



Referring for diagnostic imaging at Children's Health Ireland

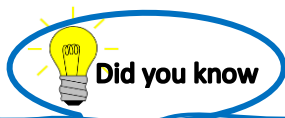
What diagnostic imaging is available?

A range of diagnostic imaging procedures are available in the hospitals of Children's Health Ireland (CHI). Some of these modalities (X-ray, CT, Fluoroscopy, DXA, Nuclear Medicine) use ionising radiation while others (Ultrasound and MRI) do not.

The radiation dose associated with the ionising modalities is required by law ^[1] to be **as low as reasonably achievable (ALARA)**. This means we ensure all our imaging systems are **optimised** for use for our paediatric patients to ensure we deliver **as low a radiation dose as possible**, while producing images of diagnostic quality.



All imaging equipment is purchased specifically for paediatric patients.



All imaging procedures are carried out using age or weight-based protocols

Who can refer for imaging?

As per Irish legislation¹ the following persons can refer for diagnostic imaging at CHI:

- A registered medical practitioner (GP, Community or Hospital doctor)
- An CHI approved nurse referrer working within their scope of practice
- A registered dentist
- A CORU registered Radiographer working with their scope of practice

Who can refer:	CHI Medical Doctor	Community Doctor / GP	CHI Nurse Referrer*	Dentist
General X-ray	X	X	X	
Dental X-ray	X	X	X	X
CT	X		X	
DXA	X		X	
Nuclear Medicine	X		X	
Fluoroscopy / IR	X		X	
MRI	X		X	
Ultrasound	X	X	X	

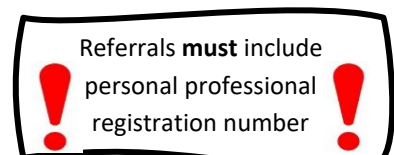
*if within scope of practice

What type of imaging referrals are accepted in CHI?

- Electronic via NIMIS
- Hardcopy from GP practices, external hospitals, or community health facilities.
- Via Healthlink
- Via email once the referral is sent as an attachment or directly from personal Healthmail account.

Referrals must:

1. include patient demographics (Full name, address, DOB)
2. include details of imaging required including sufficient clinical information to allow justification to take place
3. be on headed paper or include an official surgery/hospital stamp that includes address;
4. be signed & include professional registration number



¹European Union (Basic Safety Standards for Protection against dangers from medical exposure to Ionising Radiation) Statutory Instrument 256 of 2018.



Justifying your referral

All Referrers are advised and encouraged to utilise the *iRefer guidelines 'Making the Best Use of Clinical Radiology'*, when referring for imaging examinations at CHI. It is a synthesis of evidence-based guidelines from UK and international sources and provides recommendations for everyday use of clinical imaging services. Referral guidelines help referrers to request the best, safest and most valuable imaging investigations, facilitating more expedient authorisation and justification.

Here is an example of the different doses involved for Chest exams using different imaging modalities in CHI:

	Chest X-ray (mSv)	Chest CT (mSv)	Chest MRI
4 weeks – < 4 Y (5 – <15kg)	0.02	0.96	No radiation dose associated with MRI imaging
4 – < 10 Y (15 – <30kg)	0.01	1.97	
10 – < 14 Y (30 – <50 kg)	0.01	2.44	
14 – 18 Y (50 – 80 kg)	0.01	2.62	

Note: All referral **MUST be justified in advance** by radiographers who are undertaking the exposure

Dose associated with some typical paediatrics exams

This table gives an example of some typical exams in CHI and the associated dose equivalent:

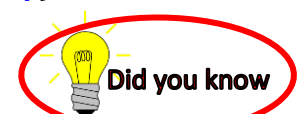
Imaging Exam	Dose Trefoil ^[ACR]	Equivalent Period of Exposure to Natural Radiation ^[ACR]
4yr Chest X-ray	☢	A few days
6mth Abdominal / Pelvis X-ray	☢☢	A few weeks
14yr old C-spine	☢	A few days
12yr old Scoliosis Spine	☢☢☢	A few months
6yr MCUG	☢☢☢	A few months
8 yrs old CT brain	☢☢☢	A few months
5 yrs old CT Abdomen	☢☢☢	A few months
5yr old NM (DMSA)	☢☢☢	A few months
1yr old NM (MAG3)	☢☢☢	A few months

For more information relating to the specific radiation dose associated with a patient's procedure, please contact CHI Radiology.

(<https://www.childrenshealthireland.ie/list-of-services/radiology-x-ray/>)

Further details can be found at:

RP 178 Referral guidelines for medical imaging: availability and use in the European Union <https://data.europa.eu/doi/10.2833/18118> | <https://www.irefer.org.uk/> . RCR Making the Best Use of Clinical Radiology' | <https://www.acr.org/Clinical-Resources/ACR-Appropriateness-Criteria> | <http://www.imagegently.org/>



All CHI patient doses are comparable with international and national diagnostic reference levels