BRACCO FELLOWSHIPS - EDUCATION IN RESEARCH

Project 7:

The Natural History of Continence and Incontinence Post-Robotic Radical Prostatectomy (The ProsPUR study - Prostate Perineal Ultrasound Research)

NAME OF INSTITUTION: Cambridge University Hospitals NHS Trust - Addenbrooke's Hospital, Cambridge/UNITED KINGDOM

RESEARCH GROUP AND ITS MISSION:

Clinical research centres on prostate cancer imaging, with a particular interest in multi-parametric MRI techniques for identifying and characterising prostate tumours. We are currently recruiting to several imaging trials looking into functional imaging of the prostate, including PET imaging with PSMA and acetate tracers and MRI using advanced diffusion sequences and multi-nuclear spectroscopy, including hyperpolarised carbon.

OBJECTIVES:

- Map out anatomical changes of the male pelvic floor and sphincter recovery during the 1-year post-operative period following radical removal of the prostate
- Correlate the post-surgical changes in pelvic floor anatomy with continence rates
- Determination any pre-operative patient related factors to post-operative continence
- Determine the factors that contribute to incontinence in some patients post-surgery

APPLICANT'S DUTIES:

- Work alongside an experienced consultant uro-radiologist to measure change in position of bladder neck opening in the superior-anterior direction with pelvic floor contraction exercises for each of the 94 patients already scanned
- Measure bladder neck in the inferior-posterior direction post-val salva
- Quantify any changes in angle of bladder neck opening for all subjects both post-pelvic floor contraction (tendency to acute) and post-val salva (tendency to obtuse)
- Collate and evaluate data with senior support, including correlating above variables to IPSS continence scores and any independent clinical factors

APPLICANT'S BENEFITS:

- Participation in the scientific outcomes of the project e.g. presentation at national/international conferences and publication of paper/s
- Internal group presentations occur on a weekly basis, and project updates can be scheduled within the period of the research attachment
- The project is expected to be of high enough quality and interest to achieve at least one publication in a peer-reviewed journal
- Depending on timing of project and preliminary results, abstract submission for a relevant conference is possible
- The candidate will gain experience in data collection, idea development, critical appraisal of results, organisation of data for purposes of presentations, and article writing
- The weekly group meetings and ancillary department activity will give the candidate an insight into the career of academic radiologists and an introduction to the breadth of research that occurs within the Cambridge Radiology department

Project Leader: Dr. Tristan Barrett (University Lecturer and Honorary Consultant Radiologist)
Members: Nikesh Thiruchelvam (Consultant Urologist), Nadeem Shaida (Consultant Interventional Radiologist), Leonardo Rondo (Computational Scientist), Andrew Gill (Image analysist), Nikita Sushtensev (Doctoral student)