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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 with more than 1500 RARP procedures we identified 25 patients <50 years old age. Mean patient age and preoperative serum PSA values were 47.1 ± 2.3 (40-49) years and 6.9±3.9 (2.2-16.4) ng/ml, respectively. Preoperative prostate biopsy Gleason scores (GS) were: 3+3 (n=18, 72%), 3+4 (n=6, 24%) and 4+5 (n=1, 4%). Bilateral neurovascular bundle (NVB) sparing and unilateral NVB-sparing RARP were performed in 21 (84%) and 4 (16%) patients, respectively.

Results: Mean prostate weight measured on pathologic evaluation was 41.6±12.6 (29-75) gr. Mean console time was 115.5±30.8 (70-220) minutes. Mean intraoperative blood loss was 124.4±101.3 (50-400) cc. Mean duration of hospital stay was 3.6±1.1 (2-7) days. Mean urethral catheter removal time was 8±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 we no other late complications. Postoperative pathologic stages were: pT2a (n=2, 8%), pT2b (n=2, 8%), pT2c (n=16, 64%), pT3a (n=4, 16%) and pT3b (n=1, 4%). Five (20%) patients had positive surgical margin (SM) who had pT2c (n=3), 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 37.4 months, biochemical recurrence occurred 1 (4.8%) 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=21). Of those, 17 (80.9%) were fully continent (0 pad/day), 3 (14.2%) wore a safety pad/day, 1 (4.9%) wore 1 pad/day. Of the 21 patients with no preoperative erectile dysfunction (ED) (IIEF= 22-25) and with at least 1-year follow-up, 14 had postoperative IIEF scores available. 10 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.