



Prostate imaging and focal therapy

This special edition of *Translational Andrology and Urology (TAU)* has a focus on Prostate Imaging and Focal Therapy. It is published at the end of a decade of immense change in our understanding of the tumour biology, genomics, optimal diagnosis and treatment of localised prostate cancer.

The heterogeneity of prostate cancer has presented a challenge to researchers in identifying a responsible cardinal genomic alteration. In the opening article Dr. Hayley Whitaker provides a summary of the state-of-art pertaining to tumour biology and genomics from diagnosis to metastatic disease.

Recent diagnostic highlights have been the validation of pre-biopsy multi-parametric MRI (mp-MRI) and MRI-targeted biopsy strategies over a systematic transrectal ultrasound guided-biopsy (TRUS-GB) approach. In this respect, Prof. Leonard Marks, Prof. Tilman Loch and Prof. Jochen Walz succinctly cover the role of systematic sampling in an MRI-targeted prostate biopsy strategy, the role of prostate ultrasound in an MRI-era and the current available techniques in prostate biopsy sampling, respectively.

Treatment strategies have also broadened, with the development of minimally-invasive therapies that can focally treat an area of the prostate in which a cancer resides. In part, driven by the emergence of the index-lesion theory, which suggests that in most men that a one or two lesions are biologically and clinically aggressive and drive metastatic potential. An update on the evidence base for tissue preservation, lesion-directed therapy and the available treatment modalities is provided by Prof. Hashim Ahmed.

Further, the favorable toxicity profile of focal therapy, when compared to whole-gland treatment, has led to a rising adoption amongst both urologists and patients. Dr. Tim Dudderidge explores whether there is enough evidence to now routinely consider focal therapy alongside whole-gland treatment options at the multi-disciplinary team meeting (MDT) or tumour board. In cases of whole-gland treatment failure focal therapy may offer a salvage approach and in our final article, Dr. Taimur Shah shares the accumulating evidence base for salvage focal therapy in men with evidence of radio-recurrent disease.

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