	Overall Population (N = 1,103)	SP Transperitoneal (N=244)	SP Extraperitoneal (N=712)	SP Transvesical (N=147)	P values	
Total Operative Time, minutes					<0.05	TP vs EP: 0.89
Median (Q1, Q3)	195 (150 – 247)	210 (116 – 286)	191 (150 – 239)	210 (183 – 236)		TP vs TV: 0.29
						EP vs TV: <0.05
Estimated Blood loss, cc					<0.05	TP vs EP: <0.05
Median (Q1, Q3)	100 (50 – 150)	75 (50 – 138)	100 (75 – 200)	75 (50 – 100)		TP vs TV: 0.65
						EP vs TV: <0.05
Lymphadenectomy, N (%)	774 (71.9%)	142 (58.2%)	582 (85.0%)	50 (34.0%)	<0.05	TP vs EP: <0.05
						TP vs TV: <0.05
						EP vs TV: <0.05
Drain, N(%)	33 (4.8%)	0	31 (7.0%)	2 (1.4%)	<0.05	TP vs EP: <0.05
						TP vs TV: 0.78
						EP vs TV: <0.05
Lymph Node Yield					<0.05	TP vs EP: <0.05
Median (Q1, Q3)	5 (2 – 8)	3 (0 – 11)	5 (3 – 8)	2 (0 - 6)		TP vs TV: <0.05
						EP vs TV: <0.05
Positive Margins, N (%)	309 (28.7%)	75 (30.1%)	209 (30.2%)	25 (18.2%)	<0.05	TP vs EP: 0.82
						TP vs TV: <0.05
						EP vs TV: <0.05
Inpatient Hospital Stay, Hours					<0.05	TP vs EP: <0.05
Median (Q1, Q3)	13 (6.2 – 24)	24.0 (13.0 – 24.0)	8.0 (5.9 – 24.0)	5.5 (4.3 – 22.5)		TP vs TV: <0.05
						EP vs TV: <0.05
Medication Use at Discharge, N (%)					<0.05	TP vs EP: <0.05
None	113 (20.6%)	0	62 (21.1%)	51 (35.4%)		TP vs TV: <0.05
NSAIDs only	312 (56.9%)	100 (93.5%)	130 (44.2%)	82 (56.9%)		EP vs TV: <0.05
Opioids	120 (21.9%)	7 (6.5%)	102 (34.7%)	11 (7.6%)		
Pain Score at Discharge					<0.05	TP vs EP: <0.05
Median (Q1, Q3)	2 (0 – 3)	1 (1 – 2)	2 (0 – 3)	3 (1 – 4)		TP vs TV: <0.05
						EP vs TV: <0.05
Postoperative Complications, N (%)	146 (16.5%)	38 (21.2%)	85 (15.2%)	23 (15.6%)	0.165	
Clavien-Dindo Classification, N (%)					0.164	
1	54 (37.0%)	13 (34.2%)	27 (31.8%)	14 (60.9%)		
2	40 (27.4%)	8 (21.1%)	26 (30.6%)	6 (26.1%)		
3a	35 (24.0%)	7 (18.4%)	25 (29.4%)	3 (13.0%)		
3b	11 (7.5%)	6 (15.8%)	5 (5.9%)	0		
4	4 (2.7%)	2 (5.3%)	2 (2.4%)	0		
Readmission, N (%)	47 (5.9%)	5 (3.0%)	34 (6.9%)	8 (5.4%)	0.180	
Foley Catheter Duration, days					<0.05	TP vs EP: <0.05
Median (Q1, Q3)	7 (5 – 7.3)	5 (4 – 6)	7 (7 – 9)	4 (3 – 6)		TP vs TV: <0.05
						EP vs TV: <0.05
6 week Continence*, N (%)	218 (45.5%)	25 (48.1%)	118 (40.5%)	75 (58.1%)	<0.05	TP vs EP: 0.31
						TP vs TV: <0.05
						EP vs TV: <0.05
3 Month Continence*, N (%)	356 (70.4%)	76 (62.8%)	184 (68.7%)	96 (82.1%)	<0.05	TP vs EP: 0.26
						TP vs TV: <0.05
						EP vs TV: <0.05
6 Month Continence*, N (%)	425 (88.5%)	95 (85.6%)	226 (87.9%)	104 (92.8%)	0.218	
Continence data missing, N	576	123	421	32		
6 Month Potency,** N (%)	63 (29.4%)	N/A	47 (30.7%)	16 (26.2%)	0.515	
Potency data missing, N	887	242	559	86		
3 Month Detectable PSA	55 (10.3%)	3 (2.5%)	39 (13.0%)	13 (11.4%)	<0.05	TP vs EP: <0.05
						TP vs TV: <0.05
						EP vs TV: 0.42
PSA data missing, N	570	124	413	33		
Follow Up Duration, months					<0.05	TP vs EP: 0.21
						TP vs TV: <0.05
						EP vs TV: <0.05
Median (Q1, Q3)	10.8 (5.0 – 16.4)	12.0 (6.0 – 18.0)	11.7 (4.5 – 21.9)	9.1 (4.5 – 12.3)		

