

Medical Imaging

LECTURE THREE

X- Ray

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X- Ray

Introduction

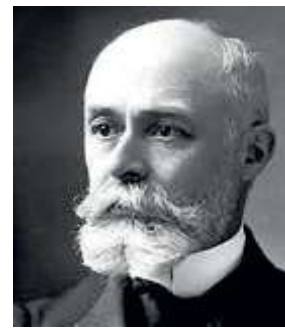
In 1895, Wilhelm Roentgen, a German physicist, discovered radiation, which he called X-rays that could be used to look into the human body. This discovery heralded the medical uses of radiation, which have been expanding ever since. Roentgen was awarded the first Nobel Prize in physics in 1901. Marie Curie shared the Nobel Prize in physics in 1903 with Pierre Curie and Henri Becquerel. She was the first woman to win the Nobel Prize a second time in 1911 for her discoveries in radiation chemistry. The first use of X rays was in medical diagnosis, within six months of their discovery in 1895. So a benefit from the use of radiation was established very early on, but equally some of the potential dangers of radiation became apparent in the doctors and surgeons who unwittingly overexposed themselves to X rays in the early 1900s. Since then, many different applications of radiation and radioactive materials have been developed.



Roentgen
(1845–1923)



Marie Curie
(1867–1934)



Henri Becquerel
(1852–1908)

Properties of X-Ray

There are many properties of x-ray such as;

- (i) X-ray is a type of electromagnetic radiation with frequency of 10^{18} Hz and wavelength of 10^{-10} m (high frequency and very short wavelength).
- (ii) X-ray has the ability to pass through liquids, solids, gases and many materials.