



## 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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Mr. Martin J. Connor, BSc (Hons), MBBS, MSc, MRCS



Mr. Saiful Miah, BSc (Hons), MB ChB, PhD, FRCS (Urol)



Mr. Taimur T. Shah, BSc (Hons), MBBS, FRCS (Urol)



Professor. Hashim U. Ahmed, BA (Hons), BCh (Oxon), BM, PhD, FRCS (Urol)

**Martin J. Connor**<sup>1,2</sup>

(Email: [m.connor@imperial.ac.uk](mailto:m.connor@imperial.ac.uk))

**Saiful Miah**<sup>1,3</sup>

(Email: [saiful.miab@nhs.net](mailto:saiful.miab@nhs.net))

**Taimur T. Shah**<sup>1</sup>

(Email: [t.shah@imperial.ac.uk](mailto:t.shah@imperial.ac.uk))

**Hashim U. Ahmed**<sup>1,2</sup>

(Email: [hashim.abmed@imperial.ac.uk](mailto:hashim.abmed@imperial.ac.uk))

<sup>1</sup>Imperial Prostate, Department of Surgery and Cancer, Imperial College London, Charing Cross Hospital, London, W6 8RF, UK;

<sup>2</sup>Department of Urology, Imperial College Healthcare NHS Trust, Charing Cross Hospital, London, W6 8RF, UK;

<sup>3</sup>Department of Urology, Addenbrooke's Hospital, Cambridge University Hospital NHS Foundation Trust, CB2 0QQ, UK

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