



AUTHOR REPLY

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 BPH/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 an important observation nonetheless.

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Several nonmalignant histological prostate findings have been shown to be of clinical relevance. For example, we and others have shown chronic histological prostate inflammation in needle biopsies is associated with worsening prostatitis- and benign prostate hyperplasia (BPH)-related symptoms over time.^{1,2} While basal cell hyperplasia (BCH) in the transitional zone has been associated with BPH in prior studies, the clinical significance of BCH in needle biopsies of the peripheral zone has not been previously studied in earnest.^{3,4} Although limited by a low prevalence of BCH (1.3%), the current study is one of the largest analysis of BCH and it was unable to identify any association between BCH and prostate cancer, BPH or prostatitis-related symptoms. The lower BCH prevalence in our study likely stem from the fact that: (1) our biopsies targeted the peripheral zone only, and (2) subjects with very large prostates and/or severe urinary symptoms were excluded. Moreover, data from the 4-year repeat prostate biopsies were indeed analyzed but not included in the final manuscript given the results were similar to the ones obtained using 2-year biopsy data. While it is conceivable that future studies with larger BCH samples may identify correlations between BCH and clinically meaningful outcomes, the current relevance of BCH seems to rely solely on being a differential diagnosis for high-grade prostatic intraepithelial neoplasia and prostate adenocarcinoma and, as such, may be omitted from routine pathological prostate needle biopsy reports.

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