should be interpreted within the framework of a retrospective study design.

**Source of Funding:** None

**PD57-03**

**ERECTILE FUNCTION RECOVERY PREDICTION USING A PRE AND POST-OPERATIVE NOMOGRAM AFTER ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY**

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**INTRODUCTION AND OBJECTIVE:** In this study we propose a preoperative and post-operative nomogram to predict post-operative potency recovery following robot assisted laparoscopic prostatectomy (RALP).

**METHODS:** Patients from 1st January 2008 to 31st December 2016 (development set, n = 6502) were selected to develop the nomograms, and patients from 1st January 2016 to 1st January 2019 (validation set, n = 2706) were used for validation. The variable selection was performed by estimating the importance of predictors in a multi-variable setting using survival random forests. Multivariable Cox regression models were fitted on the development cohort (n = 6502) to predict EF recovery after RALP using as prognostic factors the covariates selected. Two nomograms were drawn using the regression coefficients of the pre- and post-operative Cox models predicting probabilities of EF recovery at 3, 6, 12, and 24 months after surgery. The performance of the two models was assessed by evaluating discrimination and calibration on the internal and external cohorts.

**RESULTS:** Nomograms

Starting from the estimated coefficients of the pre- and post-operative Cox models, two nomograms were drawn (Fig 1a and 1b). Internal validation. The discrimination ability of the pre-operative model was evaluated on the development cohort using the ROC curves estimated at 3, 6, 12, and 24 months. The AUC at these time points was 0.726, 0.734, 0.754, and 0.778, respectively (Fig 2a). The AUCs of the post-operative model at 3, 6, 12, and 24 months were 0.746, 0.756 and 0.777, and 0.801, respectively (Fig 2b). External validation. Pre- and post-operative predictive models were externally validated using a set of 2706 patients. The AUCs of the pre-operative model at 3, 6, 12, and 24 months were 0.789, 0.772, 0.768, and 0.778, respectively. (Fig. 2c). The ROC curves of the post-operative model at 3, 6, 12, and 24 months with AUCs of 0.807, 0.797, 0.793, and 0.798, respectively. (Fig 2d). CONCLUSIONS: The above nomograms help us to predict with good accuracy the probability of potency recovery at 3, 6-12- and 24 months following surgery taking in to consideration preoperative and post-operative factors. This is a novel tool for the care giver to predict realistic expectation of potency outcomes to the patients, while preoperative and immediate post-operative counseling.

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**PD57-04**

**ROBOTIC-ASSISTED RADICAL PROSTATECTOMY IN YOUNG ADULTS: AGE-STRATIFIED ONCOLOGICAL AND FUNCTIONAL OUTCOMES**

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**INTRODUCTION AND OBJECTIVE:** There is a scarcity of information on the outcomes of robotic-assisted prostatectomy (RALP) in young men. To compare the age-stratified functional and oncological outcomes of RALP in men aged ≤55 years.

**Source of Funding:** None
METHODS: Among 10,997 patients in our RALP series, 2,243 were \(<\)55 years old. These men were divided into 3 age-stratified groups (group 1: \(<\)45 years, group 2: 46-50 years, group 3: 51-55 years old). Age-stratified groups were compared for clinical, oncological, and trifecta outcomes. Kaplan-Meier curves and Cox regression models were used to identify survival estimations and their predictors.

RESULTS: Overall, 33% and 22% of men had non-organ confined (\(\geq\)pT3) and Gleason \(\geq\)3+3 prostate cancer at final pathology, respectively. Younger patients had a higher incidence of low-risk disease and better erectile function at presentation. Organ-confined and Gleason 3+3 cancer rates for men \(<\)45 and 51-55 years were 82% vs. 74% and 41% vs. 30%, respectively (\(p<0.05\)).

Biochemical recurrence-free survival was similar among age-stratified groups. Bilateral nerve-sparing (NS) rate was significantly higher in younger patients (74% in group 1 vs. 56% in group 3, \(p<0.001\)). One-year trifecta rates were 79.8%, 71.6%, and 63.9% for increasing age groups, respectively (\(p<0.001\)). Age, comorbidity score, and extent of NS were independent predictors of functional recovery. This study is limited by its retrospective design.

CONCLUSIONS: At RALP, one third of patients \(<\)55 years have locally advanced or high-risk prostate cancer. Age \(<\)45 years is associated with higher incidence of favorable tumor characteristics, which gives the surgeon increased ability to perform bilateral full NS, resulting in better functional recovery. Even in this young age group the influence of age is seen reflected by increase in the grade of disease and decrease in potency as age increases.

INTRODUCTION AND OBJECTIVE: Retzius-sparing robot-assisted radical prostatectomy (RSP) has been mentioned for the first time in 2020 by the EAU Guidelines as one of the possible surgical approaches for prostate cancer. The Authors of the guidelines expressed some concerns in special situations, such as high-risk prostate cancers (HR-PCa), in which good quality data are still lacking. The aim of our study is to report about the predictors of short-term results of RSP in high-risk patients in a multicentric setting of expert surgeons. Finally, we analysed the predictors of positive surgical margins (PSMs) and urinary continence.

METHODS: We retrospectively evaluated all HR-PCa patients who underwent RSP by expert surgeons in 5 different international centers. Pre-, peri- and post-operative features of all the consecutive high-risk cases operated by each surgeon after their learning curve in all the participating centers were collected. The minimum surgical experience required to participate to the study was 100 RSP cases. PSMs and biochemical relapse (BCR) were the evaluated as oncological outcomes. Urinary continence was defined as the use of no pad or safety pad. Erectile function was defined as erections sufficient for intercourse, with or without the use of oral drugs.

RESULTS: We included 579 patients operated by 7 surgeons in 5 centers. Median age was 66 (IQR 60-70), median PSA was 9.6 ng/ml (IQR 6.3-20), ISUP group at biopsy was 1 in 3.8%, 2 in 23%, 3 in 32.6%, 4 in 19.9%, 5 in 20.7; median surgical time was 195 minutes. Pathological stage was pT2 in 40.1%, pT3a in 35.9%, pT3b in 23.1%, pT4 in 0.9% of cases. PSMs were present in 31.3% of cases (including 9.2% focal ones). Urinary continence was achieved in 72.2% of cases one week after the removal of catheter. After a median follow-up of 22 months, 89.1% of patients were continent. At univariate analysis, PSA, ASA score, type of urinary catheter (suprapubic vs transurethral), ISUP group, pT, and pN, were significant predictors of PSMs; at multivariate analysis, only pT remained significant (\(p<0.001\)). Among the predictors of urinary continence, only previous BPH surgery (\(p=0.035\)) and wide bladder neck dissection (\(p=0.02\)) were significant at multivariate analysis.

CONCLUSIONS: We reported the first multi-center experience of RSP in HR-PCa. Considering that high risk cases are generally those with the worst functional results, 89% of continent patients is the confirmation that RSP helps in achieving good functional results. Predictors of PSMs and urinary continence have been identified.

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INTRODUCTION AND OBJECTIVE: Though Retzius sparing (RS)-robotic prostatectomy (RS-RP) has an advantage of continent recovery over conventional anterior approach (A-RP), it may be associated with a higher positive surgical margin (PSM) rate compared to A-RP. We studied whether the PSM rate was higher in RS-RP than A-RP and how the tumor location is associated with PSMs.

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