

CT scanning and radiation dose

Background

Computed Tomography (CT) scans are special x-ray scans that produce cross-sectional, highly detailed pictures of the body using x-rays and a computer. CT scanners use ionising radiation to help diagnose and monitor a wide range of conditions such as cancer, stroke and traumatic injuries.

CT use has increased substantially over the last two decades as the technology has become more sophisticated, enabling scanners to deliver higher quality images with lower radiation doses. CT scanning is now frequently replacing invasive, less accurate or higher risk alternatives such as exploratory surgery.

News reports have highlighted concerns regarding the potential risk of cancer from CT scanning.

Risk in context

The risks from exposure to high-dose radiation are well known. However, diagnostic x-ray services use low doses of radiation more comparable with the background radiation we are being continually exposed to from naturally occurring materials.

Humans live with this background radiation in our environment all the time, with no detrimental effects. The potential harm from the very low-level radiation that is employed in diagnostic CT imaging is a 'best guess' as it is not possible to perform studies confirming or quantifying the amount of risk to an individual from a single CT scan.

Because of this uncertainty, radiation protection authorities recommend that we should regard low doses of radiation as potentially harmful and we should minimise radiation exposure whenever possible to balance potential risk against benefit to you, the patient. You should also keep in mind that the overall lifetime risk of death from cancer is 30-40% regardless of imaging history.

Cabrini's response

At Cabrini we value your health and safety and for that reason a series of measures has been implemented in direct response to the increasing public concern regarding the possible risks from CT scans.

It is also important to realize however, that for a properly and appropriately performed examination, the potential health benefits outweigh the potential risks of radiation exposure and you should not hesitate to have a radiological test if it is medically indicated.

Questions

For more information, please contact Cabrini Medical Imaging using the details number below.

For further information you can access two very good websites: **insideradiology.com.au** which has articles on radiology and radiation dose written by Australian radiologists, supported by the Australian Government Department of Health, and **xrayrisk.com** an educational website focusing on estimating patients' personal risk, whilst providing answers to frequently asked questions.