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EDITORIAL COMMENT

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Repeat biopsies in prostate disease are notoriously difficult to acquire, but provide a wealth of data linking phenotype with disease progression.

The REDUCE trial is a rare longitudinal clinical trial that performed prostate biopsy at baseline and again at 2 and 4 years to determine the effect of dutasteride on prostate cancer prevention.¹ The authors performed a retrospective analysis of peripheral zone needle biopsies from 6471 men enrolled in the REDUCE trial to determine the association between baseline basal cell hyperplasia (BCH) and the risk of (1) prostate cancer, (2) benign prostatic hyperplasia with lower urinary tract symptoms, or (3) prostatitis. In short, BCH was not predictive of any clinically meaningful disease progression at 2 years, prompting the suggestion that this rare phenotype should not even be noted by pathologists.

It is important to document these negative results, but with several caveats noted. The incidence of BCH in needle biopsies from this REDUCE cohort was extremely low (1.3%), with other cohorts demonstrating an incidence of 3.1% in needle biopsies to 23% in whole mounts.² Our own study of BCH in transition zone tissue from patients with BPIT/LUTS undergoing TURP or simple prostatectomy tissue showed an incidence of 8%, but the total volume of BCH foci was highly variable between patients.³ The low incidence and sporadic appearance of BCH foci in the peripheral zone may make its random detection in biopsies an underestimate, and the relatively short 2-year follow-up may be insufficient to detect clinically meaningful differences in relation to prostate cancer progression. On this point, it is unclear why the biopsies from the 4-year follow-up in the REDUCE trial were not used instead. It is also difficult to extrapolate the relationship between BCH detected by biopsy in the peripheral zone and symptoms due to transition zone BPH. However, the conclusion that BCH is not related to age, prostate volume, LUTS, or prostatitis does largely agree with our own study performed on larger specimens from the transition zone.³

Based on a transcriptional profile of basal cells from patients with BCH compared to basal cells from patients without BCH, we established that BCH is likely a metaplastic event.³ This study suggests that the BCH phenotype is clinically meaningless and should be ignored. Perhaps future studies with a higher incidence and longer follow-up will alter this opinion, but it is an important observation nonetheless.

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