

Supplementary material

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Supplement to: OWK Tsui, KCH Shing, APM Lam, et al. Effects of nerve sparing on erectile dysfunction and urinary incontinence in robot-assisted radical prostatectomy. Hong Kong Med J 2025;Epub 10 Jun 2025. <https://doi.org/10.12809/hkmj2411709>.

Supplementary Table 1. Age distribution in erectile dysfunction analysis (n=75)*

Age, y	Non-NS (n=47)	Unilateral NS (n=18)	Bilateral NS (n=10)
<55	0	0	0
55-64	21 (44.7%)	10 (55.6%)	3 (30.0%)
65-74	25 (53.2%)	7 (38.9%)	7 (70.0%)
≥75	1 (2.1%)	1 (5.6%)	0

Abbreviation: NS = nerve sparing

* Data are shown as No. (%)

Supplementary Table 2. Age distribution in urinary incontinence analysis (n=264)*

Age, y	Non-NS (n=174)	Unilateral NS (n=59)	Bilateral NS (n=31)
<55	3 (1.7%)	0	0
55-64	54 (31.0%)	15 (25.4%)	9 (29.0%)
65-74	106 (60.9%)	38 (64.4%)	19 (61.3%)
≥75	11 (6.3%)	6 (10.2%)	3 (9.7%)

Abbreviation: NS = nerve sparing

* Data are shown as No. (%)

Supplementary Table 3. Age of patients included in erectile dysfunction study*

	Age, y	P value (compared with non-NS)
Non-NS (n=47)	65.20±4.95	N/A
Unilateral NS (n=18)	64.84±6.51	0.584
Bilateral NS (n=10)	66.64±5.35	0.217

Abbreviations: N/A = not applicable; NS = nerve sparing

* Data are shown mean±standard deviation, unless otherwise specified

Supplementary Table 4. Age of patients included in urinary incontinence study*

	Age, y	P value (compared with non-NS)
Non-NS (n=174)	66.82±5.48	N/A
Unilateral NS (n=59)	67.90±5.49	0.096
Bilateral NS (n=31)	67.94±5.14	0.135

Abbreviations: N/A = not applicable; NS = nerve sparing

* Data are shown mean±standard deviation, unless otherwise specified

Supplementary Table 5. Pathological Gleason scores and International Society of Urological Pathology Grade Groups distribution in prostate cancer patients

Pathological Gleason score	Count	Percentage	ISUP Grade Group[*]
3+3	59	23.5%	1
3+4	103	41.0%	2
4+3	60	23.9%	3
3+5	3	1.2%	4
4+4	12	4.8%	5
4+5	11	4.4%	
5+4	1	0.4%	
5+5	2	0.8%	

Abbreviation: ISUP = International Society of Urological Pathology

* ISUP Grade Groups are classified as follows:

- Grade Group 1 = Gleason score ≤ 6
- Grade Group 2 = Gleason score 3+4=7
- Grade Group 3 = Gleason score 4+3=7
- Grade Group 4 = Gleason score 3+5=8 and 4+4=8
- Grade Group 5 = Gleason score 4+5=9, 5+4=9, and 5+5=10

Supplementary Table 6. Use of phosphodiesterase type 5 inhibitors among patients with postoperative erectile dysfunction*

	Age, y	Preoperative IIEF-5 score	No. of patients using PDE5i	No. of patients using PDE5i with subjective improvement of erectile function
Non-NS (n=47)	65.20±4.95	15.98±5.57	18 (38.3%)	7 (38.9%)
Unilateral NS (n=18)	64.84±6.51	17.45±5.51	14 (77.8%)	5 (35.7%)
Bilateral NS (n=10)	66.64±5.35	14.58±6.20	6 (60.0%)	4 (66.7%)

Abbreviations: IIEF-5 = International Index for Erectile Dysfunction-5; NS = nerve sparing; PDE5i = phosphodiesterase type 5 inhibitors

* Data are shown as No. (%) or mean±standard deviation

Supplementary Table 7. International Index for Erectile Dysfunction–5 scores among patients with and without the use of phosphodiesterase type 5 inhibitors*

