

# Histopathological lesions in transrectal ultrasound guided biopsies of prostate in patients with raised serum prostate specific antigen: A preliminary report

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## Abstract:

**Background:** Transrectal ultrasound (TRUS)-guided needle biopsies of prostate are considered the gold standard for the diagnosis of the prostatic cancer. Currently, there is no information on the spectrum of pathological lesions in TRUS biopsies of prostate in men from Pakistan.

**Objectives:** To determine the spectrum of pathological lesions in TRUS-guided needle biopsies of prostate in men with increased serum prostatic specific antigen (PSA) levels with or without symptoms of prostatism.

**Patients and methods:** A prospective study carried out at the Department of Histopathology, Sindh Institute of Urology and Transplantation (SIUT), Karachi from September 2001 to June 2002. Fifty four men underwent TRUS-guided prostate biopsies for suspected prostate cancer. Raised serum PSA levels were arbitrarily divided into mild ( $\geq 4$  to 20 ng/ml), moderate ( $\geq 20.1$  to 50 ng/ml) and marked elevations ( $\geq 50.1$  to highest). In most cases, eight cores were taken per case. Each core was individually labeled and submitted for histopathological study.

**Results:** The mean age of patients was  $66.9 \pm 9.4$  years (range: 52-100 years). The mean serum PSA was  $97.1 \pm 119.4$  ng/ml (range: 4-449 ng/ml). Mean number of cores obtained per case was  $7.8 \pm 0.9$  (range: 4-9). Overall, 30 (55.6%) cases showed benign lesions and 24 (44.4%), malignant. Benign lesions consisted of adenomyomatous hyperplasia. Fourteen of benign cases (46.6%) showed significant inflammatory changes. Among malignant lesions, all cancers were of moderate to high Gleason grades and scores. Mild serum PSA rise was seen in 26 (48.1%) patients; among these, 19 (73%) cases showed benign lesions and 7 (26.9%), malignant. Moderate serum PSA rise was seen in 14 (25.9%) cases; among these 9 (64.3%) were benign and 5 (35.7%) malignant. Fourteen (25.9%) patients had serum PSA  $\geq 50.1$  ng/ml. Among these, 12 (85.7%) had adenocarcinoma, 2 (14.3%) hyperplasia, one of the later with active prostatitis.

**Conclusions:** In conclusion, this is first study from Pakistan on the spectrum of pathological lesions in prostate TRUS-guided biopsies in men with suspected prostate cancer. The detection rate of prostate cancer is similar to that reported previously from around the world and rises with an increase in serum PSA level.