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## Urology Surgery

### 1. Original Article

#### **Robotic radical prostatectomy in post HIFU salvage setting: tertiary center experience and review of the current literature**

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**Cite this article:** De Luca S, De Cillis S, Piramide F, Alessio P, Russo F, Amparore D, Volpi G, Granato S, Manfredi M, Fiori C, Checcucci E, Porpiglia F. Robotic radical prostatectomy in post HIFU salvage setting: tertiary center experience and review of the current literature. *Mini-invasive Surg* 2022;6:13.

<http://dx.doi.org/10.20517/2574-1225.2021.127>

#### Abstract

**Aim:** The purpose of the study was to describe our surgical technique of salvage robot-assisted radical prostatectomy (sRARP) in patients who underwent primary high-intensity focused ultrasound (HIFU) and to report the perioperative, functional, and oncological outcomes during the first year follow up. The secondary aim of the study was to review the current literature evidence on this topic.

**Methods:** We retrospectively extracted, from our prospective RARP database, all the patients who underwent sRARP for biochemical recurrence after primary HIFU. All the surgical interventions were performed by a single surgeon following our total anatomical reconstruction (TAR) technique. Demographics, perioperative, functional, and oncological results were collected up to one year follow-up.

**Results:** Eleven patients underwent post-HIFU sRARP with TAR technique at our institution. All the surgical procedures were uneventful. All the complication recorded were classified as Clavien-Dindo Grade I. Continence rate at 1-, 3-, 6-, and 12-month post intervention was 36.3%, 45.5%, 63.6 %, and 81.1%, respectively. Medium PSA at 12 months follow-up was 0.2 ng/mL (SD 0.01), with no Biochemical Failure (BCF) recorded.

**Conclusion:** sRARP with TAR technique is a safe and feasible procedure in patients

with BCF after primary HIFU. No major complications were recorded, with good oncological and functional results after one year follow up.

## 2. Original Article

### **Trifecta results in Retzius-sparing robotic radical prostatectomy: results of a high-volume center**

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**Cite this article:** Olivero A, Dell'Oglio P, Ambrosini F, Secco S, Barbieri M, Palagonia E, Napoli G, Strada E, Petralia G, Di Trapani D, Buratto C, Martiriggiano M, Galfano A, Bocciardi AM. Trifecta results in Retzius-sparing robotic radical prostatectomy: results of a high-volume center. *Mini-invasive Surg* 2022;6:6. <http://dx.doi.org/10.20517/2574-1225.2021.117>

#### **Abstract**

**Aim:** We aimed to evaluate trifecta outcomes after Retzius-sparing robot-assisted radical prostatectomy (rs-RARP).

**Methods:** We evaluated 1488 patients who had undergone rs-RARP at our institution from 2011 to 2019. All patients filled out questionnaires for functional outcomes before surgery, and only patients with baseline continence and IIEF-5 scores of > 16 were included. Biochemical recurrence (BCR) was defined as two consecutive prostatic specific antigen levels of > 0.2 ng/mL after rs-RARP. Postoperative continence was defined as the use of no pads. Potency was defined as the ability to achieve erections for sexual intercourse, with or without phosphodiesterase-5 (PDE-5) inhibitors. A multivariable logistic regression model was performed to identify predictors of trifecta outcome.

**Results:** In total, 1240 patients were included in the analysis. During the 24-month follow-up time, 149 patients (11.9%) harbored BCR. Urinary continence was observed in 981 patients (79.5%), while 171 (13.8%) still used a safety pad daily after 24 months. Sexual potency was reported in 643 patients (51.9%), of whom 379

(30.6%) had spontaneous erections and 264 (21.3%) used a PDE-5 inhibitor. Overall, the trifecta outcome was reached by 42.1% of the study's population. The trifecta outcome was easily reached by younger patients and patients who underwent a full nerve-sparing (NS) prostatectomy. In the multivariable model, age [odds ratio (OR) = 0.89; 95% confidence interval (CI): 0.84-0.90;  $P < 0.01$ ] and type of NS surgery [partial NS (OR = 3.34; 95%CI: 1.01-11;  $P = 0.04$ ) full NS (OR = 4.57; 95%CI: 1.86-12;  $P < 0.01$ )] resulted as independent predictors.

