"... PROTECTING PEOPLE AND THE ENVIRONMENT FROM THE HARMFUL EFFECTS OF RADIATION..."

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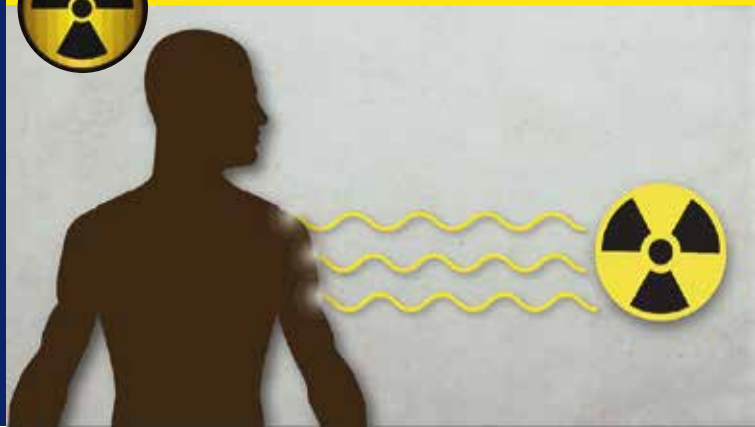
APPLICATION OF IONIZING RADIATION FOR DIAGNOSTIC PURPOSES



1. MEDICAL APPLICATIONS

A variety of nuclear and radiation based de-vic-es and procedures are used to diagnose, moni-tor and treat a wide assortment of medical conditions

Diagnostic Radiology

A branch of medicine dealing with medical imaging. Commonly used techniques includes; General X-rays, dental, computed tomography scanning, mammography and Nuclear Medicine

2. GENERAL X-RAYS

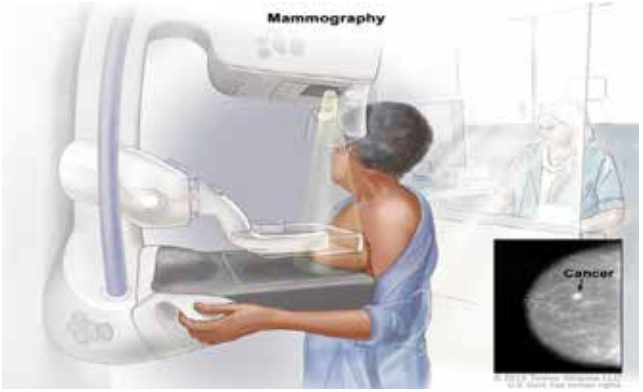
Exposure to X-rays is a diagnostic proce-dures that is used to take images of the body organs. The most familiar use of broken bones, whilst others such as chest Xray scan spot pneumonia.

Common Clinical Application

Chest: To assess lung pathology
Skeletal: to examine bone structure and diag-nose fractures, dislocation or other bone pathology
Abdomen: Can assess abdominal obstruction, free air or free fluid within the abdominal cavity
Dental: To assess common dental pathologies such as cavities or abscesses.

3. MAMMOGRAPHY

Mammography is the process of using low-energy X-rays to examine the human breast for diagnosis and screening. The goal of mammographyis the early detection of breast cancer, typically through detection of characteristic masses or micro calcifications.



4. COMPUTED TOMOGRAPHY(CT)

This is a medical imaging technique that uses computer-processed combinations of multiple X-ray measurements taken from different angles to produce 3-Dimensional images of a body, allowing the user to see inside the body.

5. NUCLEAR MEDICINE

Nuclear medicine is an imaging modality that involves ingestion, inhalation or injection of radioactive tracers to visualize various organs. The tracer or radiopharmaceutical is produced through addition of a radioactive isotope to a pharmaceutical specific to the organ being imaged.

Radiation Safety Tips

- Pregnant or those suspecting to be should notify the physician before an x-ray is taken
- Carry any previous x-ray records to your medical practitioner
- Balance between the benefit and risk as principle of justification
- Use of appropriate shielding as principle of optimization