

TABLE 49 Characteristics of the included studies: non-randomised comparative studies (robotic vs laparoscopic prostatectomy) ($n=8$)

Study details	Participant characteristics			Intervention characteristics			Outcomes
Author, year: Gosseine 2009 ⁹¹	Inclusion criteria: not reported			A. Robotic prostatectomy: trade name of robot: da Vinci system			Safety: surgical complications, operating time, hospital stay, catheterisation, blood loss
Language: French	Exclusion criteria: not reported			B. Laparoscopic prostatectomy:			
Publication type: full text		A	B	Nerve sparing for erectile function:			
Number of study centres: 1	Patients, n	122	125		A	B	Dysfunction: urinary incontinence
Setting: hospital	Age (years), mean (SD)	60.6 (6.1)	61.7 (6.8)	Non-nerve sparing, n (%)	30 (25)	45 (36)	
Country: France	BMI (kg/m ²), mean (SD)	26.7 (3.4)	27.2 (3.5)	Unilateral, n (%)	16 (13)	13 (10.4)	
Recruitment/treatment dates: March 2004–April 2007	Previous TURP, n	2	4	Bilateral, n (%)	76 (62)	64 (5.12)	
Prospective/retrospective data collection: prospective	PSA (ng/ml), mean (SD)	7.37 (4.3)	7.87 (5.09)	Bladder neck preservation, n (%)	97 (79)	53 (42)	
Patients recruited consecutively: yes	Clinical stage, n (%)			Not reported n (%)	0	3 (2.4)	
Length of follow-up: 3 years	T1	70 (57.4)	78 (62.4)				
Source of funding: not reported	T2	52 (42.6)	47 (37.6)				
Systematic reviewer: CR	Biopsy Gleason score, n (%)						
	≤6	73 (59.8)	86 (68.8)				
	7	42 (34.4)	36 (28.8)				
	8–10	7 (5.8)	3 (2.4)				

BMI, body mass index; TURP, transurethral resection of the prostate.

continued

TABLE 49 Characteristics of the included studies: non-randomised comparative studies (robotic vs laparoscopic prostatectomy) (*n* = 8) (*continued*)

Study details	Participant characteristics		Intervention characteristics		Outcomes
Author, year: Hu 2006 ⁹²	Inclusion criteria: patients had radical prostatectomies with laparoscopic or robotic procedures		A. Robotic prostatectomy: trade name of robot: da Vinci system; approaches: trans-peritoneal		Safety: surgical complications, operation time
Language: English	Exclusion criteria: patients with neoadjuvant hormonal therapy		B. Laparoscopic prostatectomy: approaches: trans-peritoneal (both Montsouris technique); nerve sparing		
Publication type: full text					Death
Number of study centres: 1					
Setting: hospital					Learning curve: operating time
Country: US					
Recruitment/treatment dates: A: June 2003–June 2004; B: October 2000–January 2003		A	B		
Prospective/retrospective data collection: mixture	Patient enrolled	671	517	Unilateral, <i>n</i> (%)	27 (8.4) 23 (6.4)
Patient recruited consecutively, Y/N: no	Patient analysed	322	358	Bilateral, <i>n</i> (%)	259 (80.4) 237 (66.2)
Length of follow-up: not reported	Age, mean (range)	62.1 (41-84)	63.7 (40-83)	Non-sparing, <i>n</i> (%)	35 (0.9) 87 (24.3)
Source of funding: not reported	BMI, median (range)	27.5 (17.8-51.5)	27.4 (17.9-43.8)	All patients (A and B) had bilateral pelvic lymph node dissection	
Systematic reviewer: XJ	Previous abdominal surgery	37/322 (11.5%)	39/358 (10.9%)		
	PSA, ng/ml				
	0–4	66 (20.6%)	55 (15.4%)		
	4–10	213 (66.4%)	247 (69%)		
	10	42 (13.1%)	56 (15.6%)		
	Clinical stage, n (%)				
	T1a	1 (0.3)	6 (1.7)		
	T1b	0	2 (0.6)		
	T1c	231 (74.5)	261 (72.9)		
	T2a	59 (19.0)	72 (20.0%)		
	T2b	11 (3.5)	4 (1.1)		
	T2c	7 (2.3)	10 (2.8)		
	T3a	1 (0.3)	1 (0.3)		
	T3b	0	2 (0.6)		
	Biopsy Gleason score, n (%)				
	1–5	5 (1.6)	9 (2.5)		
	6–7	289 (93.5)	322 (90.2)		
	8–10	15 (4.9)	26 (7.3)		

