

## RECTAL WALL RECURRENCE OF PROSTATIC ADENOCARCINOMA

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We report 2 cases of tumor recurrence in the rectal wall following prostate biopsy and cryoablation.

### CASE REPORTS

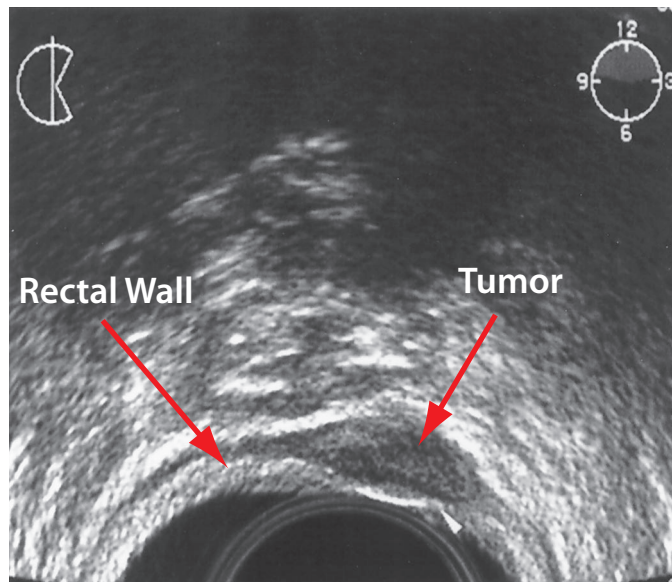
**Case 1.** A 60-year-old man was treated with 72 Gy, external beam radiation therapy for Gleason score 4 + 3 adenocarcinoma of the prostate diagnosed by transrectal ultrasound guided biopsy. After treatment prostate specific antigen (PSA) decreased to 1.3 ng./ml. One year later PSA had increased to 2.0 ng./ml. Transrectal ultrasound guided biopsy revealed recurrent prostatic adenocarcinoma. Salvage cryosurgical ablation of the prostate was then performed, after which PSA decreased to less than 0.5 ng./ml. Three years after primary therapy, repeat transrectal ultrasound was performed for a superficial palpable nodule noted on digital rectal examination. At that time PSA was 1.8 ng./ml. Transrectal ultrasound demonstrated a fusiform mass in the rectal wall. Biopsy of the mass showed Gleason score 4 + 4 adenocarcinoma. The patient subsequently received hormone ablation therapy. Six years after initial treatment he is living with hormone refractory prostate cancer.

**Case 2.** A 74-year-old man underwent cryosurgical ablation of the prostate for Gleason score 2 + 3 adenocarcinoma, which was detected by transrectal ultrasound guided biopsy. Sixteen months after cryotherapy PSA had increased to 6.0 ng./ml. and transrectal ultrasound guided biopsy revealed Gleason score 3 + 4 adenocarcinoma. Salvage cryosurgical ablation of the prostate was then performed, after which PSA decreased to less than 0.1 ng./ml. Forty-two months after the second cryoablation transrectal ultrasound was performed for increasing PSA and a palpable mass on digital rectal examination. The scan demonstrated a fusiform hypoechoic lesion within the muscularis propria of the rectum (see figure). Biopsies of the mass showed Gleason score 3 + 4 adenocarcinoma. The patient was subsequently treated with external beam radiation therapy, and PSA was undetectable 27 months after treatment.

### DISCUSSION

Seeding of prostate needle biopsy tracts is exceedingly uncommon although cases have been reported in the literature. Most cases have occurred following transperineal rather than transrectal prostate needle biopsy.<sup>1,2</sup> It is speculated that perineal biopsy tract seeding can be attributed to the larger bore biopsy needles used in that approach. Generally such events have been associated with high grade, locally advanced tumors although seeding of a well differentiated tumor has also been described.<sup>1,2</sup> Recurrence has been reported as late as 14 years after biopsy.

Microscopic biopsy tract seeding has also been noted to occur after transrectal biopsy of the prostate. Bastacky et al evaluated 350 consecutive clinical stage B prostatectomy specimens.<sup>3</sup> They identified 7 cases (2%) in which needle



Fusiform thickening of rectal muscularis propria as seen on transrectal ultrasound.

biopsy associated tumor tracking was present on microscopic analysis, of which 6 occurred after transrectal biopsy. To date, the clinical significance of such microscopic tracking remains unknown.

In both of our patients biopsies were taken transrectally using an 18 gauge automated biopsy gun needle. Recurrences were noted at 13 and 42 months after secondary treatment (36 and 58 months after primary treatment), and were detected in response to increasing serum PSA. Pathology consisted of intermediate to high grade cancer. Interestingly in both cases either primary or salvage treatment consisted of cryosurgical ablation of the prostate. These procedures were performed transperineally without violation of or injury to the rectal wall. On ultrasound these masses were clearly isolated to the rectal wall, away from the prostate gland and transperineal cryoprobe tracts. These findings suggest seeding of the transrectal needle tract rather than the cryosurgical ablation probe tract. To our knowledge we report the first 2 cases of rectal wall recurrence after transrectal ultrasound guided biopsy of the prostate.

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