Dosimetric evaluations for transperineal placement of radioactive seeds into the prostate are usually performed by utilizing stereo-shift or orthogonal films obtained one day after the implant procedure. This is at a time when the prostate is unnaturally swollen and enlarged due to trauma suffered during implantation. Radioactive seeds, appear to be further apart, while the prostate is enlarged, than during most of their decay time after the subsidence of prostatic swelling.

We have attempted to correct for this enlargement by performing dosimetric evaluation at different times after the implantation of the seeds. Ten successive patients were selected and dosimetric calculations were performed at one and thirty days post implantation. In these ten patients there were no loss of seeds noted on the films obtained at thirty days compared to the original films. The dosimetric evaluations were performed using the Brachytherapy program of the ROCS treatment planning system and were performed by the same dosimetrist. Volumes and areas of various isodose surfaces were obtained and compared. The volumes enveloped by the 16,000 cGy isodose were 4.6% smaller based on the late films compared to the early films. This suggests that, dosimetric calculations based on films obtained right after the implant procedure will overestimate the volume treated.