Group	IIEF-5 scores						Change between pre- and post-operative 12 months
	Preoperative	Postoperative 1 month	Postoperative 2 months	Postoperative 3 months	Postoperative 6 months	Postoperative 12 months	
Non-NS without PDE5i (n=29)	15.96±6.48	2.00±1.18	3.32±4.91	4.26±4.80	4.52±5.46	7.30±5.33	-8.66
Non-NS with PDE5i (n=18)	15.76±4.30	1.72±1.12	2.89±3.14	2.95±3.13	3.65±3.75	5.56±4.80	-10.20
Unilateral NS without PDE5i (n=4)	13.00±4.05	2.36±1.15	1.75±0.96	1.40±0.55	6.50±9.04	7.00±10.39	-6.00
Unilateral NS with PDE5i (n=14)	19.53±4.87	2.36±1.50	2.62±3.12	2.08±1.55	2.58±2.27	2.50±2.35	-17.03
Bilateral NS without PDE5i (n=4)	13.17±5.04	3.67±5.61	5.83±5.11	5.50±6.44	2.60±2.30	11.50±13.43	-1.67
Bilateral NS with PDE5i (n=6)	16.00±7.38	2.83±0.98	7.33±6.38	7.33±6.44	6.17±4.79	8.33±36.42	-7.67

Abbreviations: IIEF-5 = International Index for Erectile Dysfunction–5; NS = nerve sparing; PDE5i = phosphodiesterase type 5 inhibitors

* Data are shown as mean±standard deviation, unless otherwise specified

Supplementary Table 8. Types of phosphodiesterase type 5 inhibitors used*

	Sildenafil prn	Sildenafil maintenance	Tadalafil prn	Tadalafil maintenance	Avanafil prn	Avanafil maintenance
Non-NS (n=18)	8	2	7	8	0	1
Unilateral NS (n=14)	5	1	7	7	0	0
Bilateral NS (n=6)	0	0	2	4	0	0

Abbreviations: NS = nerve sparing; prn = pro re nata (as needed)

* Data are shown as No.

Supplementary Table 9. Comparison of erectile dysfunction between non–nerve sparing and unilateral sparing procedures (n=65)

Time	Mean IIEF-5 score in non-NS	Mean IIEF-5 score in unilateral NS	95% confidence interval	P value
1 month	1.86	2.38	-1.33 to 0.30	0.205
2 months	3.19	2.50	-1.26 to 2.64	0.480
3 months	3.71	2.06	0.18 to 3.12	0.028
6 months	4.15	3.92	-3.00 to 3.44	0.886
12 months	5.27	4.86	-5.80 to 6.62	0.883

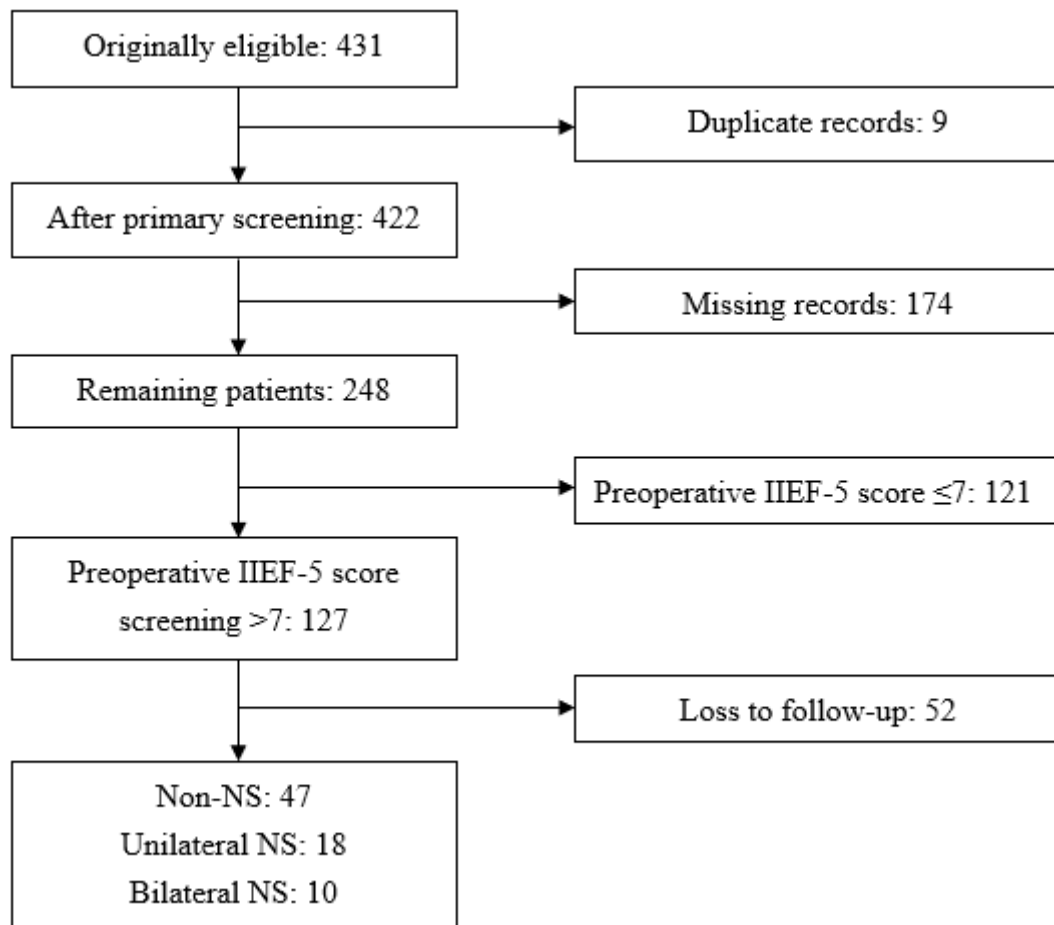
Abbreviations: IIEF-5 = International Index for Erectile Dysfunction–5; NS = nerve sparing