Conclusion: rs-RARP is associated with optimal trifecta outcome rate. Age and NS technique are independent predictors of trifecta outcomes.

### 3. Perspective

#### Has robotic prostatectomy determined the fall of the laparoscopic approach?

[HTML](#) [PDF](#)

**Cite this article:** Hayes J, Vasdev N, Dasgupta P. Has robotic prostatectomy determined the fall of the laparoscopic approach?. *Mini-invasive Surg* 2021;5:56.

<http://dx.doi.org/10.20517/2574-1225.2021.126>

#### Abstract

Robotic-assisted laparoscopic prostatectomy (RALP) has revolutionised the surgical management of localised prostate cancer in the modern era. The surgeon is provided with greater precision, more versatile dexterity and an immersive three-dimensional visual field. The impressive hardware facilitates, for example, the dissection of the peri-prostatic fascia, whilst preserving the neurovascular bundle, or the suturing of the vesico-urethral anastomosis. Prior to RALP, laparoscopic radical prostatectomy (LRP) represented the first venture into the minimally invasive world. Associated with more cumbersome ergonomics, LRP has a significant learning curve compared with the robotic approach. There has been a paucity, until recently, of high-quality literature comparing outcomes between the two operations, including the attainment of the Pentafecta of survivorship: biochemical recurrence-free, continence, potency, no

postoperative complications and negative surgical margins.

#### 4. Review

##### **An investigative review on the current role and outcomes of salvage radical cystectomy**

[HTML](#) [PDF](#)

**Cite this article:** Cicione A, Lombardo R, Voglino OA, Tubaro A, De Nunzio C. An investigative review on the current role and outcomes of salvage radical cystectomy. *Mini-invasive Surg* 2021;5:47. <http://dx.doi.org/10.20517/2574-1225.2021.52>

#### **Abstract**

Salvage radical cystectomy (SRC) is currently performed after failure of a trimodal treatment (TMT) for muscle invasive bladder cancer (MIBC) and also as a palliative surgery to manage bladder cancer-related symptoms. We reviewed the available literature to assess the current outcomes of SRC. A comprehensive research of the Medline and Embase databases was carried out by following the Preferred Items for Systematic Reviews and Meta-Analysis. Bladder cancer, radiotherapy, salvage, and cystectomy were the main keywords used in the research. Due to the lack of studies, no time restriction was applied, however only English language and only studies using Clavien-Dindo Grade (CCS) to report complications were considered. Overall, 285 studies were identified, of which 41 studies were considered eligible for the purpose of this review. No comparative studies were found between TMT plus SRC and immediate radical cystectomy. Thirteen studies reported oncological outcomes after TMT. The five-year mean disease free survival rate of patients who underwent SRC after TMT was reported to be about 50% and the 5-year OS rate was between 33% and 48%. Three studies including fewer than 20 patients performed SRC with palliative purpose. Although no perioperative death occurred, patients were highly selected. Overall, 4 studies graded surgery-related complications by CCS. The rate of major complications, defined as  $CCS \geq 3$ , was reported to be between 16% and 32%,

most of them being gastrointestinal complications. SRC still preserves a role in the management of MIBC, being part of TMT and palliative care in highly selected patients. However, this surgery is at higher risk of complications and is associated with incontinent urinary diversion, thus an accurate discussion during patient counseling is advisable.

## 5. Original Article

### **Predictors of re-intervention after greenlight laser photoselective vaporization of the prostate: multicenter long/mid-term follow-up experience**

[HTML](#) [PDF](#)

**Cite this article:** Campobasso D, Marchioni M, De Nunzio C, Destefanis P, Fasolis G, Varvello F, Voce S, Reale G, Cai T, Malossini G, Oriti R, Tuccio A, Ruggera L, Tubaro A, Greco F, Laganà A, Dadone C, Gontero P, De Rienzo G, Pucci L, Carrino M, Montefiore F, Rabito S, Germani S, Miano R, Schips L, Frattini A, Ferrari G, Cindolo L. Predictors of re-intervention after greenlight laser photoselective vaporization of the prostate: multicenter long/mid-term follow-up experience. *Mini-invasive Surg* 2021;5:45. <http://dx.doi.org/10.20517/2574-1225.2021.92>

#### **Abstract**

**Aim:** Greenlight photoselective vaporization of the prostate (PVP) is considered a safe alternative to transurethral resection of the prostate (TURP) in men with lower urinary tract symptoms (LUTS) and a prostate volume of 30-80 mL for the comparable short- and mid-term results. Long-term re-treatment rate is still being debated.

