Table S1. Characteristics of Studies Included

Study Characteristics									Intra-operative details									Postoperative outcomes	
Author	Title	Year	Study Period	Study Type	Inclusion and Exclusion Criteria	Hospital	Country	Type of Surgery	Sample size	Age (median /range)	Docking time (min)	Port Placement time (min)	Console time (min)	Operation time (min)	Estimated blood loss (mL)	Tilt angle	Docking Angle	Postoperative complications	Length of hospital stay (days)
Yamamoto et al.	Comparison of Perioperative Outcomes of Robot-Assisted Radical Prostatectomy Using the Hinotori and the da Vinci Surgical System	2024	April 2022 and May 2024 April 2022 and May 2024	Retrospective	RARP performed with Hinotori and da Vinci	Tottori University Faculty of Medicine	Japan	RARP ± LND	93	Not specified			Median: 271 (147-337)	Median: 343 (22-448)	Median: 180 (50-600)			1 (Common bile duct stone)	Not specified
Hinata et al.	Hinotori Surgical Robot System, a novel robot-assisted surgical platform: Preclinical and clinical evaluation	2022	august 2019 and 2020 for porcines and cadavers; December 2020 and June 2021 for patients	Preclinical study; multi-institutional observational study	1. 10 living female porcine and four fresh male cadavers- partial nephrectomy, vesicourethral anastomosis, and pelvic lymph node dissection in porcine, and partial nephrectomy, radical prostatectomy, and pelvic lymph	Kobe University Graduate School of Medicine	Japan	RAPN, vesicourethral anastomosis, and pelvic lymph node dissection in porcine, and partial nephrectomy, radical prostatectomy, and pelvic lymph node dissection in cadavers. RARP in patients	1. 10 living female porcine and four fresh male cadavers for partial nephrectomy, vesicourethral anastomosis, and pelvic lymph node dissection in porcine, and partial nephrectomy, radical prostatectomy, and pelvic lymph	RARP patients: 72 (26-76)			165 min in RARP	live porcine: 47.6 min for partial nephrectomy, 13.9 min for vesicourethral anastomosis, and 34.8 min for lymph node dis-section; fresh cadaveric study mean opera-tion time for partial nephrectomies was 57.0 min, and the	23.9 ml in live porcine; 162. 5ml in RARP			Three (10%) Clavien-Dindo ≥3 perioperative adverse events were observed. These were anastomotic leakage, paralytic ileus, and pulmonary embolism.	7 in RARP patients

					node dissection in cadavers. 2.RARP for localized prostate cancer					node dissection in cadavers. 2.30 for RARP for localized prostate cancer				ischemic time was 12.8 min; radical prostatectomy and pelvic lymph node dissection were 63.7 and 70.3 min, respectively. time taken to use hinotori: 165min				
Shimizu et al.	Robot-Assisted Radical Nephroureterectomy Using a Hinotori Surgical Robot System: Report of First Series of Four Cases	2024	April 2019 to April 2023	Retrospective	Retrospective	Tottori University Faculty of Medicine	Japan	RANU		Total: 26; hinotori TM: 5; da Vinci: 21	Median: 74 (62-87)	Not specified	Not specified	Not specified	Median: 261 (234-344)	Median: 15 (5-80)		None	Not specified

Motoyama et al.	Robot-assisted radical nephroureterectomy for upper urinary tract tumour: initial experience with the use of novel surgical robot system, hinotori	2023	July 2022 to March 2023	Retrospective	UUTT received RANU using hinotori	Hamamatsu University School of Medicine	Japan	RANU + LND	Total: 8	8	76 (51-82)	Not specified	Median: 230 (210-270)	23 (1-50)	None	10
Motoyama et al.	Robot-assisted radical nephrectomy and inferior vana cava tumour thrombectomy using the novel surgical robot platform, hinotori: Intiial experience with two cases	2023	Not specified	Retrospective	RARN/IVCTT with hinotori	Hamamatsu University School of Medicine	Japan	RARN/VCTT		2	67		228, 214	535; 200		8; 10
Motoyama et al.	Robot-assisted radical nephrectomy using novel surgical robot platform, hinotori: Report of initial series of 13 cases	2023	April 2019 to March 2023	Retrospective	RARN using the hinotori and da Vinci robotic systems	Hamamatsu University School of Medicine	Japan	RARN	Total: 34; Da Vinci: 21; Hinotori: 13	Da Vinci:64 (18–82); Hinotori: 65 (46–85)			Da Vinci: 160 (118–237); Hinotori: 157 (129–232)	Da Vinci: 20 (5–630); Hinotori: 11 (5–66)	None	Da Vinci: 8 (5–12)); Hinotori:6 (4–10)
Motoyama et al.	Perioperative outcomes of robot-assisted partial nephrectomy using hinotori versus da Vinci	2023	April 2016 and January 2023	Retrospective	small renal tumors underwent RAPN using da	Hamamatsu University School of	Japan	RAPN	Total: 111; Da Vinci: 74; Hinotori: 37	Da Vinci: 68 (18–86); Hinotori: 62 (37–84)		Da Vinci: 107 (50–194)Hinotori: 108	Da Vinci: 171 (97–256)Hinotori: 171	Da Vinci: 50 (0–4195); Hinot	None	Da Vinci: 7 (4–28); Hinotori: 7

