



Covid-19: CT-related FAQ

**‘Can I work on a
diagnostic CT scanner
as a therapeutic
radiographer?’**

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QUESTION:

I am a therapeutic radiographer and I have completed a post-grad qualification in CT. Does this mean I can work on a diagnostic CT scanner?

ANSWER

The Society and College of Radiographers has received requests from members about the need for clarification on whether a therapeutic radiographer who uses CT as part of radiotherapy planning for cancer patients, can then also use a diagnostic CT scanner to image non-cancer patients with the aim to diagnose other conditions.

SCoR does not advocate this change in or transfer of skills for any therapeutic radiographer to 'effectively' work as a diagnostic radiographer.

There are many reasons for this stance:

- There are two distinct radiography professions: Diagnostic or Therapeutic Radiography with two distinct UK regulated protected titles from the Health and Care Professions Council.
- The Ionising Radiations (Medical Exposure) Regulations 2017 (2018 in Northern Ireland) defines 'adequate training' in [Schedule 3](#)¹ as the skills and underpinning knowledge both in a theoretical and practical comprehension. Therapeutic radiographers use CT as an imaging tool in the planning and preparation of a radiotherapy treatment regime only. The knowledge and skills required to use CT in this way relate solely to cancer treatment planning as the 'pathology' that has already been diagnosed and staged. In this way CT, as the imaging tool, is used to geometrically and dosimetrically plan the Gross Tumour Volume, the Planning Target Volume, and the relevant Organs at Risk before any type of radiotherapy is delivered to a patient with cancer. SCoR see the Scope of Practice of a Therapeutic Radiographer working and practising within a patients' cancer pathway.
- The [Standards of Proficiency](#)² from the Health and Care Professions Council (as the regulatory body for radiographers working in the UK) are quite different in the approach to using a CT scanner as an imaging tool in the two radiography professions:
 - Therapeutic Radiographers must have a knowledge of cross sectional anatomy and use CT to define targets; verify optimal radiotherapy beam positions with appropriate immobilisation techniques; and prepare final radiotherapy prescriptions aiming to optimise effective tumourcidal doses whilst minimising doses to normal anatomical structures. Radiotherapy CT is both a planning and a verification (simulator) tool prior to delivery of treatment and is a requirement for complex treatment regimens such as image guided radiotherapy; stereotactic radiotherapy, and SABR.
 - Diagnostic Radiographers use CT to diagnose various other pathologies as well as cancer and as such must have a detailed knowledge of cross sectional anatomy and be able to distinguish disease and trauma processes as they manifest on diagnostic images. Recognition and identification of abnormality are skills that improve with experience.The diagnostic CT radiographer must understand medical

terminology and abbreviations across a very broad range of pathologies, some of which will be related to cancer, but others will not. Diagnostic radiographers often draw upon a body of knowledge acquired whilst experiencing a wide range of imaging techniques pre and post registration. In order to produce high quality CT images safely and with an optimised dose in keeping with the principles of ALARP, they will apply their anatomical, physiological and radiographic knowledge to ensure the scan is appropriate, justified and meets the needs of the patient.

Patients who require diagnostic CT imaging are often very sick and may present with immediate life limiting and life changing conditions as well as being trained in Advanced Trauma Life Support (ATLS) or Advanced Life Support (ALS) or Intermediate Life Support (ILS). The CT Radiographer must demonstrate an aptitude for rapid and effective, sometimes complex decision making, to pre-empt and avoid non-intended outcomes. The workload in diagnostic CT services can demand rapid turnaround and flexibility to adapt workflow to meet dynamically changing priorities. CT radiographers require additional training to operate peripheral devices such as electrocardiogram (ECG) machines and contrast agent delivery systems safely. Radiographers must be aware of the national and local diagnostic reference levels (DRLs) and dose constraints established for the examinations they undertake, particularly in relation to children and young adults.

All Radiographers have a duty to practice safely and effectively within their own scope of practice. This relates to both the range of patient morbidities and the imaging tools used to either diagnose or treat patients.

The CoR document, [The role of the Radiographer in CT³](#), is recommended reading for all radiographers. It includes details of the National Occupational Standards (NOS) in CT.

References

1. The Ionising Radiation (Medical Exposure) Regulations 2017. Adequate Training. Schedule 3: <http://www.legislation.gov.uk/ukxi/2017/1322/schedule/3/made>
2. The standards of proficiency for radiographers: <https://www.hcpc-uk.org/standards/standards-of-proficiency/radiographers/>
3. The Role of the Radiographer in Computed Tomography Imaging: <https://www.sor.org/learning/document-library/role-radiographer-computed-tomography-imaging>



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