Saturation Biopsy Performed Safely Could Enhance the Detection of Prostate Cancer in a Sub Group of Patients with PSA Levels <10ng/ml: Results in First Set of Biopsies

Introduction and Objective: To assess the diagnostic contribution of a 24-sample endorectal ultrasound guided needle biopsy as the initial diagnostic manner in order to improve detection of localized prostate cancer.
Materials and Methods: Between 2002 and 2011, 79 saturation biopsies were performend in 79 men with initial PSA level<10ng/ml. the protocol included sextant biopsies, 3 additinnal posterolateral biopsies in each peripheral zone, 3 biopsies in each transitionnal zone (TZ), and 3 biopsies in the midline peripheral zone. Each prostate core was listed and and analyzed separatly. Our patients were stratified into subgroups according to PSA,DRE and prostate volume. We compared the results of saturation biopsy to those from 6-, 12-, and 18 core biopsy protocols.
Results: Cancer detection rates using 6 biopsy samples, 12 samples,18 samples and 24 samples, sextant, lateral, TZ and midline cores were 9.8%, 14.3%, 17.3% and 22.8%, respectively. The improvement in the diagnostic yield was well rated in patients with prostate volume > 50 ML (42.2%), in men with normal DRE (18.1%), and in men with PSA<4ng/ml (39.7%). The addition of TZ zone scheme enhanced the diagnostic yield by 11.8%, otherwise only 2.9% of cancers were detected on the sole of midline cores.
Conclusions: In our data, a 24-biopsy scheme increased significantly the diagnostic yield compared with the other protocols. Patients with suspected localized cancer in small prostate should be offered at least 12 cores in the peripheral zone and far lateral peripheral zone. TZ biopsies have be considered especially in greater prostate volume (>50Ml) because it increases significantly cancer rate detected. Our results could be supported by other consistent further studies.