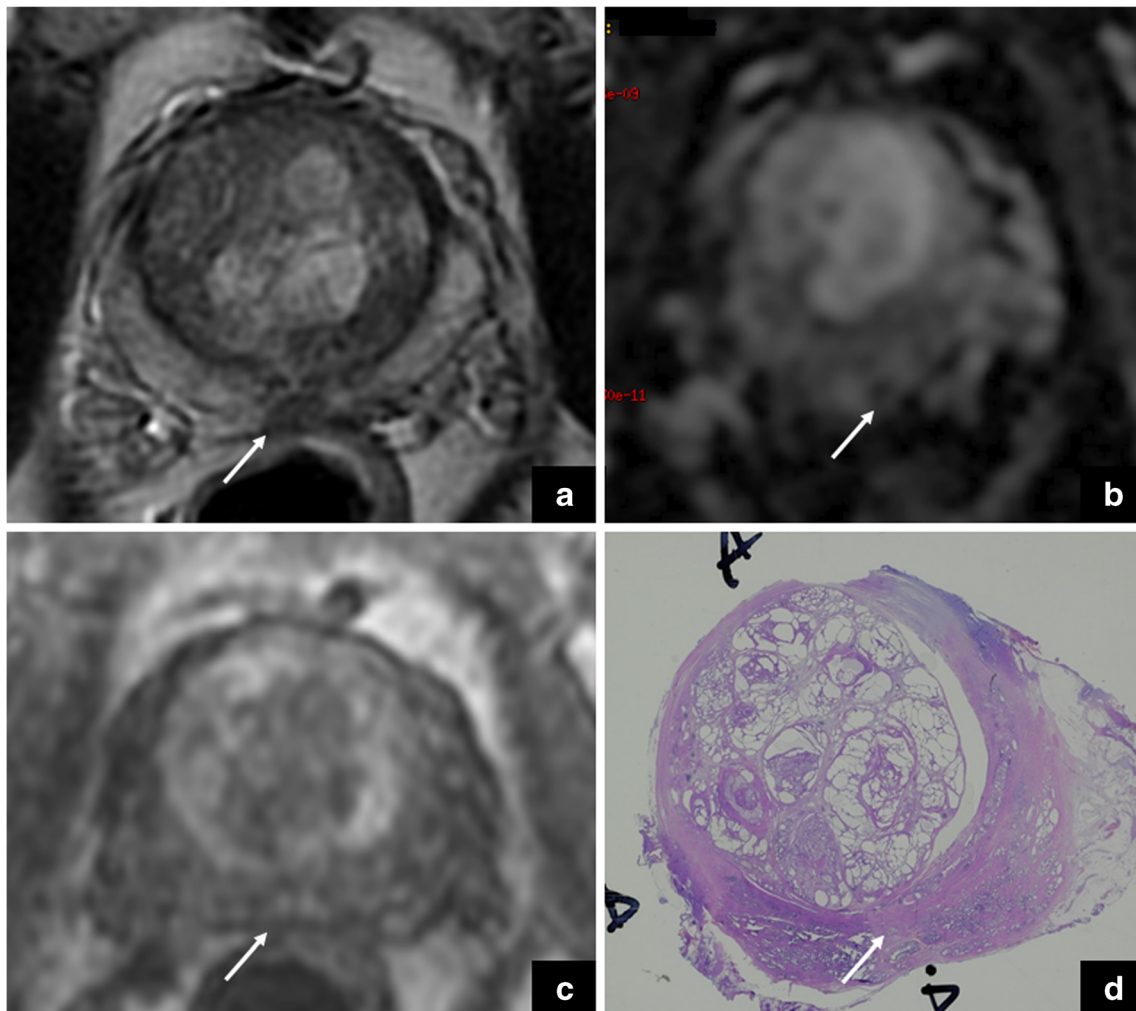


**Fig. 9** The arrows show a focal area with low-signal intensity on axial (a) and coronal (c) T2-weighted imaging, and restricted diffusion on DWI (b) at the prostate apex. The use of the coronal plane is very important to differentiate a pitfall (*teardrop*) from prostate cancer (*cancer in pitfall*)

