

Radiotherapy Board

STATEMENT ON THE FIRST UK SURVEY OF DOSE INDICES FROM RADIOTHERAPY TREATMENT PLANNING COMPUTED TOMOGRAPHY SCANS

The Radiotherapy Board¹ welcomes the publication of the *Institute of Physics and Engineering in Medicine (IPEM) topical report: the first UK survey of dose indices from radiotherapy treatment planning computed tomography (CT) scans for adult patients*² in which national dose reference levels have been defined in respect to CT in radiotherapy. The proposed dose reference levels are based on results from the first UK-wide survey to collate dose indices for a range of common CT planning protocols (breast, gynaecological, 3D lung, 4D lung, prostate, brain and head and neck scans).

The survey, carried out by the Doses to Patients from x-ray imaging in Radiotherapy Working Party of the IPEM Radiotherapy and Diagnostic Imaging Special Interest Groups, asked centres to provide CT dose index ($CTDI_{vol}$), dose length product (DLP) and scan length for individual patients along with other relevant information such as scanner type. The proposed dose indices were formulated from these data.

Whilst it is acknowledged that the use of Diagnostic Reference Levels is not a requirement in radiotherapy, the Radiotherapy Board supports the publication of these new national dose reference levels as a basis for the optimisation of CT planning scan protocols in line with the requirements of the Ionising Radiation (Medical Exposure) Regulations 2017. The use of dose reference levels is an appropriate method for demonstrating such optimisation has taken place. The Board understands that Public Health England is endorsing the use of these new [national dose reference levels](#).

The Working Party is now concentrating on producing a UK-wide survey of imaging pre-sets used by centres for cone beam CT during radiotherapy. The Radiotherapy Board would like to encourage all centres to complete this survey when they receive it, to help inform the determination of dose reference levels for cone beam CT.

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¹ The Radiotherapy Board was established in 2013 by The Royal College of Radiologists, the Society and College of Radiographers and the Institute of Physics and Engineering in Medicine to provide guidance, oversight and support for the continuing development of high-quality radiotherapy services for cancer patients in the UK. It has representation from across the four UK nations and from other organisations closely involved in radiotherapy services.

² Wood T.J. et al. IPEM topical report: the first UK survey of dose indices from radiotherapy treatment planning computed tomography scans for adult patients. *Physics in Medicine and Biology* 2018;63:185008