

NUCLEAR MEDICINE

in Penang Adventist Hospital



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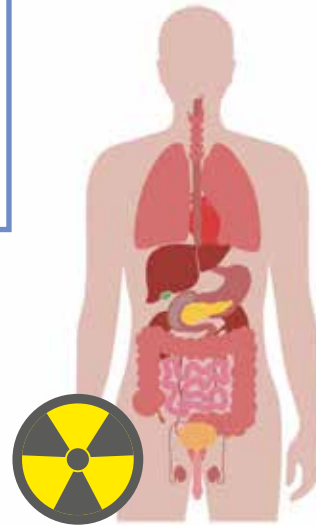
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Announcement:

By the first quarter of 2022, Penang Adventist Hospital is launching a new nuclear medicine centre, with the latest SPECT-CT scanner and custom-built rooms for thyroid cancer treatment. Penang Adventist Hospital will be the first full-fledged private nuclear medicine centre in the northern region of Malaysia equipped with PET-CT, SPECT-CT scanners and thyroid cancer treatment room.

For many people, nuclear and radioactivity equates to nuclear bombs and nuclear power-plants. In actual fact, the word 'nuclear' refers to nucleus of an atom and 'radioactivity' is the energy derived from nucleus of unstable atoms which are either too large, high in energy or having imbalance composition. The amount of radioactivity used in nuclear bombs and nuclear power-plants is more than a thousand fold compared to that used in nuclear medicine. The amount of radioactivity used in diagnostic nuclear medicine studies is only slightly higher than background radiation (natural radiation from the sun, ground, food etc).



What is all the hype about Nuclear Medicine?

It is basically a form of medicine utilizing radioactive for diagnostic and therapeutic intent. It has been used for nearly a century but is becoming more popular as clinicians are now more aware of its capabilities. Nuclear medicine is unique as the radioactives used are target-specific, thus enabling clinicians to visualize abnormalities easily and much earlier in addition to being able to treat disease with minimal side effects.

Majority of the imaging and treatment in nuclear medicine is cancer-related. PET-CT scanner helps clinicians to visualize the distribution of PET-tracers (most commonly - ^{18}F -FDG) which are target specific (in the case of ^{18}F -FDG – cancers with high glucose metabolism). Not only are the clinicians able to detect the cancers earlier, they are also able to stage and evaluate the disease response to treatment. In some instances, clinicians use PET-CT scanner to evaluate suspicious abnormalities and to plan their biopsies. Recently, nuclear medicine therapies have been shown to be effective in the treatment of neuroendocrine tumours and metastatic castrate-resistant prostate cancers.

Contrary to popular misconception, nuclear medicine is not all about imaging and treatment of cancer. PET-CT imaging can also be used in the evaluation of dementia, epilepsy, myocardial perfusion and fever of unknown origin. SPECT-CT imaging (using different radiotracers compared to PET) is used for various assessment of the body from the head to the toes – be it the brain, eyes, salivary glands, esophagus and stomach, heart and lung, liver, kidneys, bones, etc. Radioiodine-131 which is used for treating thyroid cancer can also be used to treat hyperthyroidism.

Overwhelmed, confused and don't know what to do? Do not fret – visit us at Penang Adventist Hospital for further information. Ignorance is bliss but when health is concerned – early detection, right diagnosis, right staging and right treatment is important. The famous psychoanalyst, Carl Jung once said – “I am not what happened to me, I am what I chose to become!”

