

Fusion Imaging

Medical imaging is one of the greatest engineering inventions of the 20th century. It is a non-invasive procedure and a powerful tool for diagnosing diseases. Radiology and nuclear medicine are important parts of medical imaging.

The techniques used in medical imaging developed rapidly during the past several decades. The invention of X-ray in 1895 gave birth to radiology. Then, in 1972, scientists developed a technique, called Computed Tomography (CT), which uses a scan to show in detail what is going on within the body as well as the location, size, and shape of the organs and tissues in the body.

Nuclear medicine came into being in 1896, prompting scientists to work on positron-emitting isotopes which led to the creation of another technique in the late 1980s, called Positron Emission Tomography (PET), which also uses a scan and is now widely used by doctors and others in the medical field.

PET can reveal metabolic changes in the body and is used widely by practitioners in the oncology, cardiology and neurology fields. But by itself, PET does not show lesions clearly enough. However, combining PET and CT can provide more detailed information than is possible with either scans by itself.

Fusion imaging brings two diagnostic techniques closer together to help patients and referring doctors to better understand the diagnoses. Fusion imaging can also be used in monitoring the effectiveness of treatments.