**Methods:** We retrospectively reviewed greenlight PVP procedures in a multi-institutional database from September 2011 to December 2019 collecting data on patients requiring re-intervention with a follow-up period of at least 12 months.

**Results:** Among 867 patients with a median follow-up period of 32.5 months (interquartile range: 20.0-49.0 months), 35 patients (4%) required re-intervention.



Patients requiring re-intervention had a prostate volume  $\geq 100$  mL in 28.6% of cases ( $P = 0.002$ ). Preoperative urethral stricture and incidence of early complications were more frequent in the re-treatment group ( $P = 0.027$  and  $P = 0.006$ ). In the re-treatment group, 22 patients required an endoscopic intervention for bladder neck or prostatic fossa contracture (2.5% of the study population). The remaining 13 patients in the re-treatment group underwent TURP or PVP for LUTS relapse (1.5%). In the univariate and multivariate logistic regression models, only prostate volume  $\geq 100$  mL ( $P = 0.003$  and  $P = 0.010$ ), preoperative urethral stricture ( $P = 0.013$  and  $P = 0.036$ ), and occurrence of early complications ( $P = 0.008$  and  $P = 0.024$ ) correlated with re-intervention.

Conclusion: Greenlight PVP has good functional long/mid-term results. The presence of preoperative urethral stricture and the occurrence of early complications correlate with the risk of late re-treatment. In patients with prostate  $\geq 100$  mL, the enucleation technique may be superior to vaporization in terms of lower long-term risk of re-intervention for LUTS relapse.

## 6. Systematic Review

### **Functional and oncological outcomes with male nerve sparing robotic assisted radical cystectomy**

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**Cite this article:** Thinagaran JKR, Maqboul F, Dovey Z, Wiklund P. Functional and oncological outcomes with male nerve sparing robotic assisted radical cystectomy.

*Mini-invasive Surg* 2021;5:46. <http://dx.doi.org/10.20517/2574-1225.2021.53>

#### **Abstract**

Aim: In keeping with the ethos of surgical oncology, male nerve sparing (NS) robotic assisted radical cystectomy (RARC) aims to maximise functional outcomes without sacrificing oncological outcomes. This review details the surgical technique of male NS RARC as well as discussing strategies that may be employed in tandem with

surgery to improve post-operative recovery and longer-term quality of life.

Methods: An OVID/EMBASE database search was done with key words of robotic, cystectomy, male and nerve sparing. Publications with no description of post-operative functional outcome were excluded. A total number of 25 relevant publications were selected investigating male NS RARC, assessing functional outcomes along with other surgical standard indicators.

Results: Most series contained small numbers of patients with largely retrospective data and the associated bias of selection. Mean follow up of 27.06 months (range 2.8-58 months) was noted overall. Study design, technique, definitions and measurements of continence and erectile function are heterogeneous across series. With a mean follow up of 27.06 months (range 2.8-58 months), a post-operative satisfactory erectile function of 54.32% (range 9%-100%) and satisfactory day time continence of 90% (range 54.5%-100%) and night time continence of 80.55% (range 46.7%-88%) was found with a mean positive surgical margin rate of only 1.8% (range 0%-6.4%).

Conclusion: Male NS RARC for appropriately selected patients will offer good functional outcomes. Results from the series reviewed suggest the technique is both feasible and safe, without compromising longer term oncological results.

## 7. Review

### **The contemporary status of robotic intracorporeal neobladder**

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**Cite this article:** Maqboul F, Thinagaran JKR, Dovey Z, Wiklund P. The contemporary status of robotic intracorporeal neobladder. *Mini-invasive Surg* 2021;5:44. <http://dx.doi.org/10.20517/2574-1225.2021.54>