	surgical robot system: a propensity score-matched analysis			Vinci and hinotori	Medicine						(53–191)	(106–268)	ori: 34 (1–312)			(4–23)
Miyake et al.	Initial Experience of Robot-Assisted Partial Nephrectomy Using Hinotori Surgical Robot System: Single Institutional Prospective Assessment of Perioperative Outcomes in 30 Cases	2023	between April and November 2022	Prospective	small renal tumors and subsequently underwent RAPN using hinotori	Hamamatsu University School of Medicine	Japan	RAPN	30	62 (46–84)	179 (122–268)	13 (5–20)	39 (5–312)		None	7 (4–23)
Motoyama et al.	Robot-assisted adrenalectomy using a hinotori surgical robot system: Report of first series of six cases	2023	July 2020 to November 2022	Retrospective	Adrenal tumours undergoing RAA with either da Vinci or hinotori	Hamamatsu University School of Medicine	Japan	RAA	Total: 11; hinotori: 6; da Vinci: 5	Hinotori: 48, da Vinci: 63	Median: 119 (104-133)	Not applicable	8 (3-87)		All Grade I, no major	All Grade I, no major

Table S2: Additional Post-operative Characteristics of Studies on RAPN and RARNh

Study Characteristics									Postoperative outcomes								
Author	Title	Year	Study Period	Study Type	Inclusion and Exclusion Criteria	Hospital	Country	Type of Surgery	Positive cancer margins (%)	Achievement in Trifecta	Achievement in MIC	Median change in eGFR (%) over 1 postoperative day	Median change in eGFR (%) over 1 postoperative month	Conversion to Nephretcomy	Conversion to Open	Histologic subtype (%)	
																- Clear cell renal cell carcinoma	
																- Other malignancy	
																- Benign tumour	
Miyake et al.	Initial Experience of Robot-Assisted Partial Nephrectomy Using Hinotori Surgical Robot System: Single Institutional Prospective Assessment of Perioperative Outcomes in 30 Cases	2023	between April and November 2022	Prospective	small renal tumors and subsequently underwent RAPN using hinotori	Hamamatsu University School of Medicine	Japan	RAPN	0	100.0	96.7	-20.9	-117	0	0	83.3 13.3 3.3	
Motoyama et al.	Robot-assisted radical nephrectomy and inferior vana cava tumour thrombectomy using the novel surgical robot platform, hinotori: Intiial experience with two cases	2023	Not specified	Retrospective	RARN/IVCTT with hinotori	Hamamatsu University School of Medicine	Japan	RARN/VCTT	Not mentioned	Not mentioned	Not mentioned	Not mentioned	Not mentioned	0	0	100.00	

Motoyama et al.	Robot-assisted radical nephrectomy using novel surgical robot platform, hinotori: Report of initial series of 13 cases	2023	April 2019 to March 2023	Retrospective	RARN using the hinotori and da Vinci robotic systems	Hamamatsu University School of Medicine	Japan	RARN	0	Not mentioned	Not mentioned	Not mentioned	Not mentioned	0	0	92.3 7.7 0.0
Motoyama et al.	Perioperative outcomes of robot-assisted partial nephrectomy using hinotori versus da Vinci surgical robot system: a propensity score-matched analysis	2023	April 2016 and January 2023	Retrospective	small renal tumors underwent RAPN using da Vinci and hinotori	Hamamatsu University School of Medicine	Japan	RAPN	0	100.0	97.3	-19.0	-9.2	0	0	81.1 16.2 2.7