

New treatment table panel with reduced skin dose

The C-arm table-top of the Elekta SL accelerator is provided with a tennis racquet. The sag of the tennis racquet with a normal patient load is larger than for the carbon or wooden table-top at the simulator or CT scanner. Therefore the treatment position of the patient on the treatment table is not the same. At the Netherlands Cancer Institute a carbon fiber panel was developed with minimal sag; less than 2 mm in the middle with 75 kg equally distributed load. As a pay-off the dose to the skin increased from 30 % with the tennis racquet to 70 % with the carbon panel (data are for a 6 MV photon beam). With a maximum tolerable dose to the skin of 30 Gy, the maximum dose midplane for an anterior-posterior treatment is restricted to 40 Gy. If the prescribed dose midplane is higher the tennis racquet has to be used. Recently we started a project to reduce the dose to the skin by looking at the construction and choice of materials. First measurements with a honey cell structure showed a reduction from 70 % to 48 %. Additional results will be shown together with the final results of the newly developed panel. It is the intention that this new panel will be available for the C-arm table top of the Elekta SL series accelerators.