Gleason pattern 5 is the strongest pathologic predictor of recurrence, metastasis, and prostate cancer-specific death in patients receiving salvage radiation therapy following radical prostatectomy.

Department of Radiation Oncology, University of Michigan, Ann Arbor, Michigan.

Abstract

BACKGROUND: The presence of Gleason pattern 5 (GP5) at radical prostatectomy (RP) has been associated with worse clinical outcome; however, this pathologic variable has not been assessed in patients receiving salvage radiation therapy (SRT) after a rising prostate-specific antigen level.

METHODS: A total of 575 patients who underwent primary RP for localized prostate cancer and subsequently received SRT at a tertiary medical institution were reviewed retrospectively. Primary outcomes of interest were biochemical failure (BF), distant metastasis (DM), and prostate cancer-specific mortality (PCSM), which were assessed via univariate analysis and Fine and Grays competing risks multivariate models.

RESULTS: On pathologic evaluation, 563 (98%) patients had a documented Gleason score (GS). The median follow-up post-SRT was 56.7 months. A total of 60 (10.7%) patients had primary, secondary, or tertiary GP5. On univariate analysis, the presence of GP5 was prognostic for BF (hazard ratio [HR] 3.3; P < .0001), DM (HR:11.1, P < .0001), and PCSM (HR:8.8, P < .0001). Restrification of the Gleason score to include GP5 as a distinct entity resulted in improved prognostic capability. Patients with GP5 had clinically worse outcomes than patients with GS8(4+4). On multivariate analysis, the presence of GP5 was the most adverse pathologic predictor of BF (HR 2.9; P < .0001), DM (HR 14.8; P < .0001), and PCSM (HR 5.7; P < .0001).

CONCLUSION: In the setting of SRT for prostate cancer, the presence of GP5 is a critical pathologic predictor of BF, DM, and PCSM. Traditional GS risk stratification fails to fully utilize the prognostic capabilities of individual Gleason patterns among men receiving SRT post-RP. Cancer 2013. © 2013 American Cancer Society.

© 2013 American Cancer Society.

KEYWORDS: Gleason pattern, outcomes, prognosis, prostate cancer, salvage radiation therapy

PMID: 23821578 [PubMed - as supplied by publisher]