### **Abstract**

Robotic intracorporeal neobladder (RIN) is increasingly the modality of choice for intracorporeal urinary diversion in high-volume Robotic Urology centers. This article

details the modern technique of RIN, explains specific tips and tricks to facilitate timely operative progression as well as weighs the outcomes from recently published series. An OVID/EMBASE database search was done using keywords: robotic, cystectomy, intracorporeal neobladder, orthotopic, and intracorporeal urinary diversion. The inclusion criteria were original studies on Robot-Assisted Radical Cystectomy (RARC) with RIN series, available in full text in English, published over the last ten years with a specific analysis of oncological and functional outcomes. Pooled data analysis of the 10 studies included shows 80% of patients had organ-confined disease ( $\leq pT2$ ), 1.86% of patients had positive surgical margin, median lymph node yield of 23 nodes (IQR = 7.5), and cancer-specific survival rate of 78% (range 72%-100%) over a mean follow up of 27.43 months (range 13-37 months). Functionally, the median day continence rate is 81.5%, night continence rate is 61%, and rate of return to spontaneous sexual activity is 33.5%. This compares favorably with outcomes of The International Robotic Cystectomy Consortium - Extracorporeal Urinary Diversion data and data from open radical cystectomy (ORC) neobladder series with long term follow up. High-volume robotic centers have successfully introduced programs for RARC, with RIN demonstrating its safety and feasibility. Their results suggest potential to improve perioperative and functional outcomes over ORC. Moreover, under mentorship, surgeons can learn the technique of RARC and RIN without these outcomes being significantly affected.

## 8. Review

**Review of intracorporeal and extracorporeal continent urinary diversion - where do we stand in 2021?**

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**Cite this article:** Balzano FL, Chan KG. Review of intracorporeal and extracorporeal continent urinary diversion - where do we stand in 2021?. *Mini-invasive Surg* 2021;5:41. <http://dx.doi.org/10.20517/2574-1225.2021.49>

## **Abstract**

Robot-assisted radical cystectomy has become widely accepted as a safe and minimally invasive procedure for the treatment of bladder cancer. The urinary diversion continues to be performed completely intracorporeally or extracorporeally. Over the past decade, there has been an increasing number of continent diversions being performed intracorporeally. We evaluated the most recent literature regarding intraoperative metrics and outcomes that compare the intracorporeal and extracorporeal approaches.

## **9. Systematic Review**

### **Surgical and functional outcomes after robot-assisted radical cystectomy in female patients: a systematic review of the literature**

[HTML](#) [PDF](#)

**Cite this article:** Ornaghi PI, Tafuri A, Orlando R, Panunzio A, Moschini M, Afferi L, Lonati C, Cerruto MA, Antonelli A. Surgical and functional outcomes after robot-assisted radical cystectomy in female patients: a systematic review of the literature. *Mini-invasive Surg* 2021;5:42.

<http://dx.doi.org/10.20517/2574-1225.2021.50>

## **Abstract**

**Aim:** We aimed to review and summarize recent data on surgical and functional outcomes in women undergoing robot-assisted radical cystectomy (RARC) and urinary diversion (UD) for bladder cancer, compared with male and open counterparts.

**Methods:** A systematic review of English-language articles published in the last 15 years was performed on PubMed/Medline database according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement. Outcomes of interest included peri- and post-operative surgical outcomes [operative time (OT), estimated blood loss (EBL), hospital stay (LOS), complications, and readmission],

pathological outcomes [pT stage, lymph node (LN) yield, positive surgical margins (PSMs), and positive LN (pN+)], and functional outcomes [daytime and nighttime continence, sexual activity, need for clean intermittent catheterization (CIC), and quality of life (QoL) evaluation].

Results: Overall, eight studies were selected collecting data from 229 female patients undergoing RARC. The median OT was 418 min (range 311-562 min) and the median EBL was 380 mL (range 100-1160 mL). OT and EBL were not significantly different comparing males and females, whereas the robotic approach was found to be significantly related with longer OT and lower EBL compared to the open procedure. The median LOS was 9.8 days (range 6.5-21 days); no significant differences in LOS were found between open RC (ORC) and RARC in female patients, as well as between RARC in women and men. The mean incidence of 30-day complications after RARC in women was 32.9%, with 12% of high-grade complications, while the 30- and 90-day readmission rates were 20.8%, and 28%, respectively. Complications and readmission comparing RARC and ORC in female patients appear to be overlapping. The mean rate of PSMs was 2.5% and the mean rate of pN+ was 12.7%; both these outcomes were similar in RARC compared with ORC. The mean number of retrieved LN was 20.6 (range 11.3-35.5). The LN yield resulted significantly influenced by the robotic approach [median 27 (range 19-41)] compared to the open one [20.5 (range 13-28)]. After 12 months, the rate of women with daytime and nighttime continence was 66.7%-90.9% and 66.7%-86.4%, respectively, while that of sexually active women ranged 66.7%-72.7%. The need for CIC ranged 12.5%-27.2%. Administering the EORTC-QLQ-C30 questionnaire after RARC and intracorporeal neobladder, the global health status/QoL and physical and emotional functioning items improved significantly over time.

