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## The application of Aquaplast Thermoplastic as a bolus material in the radiotherapy of a patient with classic Kaposi's sarcoma at the lower extremity.

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### Abstract

**BACKGROUND:** The classic Kaposi's sarcoma (KS) patients usually present with progressive skin lesions over the lower extremities, following an indolent course. Although radiotherapy is an effective treatment for KS, radiation over these lesions is not without difficulty. The intrinsic difficulty resides in how a homogenous radiation dose over superficial lesions involving large areas and irregular surface is properly delivered. Several bolus techniques have thus been invented.

**MATERIALS AND METHODS:** The Aquaplast RT Thermoplastic is a new type of bolus material that can be easily molded and conformed to the curvature of skin, with the equivalence to soft tissue in radiation interaction.

**RESULTS:** This material was applied as the bolus for the irradiation of a classic KS patient, whose disease involved multiple skin areas over the right heel and ankle. Large parallel-opposed irradiation fields delivered by 60Co were used. Computed tomography demonstrated a close conformity of the bolus built-up by Aquaplast RT Thermoplastic to the surface of the ankle and foot. A dosimetry measurement further confirmed an adequate and homogenous distribution of desired dose around the lesions of the lower extremity. After a total dose of 39 Gy, divided in 13 fractions, the lesions remitted completely.

**CONCLUSION:** Our data suggest that the use of Aquaplast RT Thermoplastic as a bolus material is helpful in delivering adequate dose to skin lesions of the lower extremities.

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