MAR06-2005-002257

Abstract for an Invited Paper for the MAR06 Meeting of the American Physical Society

International Standardization of the Clinical Dosimetry of Beta Radiation Brachytherapy Sources: Progress of an ISO Standard

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In 2004 a new work item proposal (NWIP) was accepted by the International Organization for Standardization (ISO) Technical Committee 85 (TC85 – Nuclear Energy), Subcommittee 2 (Radiation Protection) for the development of a standard for the clinical dosimetry of beta radiation sources used for brachytherapy. To develop this standard, a new Working Group (WG 22 - Ionizing Radiation Dosimetry and Protocols in Medical Applications) was formed. The standard is based on the work of an ad-hoc working group initiated by the Dosimetry task group of the Deutsches Institut für Normung (DIN). Initially the work was geared mainly towards the needs of intravascular brachytherapy, but with the decline of this application, more focus has been placed on the challenges of accurate dosimetry for the concave eye plaques used to treat ocular melanoma. Guidance is given for dosimetry formalisms, reference data to be used, calibrations, measurement methods, modeling, uncertainty determinations, treatment planning and reporting, and clinical quality control. The document is currently undergoing review by the ISO member bodies for acceptance as a Committee Draft (CD) with publication of the final standard expected by 2007. There are opportunities for other ISO standards for medical dosimetry within the framework of WG22.