## **10. Technical Note**

### **Single-port robotic radical cystectomy with ileal conduit urinary diversion: technique and review of the early outcomes in literature**

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**Cite this article:** Chen G, Crivellaro S. Single-port robotic radical cystectomy with ileal conduit urinary diversion: technique and review of the early outcomes in literature. *Mini-invasive Surg* 2021;5:54.

<http://dx.doi.org/10.20517/2574-1225.2021.69>

### **Abstract**

The introduction of the da Vinci single port (SP) surgical system (Intuitive Surgical, Sunnyvale, CA, USA) has meant a necessary evolution in the surgical techniques used to perform various Urologic surgeries, such as robotic-assisted radical cystectomy (RARC). In this paper, we describe a step-by-step technique for RARC with intracorporeal ileal conduit urinary diversion using the SP system at our institution and summarize early outcomes in the literature. The surgery was performed utilizing the standard institutional approach for radical cystectomy for the multiport robot, modified for the SP where appropriate. A total of 3 articles were found that included early patient outcomes after SP RARC. Including our institution, a total of 21 patients were included in the final analysis. The average patient age was 68 years old, 16 of the 21 patients were male, 13 of the patients had intracorporeal urinary diversions, the average operative time was 366 min with an average estimated blood loss of 185. The average length of stay was 5.4 days. Among these patients, there were three 30-day complications noted and five 90-day complications, all of which were Clavian II or lower. We conclude that RARC utilizing the SP approach is both feasible and offers several theoretical advantages over the open and multiport approaches, but further study is necessary before advocating for widespread adoption of this modality.

### **11. Technical Note**

**Retroperitoneal approach for robot-assisted partial nephrectomy: a step-by-step description of surgical technique**

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**Cite this article:** Bianchi A, Cianflone F, Migliorini F, Cerruto MA, Tafuri A, Antonelli A. Retroperitoneal approach for robot-assisted partial nephrectomy: a step-by-step description of surgical technique. *Mini-invasive Surg* 2021;5:37.  
<http://dx.doi.org/10.20517/2574-1225.2021.64>

### **Abstract**

In the last decades, minimally invasive partial nephrectomy (PN) has gained traction and, as of today, robot-assisted laparoscopic PN (RAPN) is increasingly being performed; this procedure might be performed with a transperitoneal or retroperitoneal (rRAPN) approach. However, rRAPN is less standardized in the literature. Therefore, we describe our rRAPN technique using a da Vinci Xi Surgical System and four robotic arms. First, with the patient placed in full flank position, the camera port is placed at the level of the Petit's triangle apex. Retroperitoneal space is created by turning the index finger in a 180° movement through this port. After, the two first 8 mm robotic ports are blindly placed with the surgeon's index finger guide, 8 cm far from the first port, respectively along the anterior and posterior axillary line; 3-5 cm caudally to the last one, a 12 mm AirSeal® assistant port is placed in the same manner. To create space for the last 8 mm robotic port, the peritoneum is reflected medially and downward off of the transversus abdominis muscle laparoscopically. Only then, the last port is placed under direct vision 8 cm ventral and about 2 cm cephalad from the port on the anterior axillary line. The robotic ports placement will result in a caudally convex arc. This technique, due to the extensive use of the surgeon index, implies fast access to the retroperitoneum, protects the underlying anatomical structures from damage, and, due to the trocar positioning along an arc, lowers the arm conflict risk.

