

00369 **Stereotactic Robot-assisted Transperineal Prostate Biopsy Under Local Anaesthesia and Sedation: Moving Robotic Biopsy From Operating Theatre to Clinic**

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**Aims:** General anaesthesia (GA) ensures accurate and pain-free transperineal MRI-US fusion targeted prostate biopsy. However, GA increases anaesthetic risks as well as cost for the patient. This IRB-approved prospective pilot study evaluates the safety and feasibility of performing stereotactic robot-assisted transperineal MRI-US fusion targeted prostate biopsy under local anaesthesia (LA) with sedation.

**Methodology:** 25 patients who underwent robotic transperineal prostate biopsy between September 2017 and May 2018 were recruited. All biopsies were performed with the iSR'obot Mona Lisa® and BK3000 ultrasound system. Intravenous paracetamol 1g, with midazolam and fentanyl were given at positioning. After administration of 5 mL of 1%-lidocaine into the perineal skin 2cm above and lateral to the anus, periapical prostatic block with 10 mL mixture of 1%-Lidocaine and 0.5%-Marcaine using 16G spinal needle was given.

**Result:** The median age of patients was 68 (range 53-78). The median PSA and mean prostate volume were 9.0ng/ml (range: 4.2 – 54.0ng/ml) and 42.2 ± 13.3 cc. 20 (80.0%) patients had targeted prostate biopsy, with median number of targeted cores of 8 (range: 5-16). All patients had saturation biopsy and median number of saturation cores was 22.5 (range: 9-48). Mean dose of intravenous midazolam given was 1.5 ± 1.2mg and intravenous fentanyl was 58 ± 37.2mcg. One patient deviated from LA protocol due to concerns of respiratory depression. No patient required conversion to GA. Two patients required motion compensation of 3mm and 7.5mm respectively due to minor movement. Immediate post-operative pain score was 0 for all patients. 24 of 25 patients (96.0%) were discharged within 24 hours of procedure. There were no immediate severe complications. Adenocarcinoma was detected in 13 of 25 (52%) cases.

**Conclusion:** This pilot feasibility study showed that stereotactic robotic transperineal MRI-US fusion targeted prostate biopsy can be safely and accurately performed under LA with sedation, moving the procedure from OT to clinic.