

# WN

## MEDICAL IMAGING. RADIOTHERAPY. MEDICAL PHYSICS. NUCLEAR MEDICINE. RADIOACTIVITY

Definitions : (from various online encyclopaedias/dictionaries)

**Medical Imaging/Radiology/ Diagnostic imaging:** the use of imaging to diagnose and treat disease through use of radiant energy or radioactive substances (formerly X-rays, gamma rays and other ionising radiation but now including non-ionising radiation e.g. ultrasound, magnetic resonance and radioactive isotopes). Radiologists interpret the images often obtained by Radiographers

**Radiotherapy/ Therapeutic radiology:** use of radiation sources to treat or relieve diseases, usually cancer

**Interventional radiology:** a sub-specialty which uses various imaging techniques to guide the placement of needles, catheters, drains and stents inside a patient to diagnose an array of conditions

**Nuclear Medicine:** sub-specialty using radioactive elements or isotopes for diagnosis and treatment of disease

**Medical Physics:** the application of physics to medicine – generally concerns physics as applied to medical imaging and radiotherapy

### RADIOLOGY

This section deals with the profession and diagnostic use of ionising radiation.  
Classify radiology of the parts of the body with the specific part

- 1 Societies
  
- 11 History
  
- 13 Dictionaries. Encyclopaedias. Bibliographies  
Use for general works only. Classify with specific subject where possible.
  
- 15 Classification. Nomenclature
  
- 16 Tables. Statistics in medical imaging
  
- 18 Education and training  
Include educational materials for both teaching and study
  
- 19 Schools and colleges

## **WN Medical Imaging, Radiotherapy, Medical Physics. Nuclear Medicine WN**

- 20        Research. Research design in medical imaging  
          Include research to support evidence-based practice  
          Classify research on a specific subject with the subject
  
- 21        Radiology as a profession. Careers  
          Include ethics, accountability, etc
  
- 22        Directories
  
- 23        Institutes of radiology
  
- 25        Laboratory manuals. Techniques. Film processing. Reclamation of silver, etc.
  
- 26        Computer applications. Use of telecommunications technology. General works  
          See WN155 for computers in radiography
  
- 27        Radiology departments
  
- 32        Law relating to the use of radioactive material
  
- 33               Discussion of laws
  
- 90        Medical imaging. General works  
          See also with specific aspects below e.g. ultrasound
  
- 100       Radiology. General works
  
- 105       Radiological anatomy
  
- 110       Patient care
  
- 115       Positioning
  
- 120       Health protection in radiodiagnosis
  
- 125       Interventional radiology. General works  
          See also with specific aspects

## **RADIOGRAPHY**

- 130 Radiography. General works
- 133 Radiography as a profession. Careers
- 138 Education and training  
Include educational materials for both teaching and study
- 140 Other personnel, e.g. dark room technicians
- 150 Equipment. X-ray tubes. Generators. Film. Intensifying screens
- 155 Use of computers and telecommunications technology in radiography  
See WN207 for PACS
- 160 Contrast medium  
See WN525 for radioisotopes
- 200 X-ray radiography. Exposure. Voltage. Filtration. Fluoroscopy. Xeroradiography
- 205 Multiple radiography
- 207 Digital radiography systems e.g. Picture Archiving and Communication System (PACS)
- 210 Stereography
- 215 Macroradiography. X-ray magnification. Image intensification.
- 220 Subtraction. Colour subtraction. Electronic subtraction.
- 225 Tomography. Linear and transverse axial
- 230 Computerised axial tomography (CAT) / Computed tomography (CT) or X-ray computed tomography. Positron emission tomography (PET)  
See QZ670 for use in diagnosis of cancer
- 245 Gamma radiography. Radiosurgery e.g. Gamma knife/Cyber knife  
See QZ747 for radiosurgery as treatment in cancer; WL630 neurological radiosurgery
- 250 Foreign bodies