Supplementary Table 10. Comparison of urinary incontinence between non–nerve sparing and unilateral sparing procedures (n=233)

Time	Mean urinary leakage in non-NS, g	Mean urinary leakage in unilateral NS, g	95% confidence interval	P value
1 month	49.44	50.82	-27.42 to 24.66	0.916
2 months	35.45	32.93	-21.14 to 26.18	0.833
3 months	25.97	28.01	-24.02 to 19.92	0.854
6 months	10.57	11.56	-11.19 to 9.23	0.849
12 months	7.10	9.66	-12.49 to 7.36	0.609

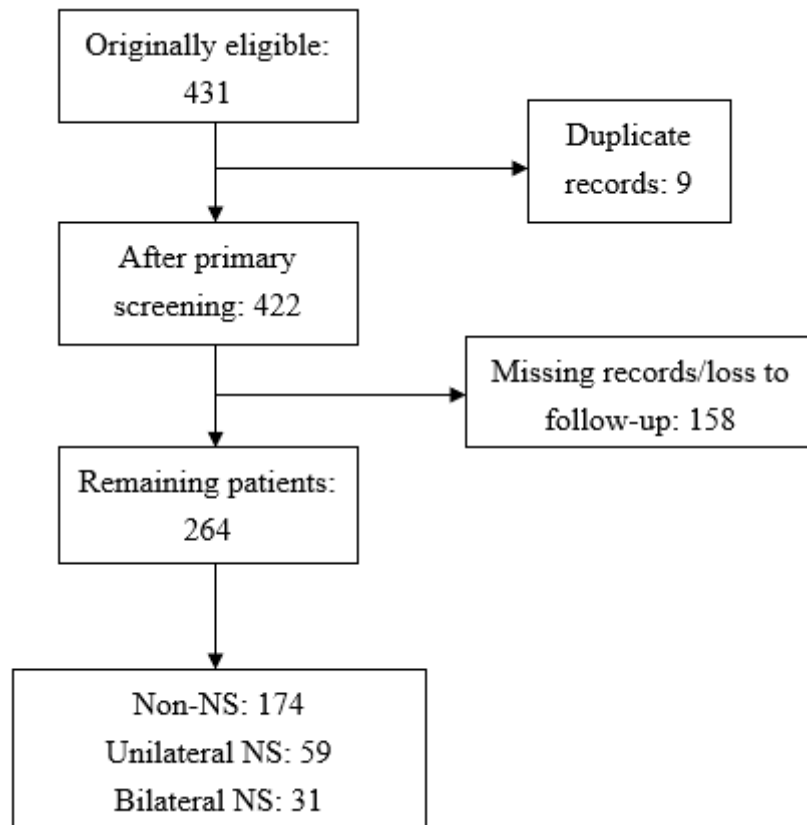
Abbreviation: NS = nerve sparing

Supplementary Figure 1. Patient selection for erectile dysfunction



Abbreviations: IIEF-5 = International Index for Erectile Dysfunction-5; NS = nerve sparing

Supplementary Figure 2. Patient selection for urinary incontinence



Abbreviation: NS = nerve sparing