

## **RADIATION PROTECTION EXPERIENCES of THE INSTALLATION OF LINEAR ACCELERATORS**

**Lajos Máté, Ballay László, Juhász László, Salik Ádám, Tóth Nikolett**

National Public Health Center National Research Directorate for  
Radiobiology and Radiohygiene

According to the Decree No. 16/2000. (VI. 8.) EüM in 2015 the operating licence of medical therapeutic irradiators, industrial accelerators and irradiators has been issued by the Radiation Hygiene Units based upon the common review with the NRDRR possessing the expertise of the NRDRR. Significant developments were carried out in radiotherapy centers last year thanks to EU support. In the majority of centers existing accelerators were exchanged for more modern equipments. New bunkers also were constructed and even the 13th radiation therapy center of the country was built in Veszprém. The NPHC-NRDRR in collaboration with the competent authority made on-site investigations and radiation protection measurements during the installation of fourteen linear accelerator equipments in 2015.

During the on-site investigations we measured the direct radiation including the area above the bunkers and we checked the appropriateness of the secondary shielding. We investigated the values of photon and neutron radiation scattering through the maze to control room.

The protection of protected area complied in every case with the planned dose requirement indicated by the Hungarian Standard No. 62-4:1999 and the Methodological Letter (ML) of the NRDRR issued in February 2015. However, the measured dose rates were very diverse. We aimed to handle the evaluation of the measured dose rate and the possible suggestions for actions as flexible as possible in accordance with the recommendations of the ML.