

## Optimization of the Ultrasound-Guided Prostate Biopsy

**Introduction and Objective:** Various schemes of prostate biopsy have been developed looking for maximum profitability, reaching the highest diagnostic rates with schemes of 10-12 cylinders. One of the most commonly used schemes is Presti's, in which the peripheral zone is sampled at its paramedian and lateral part. The areas most increase the diagnostic yield in successive biopsies are the transition zone and anterior horn. The objective of this study is to determine the diagnostic yield of prostate base and develop an optimal scheme for first prostate biopsy.

**Materials and Methods:** Prospective study of 696 patients including 445 first biopsies and 251 repeat biopsies. Prostate map was obtained on pathology of the cores obtained at each biopsy. Statistical analysis was performed according to age, PSA, PSA ratio F / T and PSAD.

**Results:** The 41% of first biopsies were positive. Seventy four (16.6%) biopsies had a single positive core corresponding to 14.6% for prostate lobes. Only 3.6% (16 patients) of prostate base biopsies were clinically relevant, providing diagnosis, changing the side of the tumor or raising Gleason, without influence of PSA, age, ratio L / T and PSAD. 34% of repeat biopsies were positive. 4.8% of the transition zone biopsies and 7% of the anterior horn biopsies were clinically relevant. 70% of the horn positive cores were clinically relevant.

**Conclusions:** At first biopsy, sampling of the prostate base is of little diagnostic value, although it is important for surgical planning. Second biopsies in the transition zone do not offer a high return. Tumors diagnosed in this area were not very aggressive, the risk of spread is low and no there is not added risk of positive surgical margins, so their utility was questionable. Second biopsies in the anterior horn provide a moderate diagnostic yield, but high clinical significance and considering that is a place with frequent presence of positive surgical margins, its utility for surgical planning is high. Therefore be assessed for inclusion in the scheme of first biopsy.