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TITLE: Total skin electron irradiation – physical point of view

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ABSTRACT

Total skin electron irradiation (TSEI) is an efficient radiotherapeutic method for the irradiation of the whole body surface, commonly used procedure in a treatment of mycosis fungoides. It is a complex technique which requires nonstandard measurements and dosimetric procedures. The aim of this poster is to describe our technical realization and dosimetric measurements of dual-field rotational TSEI. Our technique is based on two matching 6 MeV electron fields produced by TrueBeam linear accelerator (linac), operating in the high dose rate (HDTSe) mode (Varian Medical Systems, Inc., Palo Alto, California). Patient is standing in a “ballet dancer” position on a rotating platform (turntable) having its axis of rotation at the distance of 270 cm from the linac isocenter. Ionization chambers, radiochromic films and thermoluminescent detectors (TLD) have been used to determine the dosimetric properties of this technique. The poster reports measurements investigating the beam matching, the effects of rotation and the dose distribution on different phantoms and on patients.

BIOGRAPHY

Dana Kralova have been the physicist at the Radiotherapy Department of the Regional Hospital Ceske Budejovice, a.s. since 1993. She graduated in Nuclear Science and Physical Engineering at Czech Technical University in Prague. She is an author or co-author of about 50 publications.

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