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“Diagnostic Dilemma in Reporting of Cribriform Pattern of Prostate Carcinoma: A Retrospective Review”

BACKGROUND: In 2019, the International Society of Urological Pathology (ISUP) proposed new guidelines in documenting prostate carcinomas including reporting the presence of invasive cribriform carcinomas (ICC) and incorporating intraductal carcinomas (IDC) into grading as they have predictive values for cancer survival and can influence treatment management if reported as separate entities.¹ Due to their morphological similarity, PIN4 staining has been an important diagnostic tool in distinguishing between the two. At the same time, other studies have proposed that distinct reporting of these two very similar cribriform patterns is costly and does not significantly alter treatment management.²

OBJECTIVES: Given the ISUP’s recommendation of reporting distinct cribriform morphologies, this study aims to examine the use of PIN4 in identifying cribriform adenocarcinomas vs intraductal prostate carcinomas in pathology reports and highlight the stain’s diagnostic utility considering concerns about the overuse of PIN4 staining.

METHODS: Electronic medical records (EMR) were obtained from 2022 to the 2025 and reviewed for prostate biopsies with Gleason scores of 4 or higher, age, corresponding PSA values and PI-RADs score, presence of intraductal prostate carcinomas and or invasive cribriform carcinomas, percentage of grade 4 and grade 5 in the biopsies, and whether PIN4 was used to make the diagnoses. Data points were recorded and analyzed using an approved Excel spreadsheet and measured for statistical significance.

RESULTS: Out of a 92-patient cohort 56 cases (60.9%) required PIN4 staining to distinguish IDC from ICC (P = .03). This statistically significant finding highlights the need for PIN4-staining in separating these two almost similar cribriform prostate cancer forms.

CONCLUSIONS: The PIN4 stain has shown to be an important diagnostic tool for pathologists to distinguishing intraductal carcinomas and invasive cribriform as they both exhibit similar morphological patterns, and it may reduce diagnostic turnaround time to classify these lesions collectively as cribriform rather than maintain their distinction in reports.

1. JLH van Leenders, G., van der Kwast, T. H., Grignon, D. J., Evans, A. J., Kristiansen, G., Kweldam, C. F., Litjens, G., McKenney, J. K., Melamed, J., Mottet, N., Paner, G. P., Samaratunga, H., Schoots, I. G., Simko, J. P., Tsuzuki, T., Varma, M., Warren, A. Y., Wheeler, T. M., Williamson, S. R., ... Iczkowski, K. A. (2020). The 2019 International Society of Urological Pathology (ISUP) Consensus Conference on Grading of Prostatic Carcinoma. www.ajsp.com
2. Gordetsky, J. B., Schaffer, K., & Hurley, P. J. (2022). Current conundrums with cribriform prostate cancer. In *Histopathology* (Vol. 80, Issue 7, pp. 1038–1040). John Wiley and Sons Inc. <https://doi.org/10.1111/his.14665>