TABLE 49 Characteristics of the included studies: non-randomised comparative studies (robotic vs laparoscopic prostatectomy) (*n* = 8) (*continued*)

Study details	Participant characteristics		Intervention characteristics		Outcomes	
Author, year: Joseph 2007 ⁹⁴	Inclusion criteria: patients underwent prostatectomy		A. Robotic prostatectomy		Efficacy: margins, pathological Gleason score	
Language: English	Exclusion criteria: not reported		B. Laparoscopic prostatectomy: approaches: extraperitoneal			
Publication type: conference abstract			Lymph node dissection:			
Number of study centres: 2		A	B			
Setting: hospital	Patients enrolled, <i>n</i>	754	800			
Country: France/USA	Age (years), mean (range)	60.0 (40–78)	64.9 (43–77)	A	B	
Recruitment/treatment dates: A: 2003–6 at the University of Rochester Medical Centre; B: 2002–6 at Henri Mondor Hospital of Creteil	BMI (kg/m ²), mean (range)	28.5 (17.7–56.2)	27.2 (16.5–44.8)	Yes, <i>n</i> (%)	281 (37.3)	322 (40.3)
Prospective/retrospective data collection: retrospective	PSA (ng/ml), mean (range)	6.6 (0.1–39.0)	10.1 (1.5–99)	No (%)	(62.6)	(59.7)
Patients recruited consecutively: not reported	Clinical stage, n (%)					
Length of follow-up: not reported	T1a–b	0	14 (1.8)			
Source of funding: none	T1c	452 (75.2)	643 (80.4)			
Systematic reviewer: XJ	T2	148 (24.6)	141 (17.8)			
	T3	1 (0.2)	0			
	Not reported	153	2			
	Biopsy Gleason score, mean (range)	6.3 (4–9)	6.2 (4–9)			
	Prostate size (g), mean (range)	55.4 (21–141)	55.6 (22–192)			
	BMI, body mass index.					
Author, year: Joseph 2005 ⁹³ (considered separate to Joseph 2007 ⁹⁴ but may include patient overlap for US patients)	Inclusion criteria: last 50 patients in a series with localised prostate cancer who had laparoscopic radical prostatectomy or robot-assisted prostatectomy		A. Robotic prostatectomy		Dysfunction: urinary incontinence, erectile dysfunction, potency	
Language: English	Exclusion criteria: first 50 cases in each laparoscopic and robot-assisted series		B. Laparoscopic prostatectomy			
Publication type: full text			Nerve sparing:			
Number of study centres: 1		A	B			
Setting: hospital	Patients enrolled, <i>n</i>	50	50	Unilateral, <i>n</i> (%)	1 (2)	10 (20)
Country: USA	Age (years), mean (95% CI)	59.6 (1.6)	61.8 (1.6)	Bilateral, <i>n</i> (%)	46 (92)	24 (48)
Recruitment/treatment dates: not reported	PSA (ng/ml), mean (95% CI)	7.3 (1.2)	6.0 (0.83)	Non-sparing, <i>n</i> (%)	3(6)	16 (32)
Prospective/retrospective data collection: retrospective	Clinical stage, n					
Patients recruited consecutively: not reported	T1c	43	34			
Length of follow-up: not reported	T2a	6	14			
Source of funding: not reported	T2b	1	2			
Systematic reviewer: CR	Biopsy Gleason score, mean	6 (0.15)	6 (0.14)			
	Prostate size (g), mean	53 (5.3)	51 (4.1)			

continued

TABLE 49 Characteristics of the included studies: non-randomised comparative studies (robotic vs laparoscopic prostatectomy) (*n* = 8) (*continued*)

