

The revision of AAPM TG-43 formalism has affected the dosimetry data for the Nycomed/Amersham model 6711 and NASI model MED3631 ^{125}I seeds, commonly used in eye plaques for treatment of ocular melanoma. This study aims to evaluate the impact of the revised data on eye plaque dosimetry per COMS protocol. Dose calculations were performed for six plaque sizes with both standard and notched plaque loadings. Points of interest included tumor apex, tumor anterior and posterior edges, base of tumor, and optic disc. Tumor apex height varied from 3-mm to 10-mm. Anterior and posterior tumor edge points were assumed to be 2-mm from plaque edge. The optic disc point, monitored for notched plaques only, was assumed to be 2-mm from the posterior tumor edge. Doses to these points were calculated using the original and revised TG-43 dosimetry data and as required by the COMS protocol, where the point-source model was used with no source anisotropy corrections. These calculations show that revision of dosimetry data caused up to 5% changes in doses to tumor apex for all plaque sizes and tumor apex heights studied. Changes of similar magnitude were observed in doses to optic disc and tumor posterior edge. As much as 8% changes were observed in dose to tumor anterior edge and base of tumor. It should be noted that the omission of source anisotropy correction factors in these calculations introduced errors in calculated doses to tumor edges, optic disc, and base of tumor.