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## **Dosimetric effects of thermoplastic masks on skin dose**

### ABSTRACT

In radiotherapy, treating of cancer patients require the use of immobilizing devices such as thermoplastic masks. These masks increase the patient skin doses, but its effect is normally overlooked. This work is done to determine the thermoplastic mask factor to compensate for it just as applied to trays and wedges. Measurements are done at source-to-surface distance of 80 cm for external radiation beams produced by Cobalt 60 using the Farmer type ionization chamber and the Unidos electrometer. Measurements are carried out with and without mask material on the surface of a solid water phantom. Initial and final temperatures and pressures were recorded. The doses then calculated and the thermoplastic mask factor determined. The thermoplastic factor is defined at the ratio of the doses obtained with mask to the doses obtained without mask on the phantom. The mask factor is then incorporated into the treatment planning system to correct for it just as is done to tray.

**Authors:** PARODI, Katia (Ludwig-Maximilians-Universität München); CORTES GIRALDO, Miguel Antonio (Universidad de Sevilla (ES))

**Presenter:** ADU-POKU, OLIVIA (KOMFO ANOKYE TEACHING HOSPITAL)

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