

AN OVERVIEW ON EXTREMITY DOSEMETERS FOR MEDICAL APPLICATIONS

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Some activities of EURADOS Working Group 9 (WG9) are presently sponsored by the European Commission (CONRAD project). The objective of WG9 is to promote and co-ordinate research activities for the assessment of occupational exposures to staff at workplaces in therapeutic and diagnostic radiology and nuclear medicine. For some of these applications the skin of the fingers is the limiting organ from the point of view of the individual monitoring of external radiation. Therefore subgroup 1 of WG9 deals with the use of extremity dosimeters in medical radiation fields. The wide variety of radiation field characteristics present in a medical environment together with the difficulties of measuring a local dose that is representative for the maximum skin dose, usually with one single detector, makes it difficult to perform extremity dosimetry with an accuracy similar to whole-body dosimetry.

Sub-group 1 initiated working out an inventory of sites and situations presenting extremity dosimetry issues (conventional nuclear medicine, radiotherapy and PET, interventional radiology and cardiology, manual brachytherapy), together with a thorough literature review. An overview on the current status of extremity dosimetry of the medical staff is given for some European countries.

Moreover, in the beginning of 2007, an intercomparison was organised for ring dosimeters between 20 European dosimetry services. The overall objective is to verify the performance of different extremity dosimeters to measure the quantity $H_p(0.07)$ in photon and beta reference fields in medical radiation fields, and to provide guidelines for improvements in extremity dosimetry. The set-up and rationale of the intercomparison will be presented.

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