Study details	Participant characteristics	Intervention characteristics	Outcomes																											
<p>Author, year: Menon 2002⁹⁵</p> <p>Language: English</p> <p>Publication type: full text</p> <p>Number of study centres: one</p> <p>Setting: hospital</p> <p>Country: France</p> <p>Recruitment/treatment dates: October 2000–October 2001</p> <p>Prospective/retrospective data collection: prospective</p> <p>Patients recruited consecutively: yes</p> <p>Length of follow-up: mean (SD): A: 3 (1.3) months; B: 8.5 (3.2) months</p> <p>Length of follow-up for functional outcomes, mean: A: 1.5 months; B: 6.5 months</p> <p>Follow-up carried out with telephone survey by third party</p> <p>Source of funding: not reported</p> <p>Systematic reviewer: PS</p>	<p>Inclusion criteria: patients with clinically localised prostate cancer undergoing prostatectomy; patients medically fit to undergo surgery, weighing < 250 lb (those weighing > 250 lb were recommended for open radical prostatectomy), waist size < 45 inches, body mass index < 35 kg/m²; patients with previous abdominal surgery were included</p> <table border="1"> <thead> <tr> <th></th> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>Patients enrolled, <i>n</i></td> <td>50</td> <td>48</td> </tr> <tr> <td>Patients analysed, <i>n</i></td> <td>40</td> <td>40</td> </tr> <tr> <td>Age (years), mean (SD)</td> <td>60.7 (7.6)</td> <td>62.8 (7.0)</td> </tr> <tr> <td>BMI (kg/m²), mean (SD)</td> <td>27.7 (3.2)</td> <td>27.7 (2.5)</td> </tr> <tr> <td>PSA (ng/ml), mean (SD)</td> <td>5.7 (3.2)</td> <td>6.9 (4.4)</td> </tr> <tr> <td colspan="3">Clinical stage, n (%)</td> </tr> <tr> <td>T1c</td> <td>28 (70)</td> <td>26 (65)</td> </tr> <tr> <td>T2</td> <td>12 (30)</td> <td>14 (35)</td> </tr> </tbody> </table> <p>BMI, body mass index.</p> <p>Number of patients undergoing open prostatectomy during the study = 115</p>		A	B	Patients enrolled, <i>n</i>	50	48	Patients analysed, <i>n</i>	40	40	Age (years), mean (SD)	60.7 (7.6)	62.8 (7.0)	BMI (kg/m ²), mean (SD)	27.7 (3.2)	27.7 (2.5)	PSA (ng/ml), mean (SD)	5.7 (3.2)	6.9 (4.4)	Clinical stage, n (%)			T1c	28 (70)	26 (65)	T2	12 (30)	14 (35)	<p>A. Robotic prostatectomy: first 22 patients were operated using Montsouris technique; later 18 patients were operated using Vattikuti Institute technique</p> <p>B. Laparoscopic prostatectomy: performed using classical Montsouris technique</p>	<p>Equipment failure</p> <p>Safety: surgical complications, operating time, discharge, blood loss</p> <p>Efficacy: margins, pT stage, pathological Gleason score, PSA recurrence</p> <p>Death (none)</p> <p>Learning curve: operating time</p>
	A	B																												
Patients enrolled, <i>n</i>	50	48																												
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Clinical stage, n (%)																														
T1c	28 (70)	26 (65)																												
T2	12 (30)	14 (35)																												

TABLE 49 Characteristics of the included studies: non-randomised comparative studies (robotic vs laparoscopic prostatectomy) (*n* = 8) (*continued*)

