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Introduction & Objectives: To present outcomes of robotic radical prostatectomy (RARP) in patients <50 years old.

Materials & Methods: In the collective experience of 4 robotic surgeons (TE, MDB, YK and AEC) with more than 1500 RARP procedures we identified 20 patients <50 years old age. Mean patient age and preoperative serum PSA values were 47 ± 2.5 (40-50) years and 7.6 ± 4.6 (2.2-16.4) ng/ml, respectively. Preoperative prostate biopsy Gleason scores (GS) were: 3+3 (n=15, 75%), 3+4 (n=4, 20%) and 4+5 (n=1, 5%). Bilateral neurovascular bundle (NVB) sparing and unilateral NVB-sparing RARP were performed in 16 (80%) and 4 (20%) patients, respectively.

Results: Mean prostate weight measured on pathologic evaluation was 46.4 ± 12.4 (29-75) gr. Mean console time was 117 ± 32.6 (70-220) minutes. Mean intraoperative blood loss was 143.2 ± 104.3 (50-400) cc. Mean duration of hospital stay was 3.5 ± 1.1 (2-7) days. Mean urethral catheter removal time was 8.1 ± 2 (7-14) days. According to modified Clavien classification, 1 major complication occurred (symptomatic lymphocele formation on a patient that resolved following ultrasound guided aspiration) in the early perioperative period (0-30 days) and there were no other late complications. Postoperative pathologic stages were: pT2a (n=2, 10%), pT2b (n=1, 5%), pT2c (n=13, 65%), pT3a (n=3, 15%) and pT3b (n=1, 5%). Four (20%) patients had positive surgical margin (SM) who had pT2c (n=2), pT3a (n=1) and pT3b (n=1) stages. Six patients underwent pelvic LN dissection. Mean lymph node (LN) yield was 17.3 ± 8.1 (9-33). During a mean follow-up of 20.8 months, biochemical recurrence occurred in 1 (5%) patient who was given maximal androgen blockage (MAB) with pelvic radiotherapy. Urinary continence and erectile function outcomes were evaluated in patients with at least 1-year follow-up (n=14). Of those, 12 (85.8%) were fully continent (0 pad/day), 1 (7.1%) wore a safety pad/day, 1 (7.1%) wore 1 pad/day. Of the 14 patients with no preoperative erectile dysfunction (ED) (IIEF= 22-25) and with at least 1-year follow-up, 9 had postoperative IIEF scores available. Of 9 those patients, 7 had no ED and 2 had mild ED who required use of PDE5 inhibitors.

Conclusions: Prostate cancer can be detected in males <50 years old and performing RARP in this patient group is a safe minimally invasive surgical procedure with satisfactory operative, perioperative, pathologic, oncologic and functional outcomes.