AbstractID: 8175 Title: A three field perineal sparing technique using an electronic compensator

Due to the grazing incidence of the AP-PA beams in the perineal area, the traditional parallel opposed ports approach for treating low lying pelvic malignancies usually results in very high skin dose to the perinium. In many cases, the treatment has to be discontinued because of a severe skin reaction. A three port perineal technique has been used [1] where the skin dose is considerably reduced and the treatments were completed without breaks. The method consists of a normal incidence beam through the perinium and AP-PA beams with specially designed compensators to generate uniform dose in the treatment area. The technique is not widely used as the compensators are not commercially available and must be custom fabricated to match the beam characteristics of the perineal port. We have implemented the technique using a dynamic multileaf collimator to produce the required compensation. The fluence pattern was calculated using the fractional depth dose data of the photon beam used for the perineal port and was then imported into our treatment planning system (CadPlan, Varian Medical Systems, Milpitas, CA). The sliding window leaf sequence was computed and isodose curves were generated. We verified dose uniformity within the treatment volume in a polystyrene phantom by film dosimetry. The description of the technique, dose uniformity within the treatment volume and comparison between the calculated and measured isodose curves will be presented. This simple technique can be readily implemented in any clinic.

[1] SA Spencer, et al.,"Three port perineal sparing technique", Radiology **180**,563-566 (1991)