifferentiated
19. Benign
20. Unstable
21. Anaplasia
22. Noninvasive
23. Generalized; diffuse
24. Regressive

III. Adjectives

25. Precocious
26. Radioactive
27. Fluorescent
28. Interventional
29. Radiophobic
30. Angiographic
31. Radiotherapeutic
32. Radio-opaque; radiopaque
33. Radiosensitive
34. Radiologic; radiological
35. Interstitial

IV. Plural:

36. Sarcomata
37. Necroses
38. Alveoli
39. Therapies
40. Metastases
41. Teratomata

V. Meanings:

42. Nuclear Medicine
43. Radiologist
44. Radiotherapy ; irradiation;
radiation therapy
45. Radiographer
46. Radiolabeled
47. Contrast
48. In - vitro
49. Xerostomia
50. Implant
51. Interface
52. Echocardiography
53. Pheochromocytoma
54. Fluorescence
55. Radiophobia
56. Mutation
57. Carcinoma-in-situ
58. Diffuse
59. Scirrhous
60. Modality
61. Neoplasia; oncogenesis;
tumorigenesis
62. Oncogene
63. Carcinogen
64. Histogenesis
65. Sarcoma
66. Adenoma
67. Dysplasia
68. Brachytherapy
69. Anaplasia
70. Transformation
71. Metastasis
72. Apoptosis



- 73. Oncologist
- 74. Adenomegaly
- 75. Oncogenesis; Tumorigenesis;
Neoplasia
- 76. Cachexia
- 77. Pleomorphic
- 78. Regimen
- 79. Fractionation
- 80. En bloc resection

VI. Acronyms and Abbreviations

- 1. Carcinoembryonic antigen
- 2. Estrogen receptor
- 3. Bone marrow transplantation
- 4. Complete response
- 5. No evidence of disease
- 6. Progressive disease
- 7. Partial response
- 8. Tumor, nodes, metastasis
- 9. Stable disease
- 10. Radiation therapy
- 11. Biopsy
- 12. Chemotherapy
- 13. Cancer
- 14. Metastasis

