
Patterns of Local Failure Following Radiation Therapy for Prostate Cancer.


Abstract

Little is known about patterns of local failure following radiation therapy (RT) for prostate cancer (PCa). We aimed to characterize post-radiation biopsy (PRB) findings, including the presence of treatment effect, and the zonal distribution of recurrent disease after RT in men experiencing biochemical recurrence (BCR).

MATERIALS AND METHODS: We identified patients who received PRB in the setting of BCR following primary radiation for localized disease. Histologic PRB results were categorized by the absence of tumor, demonstration of radiation treatment effect, failure (recurrent cancer), or a combination of treatment effect and failure. We describe patterns of histologic failure and compared them to the diagnostic biopsy findings.

RESULTS: 284 underwent mapped PRB for BCR. Mean age at initial diagnosis was 63 years, median PSA was 8.2 ng/ml; 33% of men were classified as low, 32% intermediate, and 35% high risk, based on clinical CAPRA categories. Median time to PRB was 61 months post-treatment and findings were negative in 4%, treatment effect in 31%, failure in 45%, and a combination in 20%. Failure rates were similar across sextants. Among 140 patients with mapped pre-and post-treatment biopsies, 4% demonstrated cancer in a new location previously identified as negative. Gleason upgrading occurred in 43%, with 85% upgraded \( \geq 4+3 \).

CONCLUSIONS: Men with rising PSA after radiotherapy for PCa most often recur in dominant tumor sites. Whether failure is due to inadequate targeting, dosing or intrinsic radiation resistance remains unknown, and further study is warranted.

Copyright © 2015 American Urological Association Education and Research, Inc. Published by Elsevier Inc. All rights reserved.

KEYWORDS: prostate biopsy; prostate cancer; radiation; transrectal ultrasound

PMID: 25983194 [PubMed - as supplied by publisher]

LinkOut - more resources