*Continence defined as 0 or 1 pad per day for security.
**Potency defined as SHIM >12.

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PD27-07
AUTOMATED OPERATIVE REPORTS FOR ROBOTIC RADICAL PROSTATECTOMY USING AN ARTIFICIAL INTELLIGENCE PLATFORM

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INTRODUCTION AND OBJECTIVE: The manual creation of operative reports is a tedious documentation task that increases administrative burden among surgeons, which is a primary driver of physician burnout. Using pre-templated notes may reduce this burden but can lead to documentation inaccuracies. Additionally, surgical operative reports are subjective and lack transparency. We aim to develop an artificial intelligence (AI) tool for automatically generating operative reports based on surgical video alone.

METHODS: A previously developed computer vision AI algorithm was employed to automatically detect major steps of robotic radical prostatectomy, including pelvic lymph node dissection, Space of Retzius dissection, anterior bladder neck transection, posterior bladder neck transection, seminal vesicle and posterior dissection, lateral/pedicle and apical dissection, urethral transection, vesicourethral anastomosis, and final inspection/extraction. Each step was mapped to pre-specified text, which was then compiled into a narrative operative report based on AI recognition of surgical steps. Accuracy of the AI-generated operative reports was assessed by comparing to operative reports documented in the medical record (human). All discrepancies between AI and human operative reports were adjudicated by independent video review performed by a fellowship-trained urologic oncologist.

RESULTS: A total of 117 cases from a single tertiary referral center were included. There was concordance between human and AI operative reports in 107 cases, suggesting that the AI reproduces major components of the human operative report with 91.5% accuracy. Discrepancies between human and AI operative reports were identified in 10 cases, of which 9 were clinically significant. These included 8 discrepancies in lymph node dissection and 1 discrepancy in anterior bladder neck transection. Upon expert video review, the human was inaccurate in 3 discrepancies (2.6%), while the AI was inaccurate in 6 discrepancies (5.1%).

CONCLUSIONS: To our knowledge, this is the first report of AI-powered automated creation of operative reports, which achieve high accuracy as compared to human operative reports for major surgical steps. This novel tool has potential to reduce documentation burden, improve operative report accuracy, promote surgical transparency, and decrease subjectivity in surgical documentation.

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PD27-08
COMPARISON OF SURGICAL OUTCOMES BETWEEN OUTPATIENT AND INPATIENT ROBOT-ASSISTED RADICAL PROSTATECTOMY: A META-ANALYSIS

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INTRODUCTION AND OBJECTIVE: Several institutions have reported their experience with outpatient robot-assisted radical prostatectomy (O-RARP). However, it is unclear if utilization of this approach represents an improvement over inpatient robot-assisted radical prostatectomy (I-RARP). This meta-analysis sought to compare the surgical outcomes between O-RARP and I-RARP.

METHODS: For relevant articles, three electronic databases, including PubMed, Scopus, and Web of Science, were searched from their inception until April 30, 2022. A meta-analysis has been reported in line with PRISMA 2020 and AMSTAR Guidelines. The risk ratio (RR) and weighted mean difference (MD) were applied for the comparison of dichotomous and continuous variables with 95% confidence intervals (CI).

