

DIAGNOSTIC RADIOGRAPHY

Diagnostic radiography is a branch of medicine that uses x-rays to produce images of the human body for diagnosis of disease. Radiographers use their expertise and knowledge of patient care, physics, anatomy, physiology, pathology and imaging techniques to produce optimal radiographic images. In these procedures, x-rays are passed through the body to expose the radiation detector that is placed on the opposite side of the body. The interaction of x-rays with different body tissues allows the radiologist to distinguish between normal and abnormal tissue and to diagnose many different types of diseases.

While most radiographic images are “still images”, fluoroscopy is a dynamic x-ray imaging technique that produces moving images for the evaluation of organ movement such as the beating heart or movement of the diaphragm and bowel. When imaging organs or blood vessels that are not visible on x-ray studies, a suitable contrast media / dye is given to the patient in order to make them visible.

A CT scan (computerized tomography scan), makes use of computer-processed combinations of many X-ray images taken from different angles to produce cross-sectional (tomographic) images of specific areas of a scanned object, allowing the user to see inside the object without cutting. The images produced from the CT scan can be two-dimensional, three-dimensional, volumetric, or dynamic. Magnetic resonance imaging (MRI), on the other hand, is a medical imaging technique used in radiology to investigate the anatomy and physiology of the body in both health and disease. MRI scanners use magnetic fields and radio waves to form images of the body. MRI is widely used in hospitals for medical diagnosis, staging of disease and for follow-up examinations without exposing patients to ionizing radiation.