260 Emergencies

270 Forensic radiography

## **RADIOTHERAPY**

See also QZ750 for general works on radiotherapy for treating cancer

300 Radiotherapy. General works

305 Radiotherapy as a profession. Careers

307 Research. Research design  
Include research to support evidence-based practice

308 Tables. Statistics

309 Hospitals and departments of radiotherapy

315 Radiotherapy nursing

320 Health protection in radiotherapy

325 Radiobiology

## **EXTERNAL RADIATION**

330 External radiation

333 X and gamma photons

340 Equipment. X-ray tubes. Filtration. Applicators

342 Electron linear accelerators

345 Treatment accessories. Head shells, wax blocks, breast bridge, lead blocks, compensators

350 Procedures. Superficial, orthovoltage, megavoltage

352 Fractionation

355 Dosage calculation

358 Measurement of radiation. Dosimetry

#### **INTERNAL RADIATION**

360 Internal radiation. Radionuclides. Radioisotopes

362 Radium needles and tubes

368 Other radioisotopes, e.g. caesium, gold, strontium

370 Equipment. Surface applicators, etc.

380 Procedures. Afterloading

382 Dosage calculation

#### **MEDICAL PHYSICS**

400 Medical physics. General works

405 Medical physics as a profession. Careers

407 Research in medical physics. Research design  
Include research to support evidence-based practice

408 Tables. Statistics

409 Medical physics departments

410 Laboratory manuals

412 Image processing

415 Equipment calibration

418 Non-ionising radiation. Include radio waves  
See WN460 for magnetic resonance imaging

## **WN Medical Imaging, Radiotherapy, Medical Physics. Nuclear Medicine WN**

- 420            Ultrasound. General works. Include diagnostic use, endosonography  
                  Classify with specific applications where possible, e.g. WQ214 for use in  
                  pregnancy
- 422                       Equipment
- 425                       Safety. Biological effects
- 428                       Procedures
- 430            Lasers. General works  
                  Classify with specific applications where possible, e.g. WO225 for surgery;  
                  WR640 for cutaneous disorders; WB480 for use in physiotherapy
- 432                       Equipment
- 435                       Safety. Biological effects
- 438                       Procedures
- 440            Thermography. Infra-red thermography  
                  Classify with specific applications where possible, e.g. WP815 for  
                  mammography
- 442                       Equipment
- 445                       Safety. Biological effects
- 448                       Procedures
- 450                       Microwaves
- 460            Magnetic resonance imaging (MRI) Topical magnetic resonance (TMR)
- 462                       Equipment
- 465                       Safety. Biological effects
- 469                       Procedures e.g interventional procedures guided by MRI
- 470            Ultra-violet radiation

## **WN Medical Imaging, Radiotherapy, Medical Physics. Nuclear Medicine WN**

- 472 Equipment
- 475 Safety. Biological effects
- 478 Procedures including phototherapy  
See WB480 for phototherapy/ultraviolet therapy etc used in physiotherapy
- 480 Physiological measurement  
Classify with specific application where possible, e.g. WG106 for blood volume;  
WV577 for audiometry

### **NUCLEAR MEDICINE**

- 500 Nuclear medicine. General works
- 502 Education and training  
Include educational materials for both teaching and study
- 505 Nuclear medicine as a profession. Careers
- 507 Research in nuclear medicine. Research design  
Include research to support evidence-based practice
- 508 Tables. Statistics
- 509 Departments of nuclear medicine
- 520 Safety with radioisotopes
- 525 Radioisotopes in diagnosis. Radio-pharmaceuticals. Radioisotope tests
- 530 Labelling
- 540 Radiation detection equipment. Scintillation counters
- 545 Display
- 560 Use of radiation for sterilisation and decontamination  
See WN358 for radiation dosimetry

**RADIOACTIVITY**

- 600 Radioactivity. General works  
Include all ionising radiation and handling radioactivity
- 605 Safety. General works on all aspects
- 610 Radiation injury
- 615 Radiation protection
- 617 Equipment
- 620 Effects of radioactivity on humans
- 625 Effects of radioactivity on animals
- 640 Effects of radioactivity on food
- 645 Public health aspects, e.g. transport, storage, and disposal of waste  
Include aspects of background radiation  
See W410 for disaster planning and accounts of disasters
- 650 Nuclear power. Medical health and safety aspects  
Include emission from power stations and fallout etc.
- 670 Nuclear war. Medical aspects  
See WX825 for health services in nuclear war