RESULTS: Of the 297 retrieved abstracts, 12 underwent full-text review, and 11 studies were included in the final analysis, comprising a total cohort of 2,875 cases of robot-assisted radical prostatectomy (892 O-RARP cases and 1,983 I-RARP cases). Compared to I-RARP, the O-RARP group had lower mean operative time (MD = -9.4 minutes, 95% CI -15.1 to -3.7, 0.001), fewer overall post-operative complications (RR = 0.65, 95% CI 0.46 to 0.92, $p = 0.017$), shorter hospital stay (MD = -22.9 hours, 95% CI -26.0 to -19.7, $p \leq 0.001$), and lower postoperative opioid requirements (RR = 0.45, 95% CI 0.28 to 0.71, $p = 0.001$). There were no significant differences in other outcomes, including: estimated blood loss, postoperative pain score, unscheduled visits after surgery, positive surgical margins, biochemical recurrence, International Prostate Symptom Score (IPSS) after surgery, or three- and six-month continence rates. (Table 1)

CONCLUSIONS: This meta-analysis demonstrates that O-RARP is a safe and feasible option for patients undergoing surgery for localized prostate cancer. Further studies are needed to better evaluate optimal patient selection, associated healthcare costs, and patient reported outcomes.

Outcomes	No. of Studies	No. of patients		Heterogeneity		Overall effect	
		SP	MP	I2 (%)	p-Value	MD/RR (95% CI)	p-Value
Operative time (min)	7	303	269	59	0.021	-9.4 (-15.1 to -3.7)	**0.001**
Estimated blood loss (EBL) (mL)	8	403	369	54	0.031	0.10 (-6.3 to 6.5)	0.975
Overall Post-operative complication	9	825	1829	0	0.979	0.65 (0.46 to 0.92)	**0.017**
Minor Post-operative complication (Clavien-Dindo I-II)	8	641	613	0	0.991	0.72 (0.46 to 1.12)	0.149
Major Postoperative complication (Clavien-Dindo III-V)	5	486	467	0	0.527	0.52 (0.20 to 1.34)	0.179
Positive Surgical Margin	9	430	394	0	0.987	0.78 (0.57 to 1.06)	0.117
Postoperative pain score (n = 1-10)	4	306	170	94	<0.001	-0.50 (-1.09 to 0.08)	0.093
Need for opioids after surgery	2	198	122	0	0.349	0.45 (0.28 to 0.71)	**0.001**
Hospital stay (hour)	5	327	196	99	<0.001	-22.9 (-26.0 to -19.7)	**<0.001**
Unscheduled visits after surgery	3	386	414	49	0.14	0.76 (0.48 to 1.22)	0.269
Readmission after surgery	5	646	1735	0	0.607	0.68 (0.37 to 1.26)	0.230
Continence recovery in 3 months	4	193	210	0	0.793	1.03 (0.94 to 1.13)	0.482
Continence recovery in6 months	2	69	163	0	0.951	1.04 (0.95 to 1.13)	0.384
International Prostate Symptom Score (IPSS) after surgery	2	126	126	89	0.002	-1.59 (-6.08 to 2.89)	0.487
Biochemical recurrence	2	125	47	0	0.702	1.41 (0.27 to 7.19)	0.674

OP - Outpatient, IP - Inpatient; CI - Confidence Interval; MD - Mean Difference; RR - Risk Ratio

Table 1. Meta-analysis of the perioperative, oncological and functional outcomes between Single-port and Multiport Robot-Assisted Radical Prostatectomy

Source of Funding: None

PD27-09

PATIENT REPORTED OUTCOMES AFTER RADICAL PROSTATECTOMY OR RADIOTHERAPY FOR PROSTATE CANCER, A REGISTER-BASED NATIONWIDE STUDY

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INTRODUCTION AND OBJECTIVE: The two main alternatives for curative treatment of prostate cancer (PCa) are robot assisted radical prostatectomy (RARP) and radiotherapy (RT). We assessed outcomes after RARP and RT by use of Patient Reported Outcomes Measures (PROM) in a large, contemporary population.

