IN REGARD TO THE AMERICAN BRACHYTHERAPY SOCIETY RECOMMENDATIONS FOR ^{103}PALLADIUM BRACHYTHERAPY. BEYER *ET AL. IJROBP* 2000;47:273–275.

To the Editor: Dr. Beyer and colleagues (1), in putting forward the recommendations of the American Brachytherapy Society (ABS), suggest that the prescribed dose for ^{103}Pd monotherapy be raised from 115 Gy to 125 Gy based on the retrospective review of ^{103}Pd calibration and dosimetry presented by the American Association of Physicists in Medicine (AAPM) (2). This recommendation stems from the following three developments in the dosimetry of ^{103}Pd: (1) Vendor-specified source strengths have historically been used as the basis for treatment calculations with ^{103}Pd, and these source strengths have not been constant throughout the clinical history of this radionuclide. Acceptance of vendor-specified source strength was so ingrained that when, after noticing a 9% shift in the standard supplied by Theragenics Corp. (Norcross, GA) in 1997, we conducted a telephone survey of 10 other centers providing ^{103}Pd brachytherapy, only 3 had noticed the discrepancy. (2) The NIST-1999 standard was implemented, and this standard has led to changes in the source strength ascribed to a source of a given activity and construction. (3) Refinements in the estimate of the dose-rate constant have led to changes in the reference point dose rate ascribed to a source of unit source strength.

To maintain a constant clinical result, the radiation dose prescribed clearly must change as estimates of patient dose are improved. Therefore, the calculation and calibration recommendations of the AAPM and the dose-delivery recommendations of the ABS must be consistent with each other. However, they should also reflect the best and most reliable information available. In 1998, Fung (3) identified an inaccuracy in the report of AAPM Task Group 43 (4), which served as the published recommendation of the time. Fung showed that TG-43's Table XIII, which was the table recommended for use by that report, was distorted because it was calculated using the distance-independent anisotropy factor instead of a position-dependent anisotropy function. The magnitude of this effect varies up to 9% at a distance of 3 cm. The new AAPM recommendations do not address this mathematical correction to Table XIII, thus, the dose recommendation of the ABS specifically includes the original distortion in this table.

PAUL KING, M.S.
R. SCOTT ANDERSON, M.D.
Anderson Cancer Center
Meridian, MS

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