Prostate Cancer Radiotherapy: An Evolving Paradigm.

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The Oncology Grand Rounds series is designed to place original reports published in the Journal into clinical context. A case presentation is followed by a description of diagnostic and management challenges, a review of the relevant literature, and a summary of the authors' suggested management approaches. The goal of this series is to help readers better understand how to apply the results of key studies, including those published in Journal of Clinical Oncology, to patients seen in their own clinical practice. A urologist referred a 69-year-old man for a radiotherapy opinion regarding a recently diagnosed adenocarcinoma of the prostate. Annual serum prostate-specific antigen (PSA) testing over 7 years demonstrated a rise in PSA from 1.36 ng/mL to 5.8 ng/mL, prompting a transrectal ultrasound that revealed a heterogeneous 37-mL gland containing no visualized hypoechoic nodules. Biopsy disclosed a Gleason score 3+4 (grade group 2) adenocarcinoma of the prostate. The synoptic report stated that six of 14 cores and 17% of the tissue were involved, with the greatest core involvement being 80% at the right apex. Perineural invasion was present without lymphovascular invasion. Disease was present bilaterally at the base, midgland, and apex. His medical history was significant only for treated peptic ulcer disease and he was taking no medication. His International Prostate Symptom Score was six of 35, and he reported being sexually active with good erectile function. There was no family history of prostate cancer. He is retired. Digital rectal examination revealed moderate benign prostatic hypertrophy with no suspicious nodules. A staging computerized tomography (CT) scan of the abdomen and pelvis and a whole-body bone scan ordered by his referring urologist reported no evidence of metastatic disease. The patient had discussed surgical options with his urologist and now wished to consider radiotherapy approaches.

PMID: 30138084 DOI: 10.1200/JCO.2018.79.3257