NORTH SHORE RADIOLOGY & NUCLEAR MEDICINE

Patient Information

CT Dose information

At North Shore Radiology we have top of the range Canon CT scanners that utilise new technology to get radiation doses as low as possible. As a radiology practice, we are confident that we follow the ALARA principle. This principle states that only the minimum amount of radiation necessary to accomplish the diagnostic task at hand should be used in order to keep patient risk As Low As Reasonably Possible (ALARA).

Our new Canon CT scanners utilise AI (Advanced intelligent Clear-IQ Engine (AiCE)), to help us achieve a dose as low as possible for our patients. For more information about AiCE and some dedicated research papers you can refer to the Canon Website below.

https://global.medical.canon/products/computed-tomography/aice

New CT scanners also use technology called Dose Modulation, which combined with new AI technology can produce much lower radiation doses than older CT scanners.

It is not possible to assign a single dose to each patient for a particular CT scan. This is because the scanner modulates radiation dose through the bodies x, y and z axis as the body becomes more, or less dense. For example, the dose will be lower through the chest compared to through the hips. If a patient is larger, more radiation dose is required to penetrate tissue to achieve the necessary images for diagnosis.

Below is a link to a website that goes through this concept, however there are also many other research papers online.

https://radiopaedia.org/articles/tube-current-modulation

Please note that The Australian Radiation Protection and Nuclear Safety Agency (Australian Government) establishes the current Australian Diagnostic Reference Levels for multidetector computed tomography in Australia. The website is listed below.

https://www.arpansa.gov.au/research-and-expertise/surveys/national-diagnostic-reference-level-service/current-australian-drls/mdct

Having recently submitted this data to the Radiation Protection Agency in 2023, North Shore Radiology abides by the recommended Reference Levels for Computed Tomography.