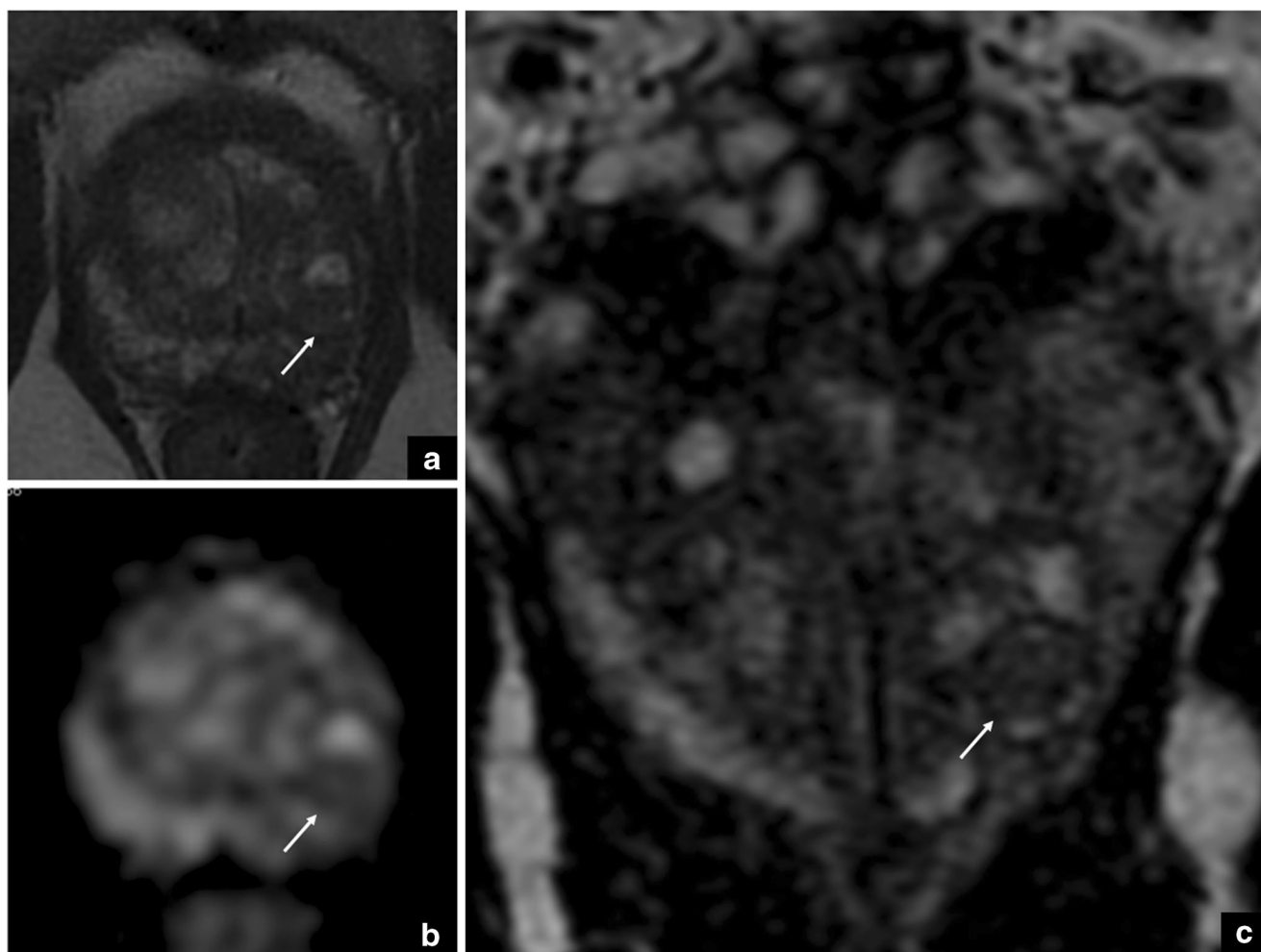
that in this scenario the experience of the radiologist and the knowledge of prostate anatomy and specific morphological

features of BPH (e.g., regular capsule and margins) are more important than ever.



**Fig. 10** Axial T2-weighted image (a) that shows a focal area of low signal intensity adjacent to the ejaculatory ducts (white arrow). This corresponds to an area of restricted diffusion on the ADC map (b) and

late enhancement on DCE imaging (c) and represents fibrosis, as confirmed at final histology after radical prostatectomy (d)



**Fig. 11** The arrows show a focal nodule bulging in the left peripheral zone, characterised by low signal intensity on axial (a) and coronal (c) T2-weighted imaging, with sharply defined margins, and restricted diffusion

on the ADC map (b). The presence of tiny bright spots (corresponding to dilated acini) is consistent with a nodule of stromal benign prostatic hyperplasia (BPH), which may sometimes protrude from the central zone

### Prostatitis

This condition is usually caused by *E. coli* or Staphylococcus infections, and can ultimately result in the formation of an abscess.

On mpMRI, focal prostatitis can show an area of decreased signal on T2-WI (from nodular to band-like) in the PZ (adjacent to the capsule and infiltrating the periprostatic fat; hence, mimicking extracapsular extension – T3 stage) and increased perfusion on DCE (+), yielding a “false positive” finding. Additionally, the ADC map can be characterised by an area of low signal intensity.

According to PI-RADS v.2, the aforementioned findings can be scored at least 4/5, suggesting the presence of clinically significant PCa. However, the clinical history plays a crucial role in the diagnosis of focal prostatitis vs the presence of PCa (incidental finding), as this latter shows an earlier and more avid enhancement (*cancer in pitfall*) (Fig. 12).

Therefore, final histopathology is regarded as the only means to carry out an accurate diagnosis and to exclude the presence of tumour.

In addition, the radiologist should keep in mind that also granulomatous prostatitis can occur in the prostate. This usually presents as a firm nodule on digital rectal examination and elevated PSA, thus mimicking PCa. Although there can be different causes (instillation of intravesical bacille of Calmette-Guérin for bladder cancer, tuberculosis, surgical procedures), most cases are usually idiopathic [9].

### Abscess vs cancer

In the PZ, it is possible to find a round-shaped region characterised by inhomogeneous, low-signal intensity on T2-WI, with a pseudocapsule (scored as 2/5), together with ring enhancement on DCE (+) and restriction on DWI (scored as 4/5).