METHODS: The National Prostate Cancer Register of Sweden (NPCR) includes information on almost all Swedish men with PCa. The PCa Data Base Sweden (PCBaSe) links data to multiple national population-based registries. PROM are distributed to all men scheduled for curative treatment. 12 month PROM were used to evaluate the outcomes erectile dysfunction, urinary symptoms, bowel dysfunction, and quality of life (QoL). Data for all men who completed 12 month PROM in PCBaSe 5.0 aged <75 years, with clinical T1c-T3 or Tx, any Gleason score, pre-operative PSA levels <l00 ng/mL, no metastases (N0, Nx. M0 or Mx) who underwent RARP or RT between 1 January 2018 and 31 December 2020 were analyzed (n=4298). Comorbidities were assessed by Charlson Comorbidity Index and a Drug Comorbidity Index. Adjusted odds ratios (OR) for each outcome comparing RT vs RARP (reference) were obtained using logistic regression, adjusting for confounders at date of treatment (age, comorbidities, educational level, civil status, PSA, prostate volume, biopsies with cancer, cT-stage and Gleason score).

RESULTS: 2557 men underwent RARP and 1741 men received RT. On average, men who had undergone RT were 4 years older and had more comorbidities. The prevalence of erectile dysfunction was 80% among men who underwent RARP and 82% among RT. 13% of the men were incontinent one year after RARP while only 5% reported incontinence after RT. 17% of men treated with RT and 18% with RARP reported high urinary bother. 34% of men who underwent RT reported urgency to defecate compared to 14% of men treated with RARP. High QoL was reported by 85% of men who underwent RARP and 79% who underwent RT. RT was associated with lower risk of erectile dysfunction (OR 0.57, 95% CI 0.48-0.67), lower risk of urine incontinence (OR 0.24, 95% CI 0.19-0.32), lower urinary bother (OR 0.74, 95% CI 0.61-0.89) but higher risk of bowel related symptoms (OR 2.84 95%, CI: 2.40-3.37). RARP was associated with higher QoL (OR 1.33, 95% CI: 1.11-1.60).

CONCLUSIONS: Results from this large, contemporary, and unselected population confirms previous reports on common side-effects after curative treatment for PCa. However, QoL is high regardless of treatment suggesting that factors other than side-effects are the main drivers of QoL.

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PD27-10

AN INTERMEDIATE-TERM ONCOLOGICAL ASSESSMENT COMPARING THE RETZIUS-SPARING ROBOT ASSISTED RADICAL PROSTATECTOMY TO THE STANDARD APPROACH IN A RANDOMIZED CONTROL COHORT

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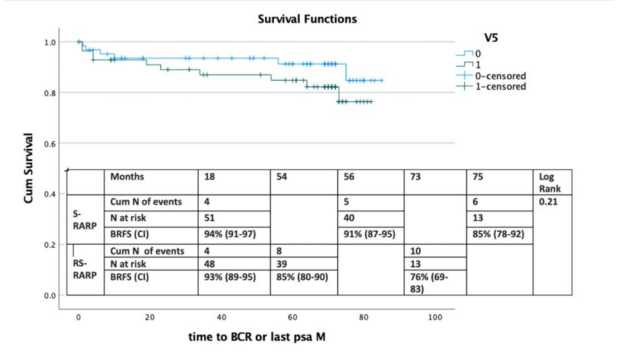
INTRODUCTION AND OBJECTIVE: Retzius sparing prostatectomy is promoted with the early continence result, but criticized for higher positive surgical margin. The long-term oncological outcome is still unknown. In this study, we aimed to compare the intermediate-term oncologic outcomes of these two approaches in a patient cohort treated as part of a randomized controlled trial.

METHODS: A total of 120 patients were previously randomized equally to receive retzius sparing (RS-RARP) versus standard robotic assisted laparoscopic radical prostatectomy (S-RARP) between January 2015 to April 2016. Baseline, surgical, and pathological characteristics as well as oncologic outcomes were assessed. The analysis was done based on the treatment received.

RESULTS: Sixty-three patients underwent S-RARP while 57 patients underwent RS-RARP. There was no statistically significant difference in the baseline nor surgical characteristics. The median follow up was 71.24 (IQR 59.75 - 75.75). There were more pathological T3 diseases in RS-RARP. There was no significant difference in the positive margin status nor the biochemical recurrence rate among both groups. After S-RARP and RS-RARP, 6 and 10 patients had biochemical recurrence and the 5 years biochemical recurrence free survival were 91% and 85%, respectively. (p=0.21).

CONCLUSIONS: In this cohort, there was no difference in biochemical recurrence in the patients who received either technique. Further multi-institutional studies with a larger sample size and longer follow-up are required.

Figure 1. Biochemical Recurrence in Patients undergoing the standard RARP (blue) compared to patients undergoing RS-RARP (green)



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