Outcome of Gleason 3 + 5 = 8 Prostate Cancer Diagnosed on Needle Biopsy: Prognostic Comparison with Gleason 4 + 4 = 8.

Harding-Jackson N, Kryvenko ON, Whittington EE, Eastwood DC, Tjionas GA, Jorda M, Iczkowski KA.

Abstract

PURPOSE: ISUP (International Society for Urologic Pathology) and WHO adopted prognostic Grade Groups 1 to 5 that simplify prostate cancer grading for prognosis. Grade Group 4 is Gleason score 8 cancer, which is heterogeneous, and it encompasses Gleason score 4 + 4 = 8, 3 + 5 = 8 and 5 + 3 = 8. The comparative prognostic implications of these various Gleason scores had not been studied by urological pathologists after a re-review of slides.

MATERIALS AND METHODS: Patients with a highest biopsy Gleason score of 3 + 5 = 8 or 4 + 4 = 8 were included in study. Controls were cases with a highest Gleason score of 4 + 3 = 7 or 9-10. A total of 423 prostatic biopsy cases accessioned from 2005 to 2013 at 2 institutions were reviewed. Clinicopathological findings and followup (median 33.4 months) were assessed.

RESULTS: Among Gleason score 8 cancers the cancer status outcome in 51 men with Gleason score 3 + 5 = 8 was marginally worse than in 114 with Gleason score 4 + 4 = 8 (p = 0.04). This was driven by a persistent nonmetastatic (after radiation/hormone therapy) cancer rate of 37% among Gleason score 3 + 5 = 8 cases vs 24% among Gleason score 4 + 4 = 8 cases. Conversely, cancer specific survival at 36-month followup was 97.8% in 3 + 5 cases vs 92.6% in 4 + 4 cases but this was not significant (p = 0.089). Cancer specific survival in the Gleason score 8 group was dichotomized by the presence of cribriform growth (p = 0.018). All Gleason score categories did not differ in the fraction of biopsy cores positive, clinical presentation or pathological findings, including the frequency of Gleason pattern 5, in 70 patients who underwent prostatectomy.

CONCLUSIONS: Using the most current standards of prostate cancer grading the prognosis is not different in Gleason score 3 + 5 = 8 and 4 + 4 = 8 cancers. This justifies including both in Grade Group 4.

Copyright © 2016 American Urological Association Education and Research, Inc. Published by Elsevier Inc. All rights reserved.

KEYWORDS: World Health Organization; biopsy; neoplasm grading; neoplasm recurrence, local; prostatic neoplasms

PMID: 27265220 DOI: 10.1016/j.juro.2016.05.105

[PubMed - as supplied by publisher]