Practitioner to Patient explanation

Your healthcare team believes that this examination is **"justified"**, which means the clinical benefits of having this procedure most likely outweigh the potential Radiation risks.

Your age, size and reason for examination will influence the amount of radiation used & the radiation dose will be personalised & **"optimised"** for you.

Radiology professionals are trained to use the **lowest amount of radiation** to achieve the best possible images.

(SCOR,2019) (RPII,2014)(RCR, 2019) (IIRRT. 2020)

	NON LONISING RADIATION	NEGLIGIBLE RISK	MINIMAL RISK	VERY LOW RISK	LOW RISK
Examples (RCR,2017)	MRI US	Chest X-Ray Limb X-Ray Lumbar spine x- Ray Mammography	IVU Nuclear Medicine Bone-scan CT Head	CT Chest CT abdomen	CT TAP. Some Interventional cases Some Nuclear- medicine scans Some PET/CT scans
Comparison to background radiation (4.03 mSv per year in Ireland - RPII, 2014)	No known radiation risk	A few days worth	A few weeks worth	A few years worth	5-10 years worth
Lifetime additional Potential Risk of cancer/exam (RCR,2017) (NCR, 2017)	No known radiation risk	Less than 1 in 20,000 chance of causing cancer	1 in 20,000 to 1 in 4,000 chance of causing cancer	1 in 4,000 to 1 in 2,000 chance of causing cancer	Less than 1 in 2000 chance of causing cancer
Typical effective doses (RCR, 2017)	0	0-1 mSv	1-5 mSv	5-10 mSv	10+ mSv
Examples of Effective Doses (RCR,2017)	0	Limbs < .01mSv Chest: 0.015mSv T-spine: 0.4mSv L-spine: 0.6mSv	Bone-scan: 3mSv Barium enema: 2.2mSv	CT chest: 6.6 mSv CT abdomen: 5.6 mSv	CT TAP: 10mSv Whole body Pet/CT: 18mSv
Equivalent CXR's (RCR,2017)	0	1 to 100	100 to 200	200 to 400	400 to 1200 +
Transatlantic Flights (1 transatlantic flight =0.08mSv, Public Health England,2011)	0	0-12.5	12.5-62.5	62.5-125	125+

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