## **12. Case Report**

### **Laparo-endoscopic single site hysterectomy in renal transplant women using conventional laparoscopic instruments**

[HTML](#) [PDF](#)

**Cite this article:** Goh WA, Tan EMX, Nadarajah R. Laparo-endoscopic single site hysterectomy in renal transplant women using conventional laparoscopic instruments. *Mini-invasive Surg* 2021;5:30. <http://dx.doi.org/10.20517/2574-1225.2021.42>

### **Abstract**

Kidney transplant recipients are at a higher risk of developing cancers as compared to the general population. This is of concern when it comes to gynaecological pathologies because the transplanted kidney lies in the pelvic region, in close proximity to the diseased organ. The successful use of laparo-endoscopic single site surgery with conventional laparoscopic instruments for total hysterectomy and bilateral salpingo-oophorectomy in three patients with prior renal transplantation is reported.

### **13. Case Report**

#### **Retroperitoneoscopic single-site 3D adrenalectomy for left adrenal renal cell carcinoma metastasis 20 years after left laparotomic radical nephrectomy**

[HTML](#) [PDF](#)

**Cite this article:** Naspro R, La Croce G, Pellucchi F, Roscigno M, Rossini A, Cassibba S, Lerner L, Da Pozzo LF. Retroperitoneoscopic single-site 3D adrenalectomy for left adrenal renal cell carcinoma metastasis 20 years after left laparotomic radical nephrectomy. *Mini-invasive Surg* 2021;5:50.

<http://dx.doi.org/10.20517/2574-1225.2021.77>

### **Abstract**

The aim of the paper is to demonstrate the practicability of retroperitoneoscopic single-site 3D left adrenalectomy after previous homolateral laparotomic renal surgery. We present a case report of a 70-year-old male who underwent radical nephrectomy in 1999. Twenty years after radical nephrectomy, the patient underwent



a computed tomography scan for B-cell lymphoma follow-up, which revealed a 30 mm left adrenal mass suspicious for a delayed renal-cell carcinoma metastasis. After multidisciplinary discussion, surgery was chosen as first option. To minimize surgical morbidity as much as possible, a 3D laparoscopic single-site retroperitoneal approach was chosen. The patient had no peri- or intra-operative complications and was discharged on Postoperative Day 3. The final histological report revealed an adrenal clear cell renal-cell carcinoma metastasis. This experience shows that single-site retroperitoneal laparoscopic adrenalectomy is possible in patients who underwent previous abdominal cancer surgery and is an option to consider when determining optimal approaches for adrenal surgery.

#### **14. Editorial**

##### **The future of robotic radical prostatectomy driven by artificial intelligence**

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**Cite this article :** Checcucci E, Porpiglia F. The future of robotic radical prostatectomy driven by artificial intelligence. *Mini-invasive Surg* 2021;5:49. <http://dx.doi.org/10.20517/2574-1225.2021.98>

#### **15. Original Article**

##### **Comparative analysis of perioperative outcomes between robot-assisted partial nephrectomy and open partial nephrectomy: a propensity-matched study**

[HTML](#) [PDF](#)

**Cite this article:** Sawada A, Kobayashi T, Takahashi T, Kono J, Masui K, Sato T, Sano T, Goto T, Akamatsu S, Ogawa O. Comparative analysis of perioperative outcomes between robot-assisted partial nephrectomy and open partial nephrectomy: a propensity-matched study. *Mini-invasive Surg* 2021;5:6. <http://dx.doi.org/10.20517/2574-1225.2020.100>

Abstract

**Aim:** Partial nephrectomy is the standard treatment for small renal tumors; however, it remains unclear which surgical approach from among robot-assisted partial nephrectomy (RAPN) and open partial nephrectomy (OPN) is superior. This study aimed to compare perioperative outcomes of RAPN and OPN performed at a single institution after adjusting for preoperative patient and tumor characteristics using propensity score matching (PSM).

**Methods:** In this retrospective cohort study, patients who underwent RAPN or OPN for a renal mass of cT1-2 N0 M0 between 2005 and 2020 at our institution were recruited. The study outcomes were perioperative outcomes, complications, and pathological and functional outcomes. PSM was used to account for baseline covariates.

**Results:** Overall, 131 RAPN and 71 OPN cases were extracted; in addition, 58 cases of RAPN and OPN were selected via PSM. RAPN was superior to OPN in terms of estimated blood loss (10 g vs. 160 g,  $P < 0.001$ ), ischemia time (23 min vs. 34 min,  $P < 0.001$ ), and hospital duration (7 days vs. 12 days,  $P < 0.001$ ). There were no significant differences in the incidence of perioperative complications or in the rate of positive surgical margins (both  $P > 0.05$ ). With respect to functional outcomes, the rates of preservation of renal function at both 1 day and 3 months postoperatively were higher with RAPN than with OPN (85.3% vs. 69.1% and 93.3% vs. 85.6% respectively, both  $P < 0.001$ ).

