

Introduction to ESTRO website article on IAEA new code of practice

“A new international Code of Practice for the dosimetry of radiotherapy beams has been published by the IAEA on behalf of IAEA, ESTRO, WHO and PAHO. It is published as document IAEA TRS-398 (2000). It includes the comments and criticism of more than 50 scientists worldwide, many of them ESTRO members, whose names are acknowledged in the publication.

Dosimetry in the new code is based on absolute dose to water dosimetry standards and chamber calibrations, rather than air kerma chamber calibrations. Application of the new code will reduce uncertainty in the dose calibration of radiotherapy equipment. Dose measurements based on air-kerma-based codes of practice may differ from those based on the new IAEA code by as much as 1% or more.

Clearly, there are two strong reasons for adopting the new code - greater consistency between radiotherapy centres and greater accuracy in dose determination. In tune with these aims, ESTRO's policy is to encourage the use of the new IAEA code of practice, but taking into account national recommendations or regulations which may require a uniform national approach in a given country.

ESTRO would also like to encourage the use of the new code by centres participating in comparative trials, in order to avoid systematic discrepancies due to differences in dose calibration. However this must be within the guidelines issued by the trial organisers. Centres participating in such trials who have not yet implemented the new code of practice, or who have implemented an alternative absorbed-dose-to-water dosimetry protocol, should state clearly the differences in statements of dose that they expect as a result, or failing that to state in detail the methods of dose determination used so that the trial organisers can evaluate the differences expected.”