Study details	Participant characteristics		Intervention characteristics		Outcomes
Author, year: Rozet 2007 ⁹⁶ Language: English Publication type: full text Number of study centres: 1 Setting: hospital Country: France Recruitment/treatment dates: May 2003–May 2005 Prospective/retrospective data collection: not reported Patient recruited consecutively, Y/N: yes for group A Length of follow-up: not reported Source of funding: not reported Systematic reviewer: XJ	Inclusion criteria: patients underwent robotic or laparoscopic prostatectomy		A. Robotic prostatectomy: robot trade name: da Vinci system; approaches: extra-peritoneal B. Laparoscopic prostatectomy: approaches: extra-peritoneal nerve sparing		Safety: surgical complications, operating time, catheterisation, blood loss, blood transfusion Efficacy: margins, pT stage, pathological Gleason score Death Learning curve: operating time
		A	B		
	Patient enrolled, <i>n</i>	133	758 (operated at the same period)		
	Patient analysed, <i>n</i>	133	133 (match-pair)	Unilateral, <i>n</i> (%)	35 (27.8)
	Age, mean (range)	62.0 (49–76)	62.5 (47–74)	Bilateral, <i>n</i> (%)	30 (23.8)
	BMI, mean (range)	24.8 (18.8–35.5)	25.3 (19.3–32.7)		96 (76.2)
	Previous abdominal/pelvic surgery	51	51	Lymph node dissection:	
	PSA, ng/ml, mean (range)	7.6 (0.9–38.0)	7.8 (3.2–19.0)		
	Clinical stage, n (%)			A	B
	T1b	0	1 (0.8)	No, <i>n</i> (%)	131 (98.5)
	T1c	76 (57.1)	90 (67.7)	Yes, <i>n</i> (%)	2 (1.5)
	T2a	51 (38.3)	39 (29.3)		3 (2.3)
	T2b	6 (4.5)	2 (1.5)		
	T3a	0	1 (0.8)		
	Biopsy Gleason score, mean (range)				
		6.3 (4.0–9.0)	6.3 (4.0–9.0)		
	≤ 6	101 (76%)	93 (70%)		
	7	29 (21.8%)	37 (27.8%)		
	8–10	3 (2.2%)	3 (2.2%)		

continued

TABLE 49 Characteristics of the included studies: non-randomised comparative studies (robotic vs laparoscopic prostatectomy) (*n* = 8) (*continued*)

Study details	Participant characteristics		Intervention characteristics	Outcomes	
Author, year: Sundaram 2004 ⁹⁷	Inclusion and exclusion criteria: not reported		A. Robotic prostatectomy	Safety: operating time, hospital stay, surgical complications, blood loss Efficacy: margins Dysfunction: urinary incontinence	
Language: English			B. Laparoscopic prostatectomy		
Publication type: conference abstract	A	B			
Number of study centres: 1	Patients, <i>n</i>	10	10		
Setting: hospital	Age (years), mean (range)	59.5 (53–69)	58.7 (50–66)		
Country: USA	PSA (ng/ml), mean (range)	5.2 (3–7.9)	5.3 (4.7–6)		
Recruitment/treatment dates: not reported	Clinical stage, n				
Prospective/retrospective data collection: not reported	T1c	9	7		
Patients recruited consecutively: yes in robotic group, not reported for laparoscopic group	2a	1	3		
Length of follow-up: mean: 3 months					
Source of funding: not reported					
Systematic reviewer: XJ					
Author, year: Trabulsi 2008 ⁹⁸	Inclusion criteria: men with clinically localised prostate cancer treated with either robotic or laparoscopic prostatectomy		A. Robotic prostatectomy: used da Vinci system; surgical approaches intraperitoneal; lymph nodes dissected when indicated (in intermediate- and high-risk patients): 14 (28%)		Safety: open conversion, blood loss
Language: English			B. Laparoscopic prostatectomy: surgical approaches transperitoneal; lymph nodes dissection: same indication as above: 51 (27%)		Efficacy: margins, pT stage, pathological Gleason score
Publication type: full text	A	B			
Number of study centres: 1	Patients, <i>n</i>	50	190		
Setting: hospital	Age (years), mean (range)	57.7 (37–60)	58.6 (43–74)		
Country: USA	BMI (kg/m ²), mean (range)	28.4 (20.4–36.6)	26.8 (18.8–51.8)		
Recruitment/treatment dates:	PSA (ng/ml), mean (range)	5.5 (1.1–21.1)	6.5 (0.4–46)		
A: October 2005–August 2006	Clinical stage, n (%)				
B: March 2000–December 2005	T1c	41 (82)	145 (76)		
Prospective/retrospective data collection: retrospective	T2a	9 (18)	40 (21)		
Patients recruited consecutively: not reported	Not reported	0	5		
Length of follow-up: not reported	Biopsy Gleason score, n (%)				
Source of funding: not reported	≤ 6	36 (72)	136 (72)		
Systematic reviewer: XJ	3 + 4	8 (16)	31 (16)		
	4 + 3	4 (8)	6 (3)		
	≥ 8	2 (4)	3 (2)		
	Prostate size (g), mean (range)	41 (16–102)	43.3 (14–156)		

BMI, body mass index.