12.8 Case 8: PI-RADS 3 Lesion in the Transition Zone Corresponding to Low-Grade Prostate Cancer

12.8.1 History

A 77-year-old man with a PSA level of 2.4 ng/mL and high-grade prostatic intraepithelial hyperplasia (HGPIN) on prior prostate biopsy (▶ Fig. 12.8).

12.8.2 Prostate MRI Findings

a) T2WI: 1.1 cm T2 hypointense lesion in the right anterior transition zone that is slightly heterogeneous with obscured margins. Notice the irregular shape and absence of a complete, smooth, well-defined capsule.

b) DWI (b = 1500 s/mm²): Marked hyperintensity
c) ADC: Moderate hypointensity
d) DCE: Focal early enhancement matching the edges of the lesion on the other sequences (positive DCE)

PI-RADS v2 assessment category: 3

12.8.3 Diagnosis

Gleason score 3 + 3 prostate cancer

Teaching points: Differentiation of atypical benign prostatic hyperplasia nodules and transition zone tumors is challenging. Signal abnormality on T2WI and DWI/ADC should be assessed relative to the remainder of the TZ in the same patient. Obscured margins raise suspicion for TZ tumor.