



Mercy

UNIVERSITY | HOSPITAL

Compassion Excellence Justice Respect Team Spirit

Radiation Information for Patients



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Contact Details

Radiology Department Reception: 021-4935275

Radiation Protection Officer: 0214935176

Mercy University Hospital: 021-4271971

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Welcome to the Radiology Department

The Mercy University Hospital Radiology (X-ray) Department offers a diverse range of diagnostic and interventional radiology services including X-rays, Ultrasound, CT and Nuclear medicine scans. We cater for in-patients, out-patients, GP referrals and emergencies.

We use state of the art medical equipment and have a dedicated team of staff including Clerical, Health-care attendants, Nurses, Radiographers and Radiologists.

What will I learn from this information leaflet?

Patients are sometimes concerned about the possible harmful effects of x-rays, so this leaflet will explain about radiation, its use and its risks.

Use of Radiation in Medical imaging

Most imaging examinations, apart from ultrasound and MRI scans, use ionising radiation (X-rays or Gamma rays). This radiation passes through the body and a picture is produced which allows the Radiologist to give a diagnosis.

Is it safe to do these Medical imaging tests?

We are all exposed every day to radiation from our environment, food we eat and even from outer space. Generally the amount of radiation used for medical imaging is very low.

Using x-rays have benefit as it helps us provide a diagnosis so we can give you the correct treatment. The benefit far outweighs the radiation risk involved. As you can see from the table on the next page the risks are indeed quite low.

Common Procedures	Comparable to Natural Background Radiation	Estimated Lifetime Additional Risk of Cancer per single Examination
Extremities	30 Minutes	1 in 100 Million
Chest X-Ray	2 Days	1 in 1Million
Pelvis X-Ray	1 Month	1 in 70,000
Abdomen X-Ray	2 Months	1 in 50,000
CT Head	6 Months	1 in 12,000
CT Chest	2 Years	1 in 2,800
CT Abdomen and Pelvis	2.5 Years	1 in 2,400
Nuclear Medicine Bone Scan	1 Year	1 in 5,700
Lifetime risk of cancer NOT caused by Radiation		1 in 3

Annual Background Radiation dose in Ireland (3.5mSv)

Medical Exposure Radiation Unit 2013: Information on Patient Radiation Dose, Ireland

www.icgp.ie/speck/properties/asset/asset.cfm?type=LibraryAsset&id=74CD10C3-48CA-463A-BE7DF2C3FA294A50&property=asset&revision=tip&disposition=attachment&app=icgp&filename=014A579D-9393-A2B4-49A243FF262DDBE5.pdf

Are the risks the same for everyone?

Radiation risks for children tend to be higher than for adults. This is because children live longer, so the chance of a radiation effect happening in their lifetime is higher compared to an adult who had the same x-ray test.

As a result, we ensure that there is a clear medical benefit for every child who is x-rayed and the radiation dose is also kept as low as possible.

The benefits and risks of having an x-ray test will be discussed with you before it is recommended. If you have any concerns, talk to your doctor or radiographer about the potential risks beforehand.



X-rays during pregnancy

Research shows that unborn babies growing in the womb are quite sensitive to radiation-rays. As a result of this a number of x-rays test are not recommended during pregnancy.

If you are a woman of child bearing age 12-55yrs, depending on the type of x-ray test you have been referred to have; the radiographer may check with you if there is any chance of you being pregnant before proceeding with the x-ray test, and you will be asked to complete and sign a form as part of our safety checks.

Please inform us when you attend if you are unsure of your pregnancy status.