Accuracy of Grading Gleason Score 7 Prostatic Adenocarcinoma on Needle Biopsy: Influence of Percent Pattern 4 and Other Histological Factors.

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Abstract

BACKGROUND: Recognition of Gleason pattern 4 in prostatic needle biopsies is crucial for both prognosis and therapy. Recently, it has been recommended to record percent pattern 4 when Gleason score 7 cancer is the highest grade in a case.

METHODS: Four hundred and five prostate needle core biopsies received for a second opinion at our institution from February-June, 2015 were prospectively diagnosed with prostatic adenocarcinoma Gleason score 7 as the highest score on review by a consultant urological pathologist. Percentage of core involvement by cancer, percentage of Gleason pattern 4 per core, distribution of Gleason pattern 4 (clustered, scattered), morphology of pattern 4 (cribriform, non-cribriform), and whether the cancer was continuous or discontinuous were recorded.

RESULTS: Better agreement was noted between the consultant and referring pathologists when pattern 4 was clustered as opposed to dispersed in biopsies (P = 0.009). The percentage of core involvement by cancer, morphology of pattern 4, and continuity of cancer did not affect the agreement between the consultant and referring pathologists. There was a trend (P = 0.06) for better agreement based on the percent of pattern 4.

CONCLUSIONS: When pattern 4 is scattered amongst pattern 3 as opposed to being discrete foci, there is less interobserver reproducibility in grading Gleason score 7 cancer, and in this setting pathologists should consider obtaining second opinions either internally within their group or externally. Prostate © 2017 Wiley Periodicals, Inc.

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KEYWORDS: gleason grading; interobserver; percent pattern 4; prostate cancer

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