Global to Focal – The changing face of prostate cancer diagnosis
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Traditional methods of Prostate Cancer diagnosis in males with an elevated or rising PSA have relied on Outpatient TRUS biopsy using local anaesthetic and taking between 6-18 biopsies. TRUS biopsy is painful, associated with rectal bleeding in 10%, UTI in 40% and Urosepsis in up to 5% of Patients. It is also has a poor sensitivity (<30%) low accuracy rates of <25% and a poor specificity of <30%.

From 2010 we changed to Template Guided Prostatic Biopsy (TGPB) carried out transperineally under a general anaesthetic. To date we have carried out TGPB in 324 patients with a positive biopsy rate of 60% (accuracy of 81%; and Specificity of 87%). The procedure is painless, UTIs occurred in 5%, no Sepsis and no rectal bleeding. Because of the large numbers of biopsies taken 15% of patients had transient retention. In patients who had a previous –ve TRUS biopsy 48% had a subsequent +ve TGBP and patients having TGBP on the first occasion for an elevated PSA (2.5-10) 58% had a positive biopsy.

With the advent of 3Tesla MRI and MRI fusion technology we have now progressed to MRI fusion biopsy using real time Ultrasound imaging and fusing the abnormal MRI image to perform the biopsy. This allows for even greater accuracy of the biopsy without taking large numbers of samples. To date we have achieved a +ve biopsy rate of 68% with an accuracy of >80%. To date there have been no cases of UTI sepsis or retention.

MRI fusion biopsy allows for more accurate identification and biopsy of the Target lesion and subsequent Focal Therapy.