**PD15-09**
IDENTIFYING THE OPTIMAL CANDIDATE FOR SALVAGE LYMPH NODE DISSECTION FOR NODAL RECURRENCE OF PROSTATE CANCER: RESULTS FROM A LARGE, MULTI-INSTITUTIONAL ANALYSIS

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INTRODUCTION AND OBJECTIVES: Salvage lymph node dissection (SLND) represents a possible treatment for prostate cancer (PCa) patients experiencing nodal recurrence after local treatment. We aimed at identifying the optimal candidates for SLND based on pre-operative characteristics.

METHODS: The study included 538 patients who experienced PSA rise and nodal recurrence after RP who underwent SLND at eight tertiary referral centres. Lymph node recurrence was documented by positron emission tomography / computed tomography (PET/CT) scan using either 11C-choline or 68Ga-prostate-specific-membrane-antigen (PSMA) ligand. The study outcome was systemic progression (skeletal and/or visceral metastasis). Multivariable Cox regression analysis was used to develop a predictive model for the study outcome. Predictors consisted of patient age, PSA level at SLND, PSA doubling time (PSADT), diagnostic tracer (11C-choline vs. PSMA), site of nodal positive imaging (pelvic vs. retroperitoneal vs. both), and number of positive spots at PET/CT. Multivariable-derived coefficients were used to develop a novel risk-calculator.

RESULTS: Imaging was positive in pelvic, retroperitoneal, and pelvic + retroperitoneal regions in 400 (15%), 58 (11%), and 80 (15%) patients. The number of positive spots was 1, 2, and ≥3 in 277 (52%), 120 (22%), and 141 (26%) patients. At a median follow-up of 44 months, 88 (16%) patients experienced systemic progression. At multivariable analysis, age (HR: 0.96; p = 0.046), PSA at SLND (HR: 1.02; p = 0.006), PSADT (HR: 0.99; p = 0.001), PSMA tracer (HR: 0.11; p = 0.003), positive imaging in both pelvic and retroperitoneal regions (HR: 1.69; p = 0.02), and ≥3 positive spots (HR: 1.71; p = 0.01) were significantly associated with M1b-c stage. The multivariable model had a predictive accuracy of 75%. Three pre-operative groups were defined based on the risk calculator: low- (<33%), intermediate- (33-66%), and high-risk (>66%). Distant metastasis-free survival at 3 years was significantly different among the three groups (3% vs. 10% vs. 39%, p < 0.0001).

CONCLUSIONS: We reported the largest series available of patients treated with SLND. At mid-term follow-up, roughly 15% of men developed systemic progression after surgery. We developed a risk calculator based on pre-operative characteristics to discern patients who would benefit the most from SLND from other patients who should be spared from the side effects of SLND.

**Source of Funding:** none

**PD15-10**
SURGICAL EXPERTISE IS THE MAJOR DETERMINANT OF DECREASED COMPLICATION RATES IN CONTEMPORARY PATIENTS TREATED WITH ROBOT-ASSISTED RADICAL PROSTATECTOMY

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**INTRODUCTION AND OBJECTIVES:** To identify factors associated with post-operative complications after robotic-assisted radical prostatectomy (RARP) in contemporary patients and to assess the probability of freedom from relevant complications according to surgical expertise.

**METHODS:** A total of 1,214 patients treated with RARP by 4 high-volume surgeons at a single referral centre between 2006 and 2015. All surgeons had a previous high-volume experience with open RP (at least 200 cases). Surgical expertise was coded as the progressive number of procedure done by each surgeon, starting from the first robotic case. Multivariable logistic regression analyses (MVA) were used to predict 90-day relevant complications (Clavien Dindo system 2-5) which were prospectively recorded for all men. Covariates consisted of age at surgery, Charlson comorbidity index, D’Amico risk groups, number of nodes removed, intra-operative time and log-transformed surgical expertise. A locally weighted, scatterplot smoothing method was used to graphically assess the multivariable effect of surgical expertise on the probability of complications.

**RESULTS:** Overall, 245 (20.2%) patients experienced post-operative complications, of which 13.8 and 8.1% were graded 2-5 and 3-5, respectively. The most common complications were lymphoceles (8.5%), blood transfusions (4.4%), fever requiring antibiotics (4.2%), anastomosis leakage (3.5%), pelvic hematoma (2.8%), post-surgical hernia (2.1%) and urinary retention (1.2%). Overall, 4.7% of patients with lymphoceles required percutaneous drainage, 1.1% with pelvic hematoma, and 1.2% with post-surgical hernia required reoperation. There were 4 (0.2%) admissions to intensive care units for cardiac events (Clavien IVa). At MVA, surgical expertise (OR: 0.8; p = 0.01) and number of nodes removed (OR: 1.03; p = 0.005) were independent predictors of 90-day complications. Figure 1 a-b represents the inverse association between surgical expertise and complications after RARP which was maintained across all risk groups.

**CONCLUSIONS:** Among contemporary patients, the rate of complications related to RARP is not negligible. Surgical expertise is the major determinant of decreased risk of postoperative complications, regardless of disease characteristics.

**Source of Funding:** none

**PD15-11**
MORE EXTENSIVE LYMPH NODE DISSECTION AT RADICAL PROSTATECTOMY IS ASSOCIATED WITH IMPROVED OUTCOMES AFTER SALVAGE RADIOTHERAPY FOR RISING PSA AFTER SURGERY: A LONG-TERM, MULTI-INSTITUTIONAL ANALYSIS

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**INTRODUCTION AND OBJECTIVES:** The aim of this study was to identify factors associated with post-operative complications after robotic-assisted radical prostatectomy (RARP) in contemporary patients and to assess the probability of freedom from relevant complications according to surgical expertise.

**METHODS:** A total of 1,214 patients treated with RARP by 4 high-volume surgeons at a single referral centre between 2006 and 2015. All surgeons had a previous high-volume experience with open RP (at least 200 cases). Surgical expertise was coded as the progressive number of procedure done by each surgeon, starting from the first robotic case. Multivariable logistic regression analyses (MVA) were used to predict 90-day relevant complications (Clavien Dindo system 2-5) which were prospectively recorded for all men. Covariates consisted of age at surgery, Charlson comorbidity index, D’Amico risk groups, number of nodes removed, intra-operative time and log-transformed surgical expertise. A locally weighted, scatterplot smoothing method was used to graphically assess the multivariable effect of surgical expertise on the probability of complications.

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**CONCLUSIONS:** Among contemporary patients, the rate of complications related to RARP is not negligible. Surgical expertise is the major determinant of decreased risk of postoperative complications, regardless of disease characteristics.

**Source of Funding:** none