**Conclusion:** In selected cases, RAPN with warm ischemia appears to preserve renal function equally well or better compared to OPN with cold ischemia.

## **16. Review**

### **Oncologic outcomes in robot-assisted radical cystectomy: Where do we stand in 2021?**

[HTML](#) [PDF](#)

Cite this article: Miller BL, Pachorek M, Sam AP, Yuh B, Lau CS. Oncologic outcomes in robot-assisted radical cystectomy: Where do we stand in

2021?. *Mini-invasive Surg* 2021;5:24.

<http://dx.doi.org/10.20517/2574-1225.2021.25>

### **Abstract**

Robot-assisted radical cystectomy is an alternative to the standard open surgical approach and has been increasingly used to surgically treat bladder cancer. Data on oncologic outcomes for the robotic approach have matured, and now intermediate and long-term oncologic outcomes are available. This review focuses on oncologic outcomes of the robotic approach with a focus on recent data and high-quality studies. Based on the current literature available, there are no consistent differences between the robotic and open approaches with respect to positive margin rates, lymph node yields, recurrence patterns, or recurrence free, cancer-specific, and overall survival. If oncologic surgical principles are adhered to, excellent oncologic outcomes are achievable with the robotic approach.

## **17. Review**

### **Urinary diversions for radical cystectomy: a review of complications and their management**

[HTML](#) [PDF](#)

Cite this article: Tinoco CL, Lima E. Urinary diversions for radical cystectomy: a review of complications and their management. *Mini-invasive Surg* 2021;5:28.

<http://dx.doi.org/10.20517/2574-1225.2021.35>

### **Abstract**

Radical cystectomy involves a urinary diversion, the most used being the ileal conduit and the orthotopic neobladder. This review focuses on the complications associated with these procedures, dividing them into general and diversion related complications, as well as their management. We conducted a search on PubMed and Scopus to identify eligible articles on complications of urinary diversions. Randomized controlled trials and systematic reviews with meta-analysis were preferred when

available. Early complications occur in the first 90 days after surgery. The most common is post-operative ileus, followed by urinary tract infections and urinary leakage. Most complications occur in the late post-operative setting, being related to the type of urinary diversion. Some of these complications are renal failure, metabolic abnormalities, infections, urolithiasis, and ureteroenteric strictures, each with particular management options. Specific ileal conduit complications are conduit deformities and parastomal hernias. Neobladder patients can have continence problems, like incontinence or urinary retention, but also fistulas and dehiscence. Standardization of complications' definitions and time-dependent reporting are crucial to better understand and manage these complications. Complication rates are similar between open and robot-assisted procedures and between intracorporeal and extracorporeal diversion. Radical cystectomy with urinary diversion is the most difficult surgical procedure in urology with high early and late complication rates. There is an urgent need of standardizing complication reporting to better compare different procedures.

## **18. Editorial**

**An introduction to the special issue “Small Renal Masses (SRMs): update in diagnosis, management and new ablative modalities”**

[HTML](#) [PDF](#)

Cite this article: Celia A, Naspro R. An introduction to the special issue “Small Renal Masses (SRMs): update in diagnosis, management and new ablative modalities”. *Mini-invasive Surg* 2020;4:5. <http://dx.doi.org/10.20517/2574-1225.2018.007>

## **19. Review**

**Imaging**

[HTML](#) [PDF](#)

Cite this article: Cicero C, Casarin A, Currò F, Campo I, Bada M, Silvestri T. Imaging. *Mini-invasive Surg* 2019;3:25. <http://dx.doi.org/10.20517/2574-1225.2018.012>

## **Abstract**

The incidence of renal cell carcinoma is rising and it represents the 2%, 3% of all cancers. The increased use of ultrasonography, contrast enhanced ultrasonography, computed tomography and magnetic resonance imaging have resulted in incidentally detected small renal masses (SRMs). SRMs represent a heterogeneous group of tumors that included metastatic lesions, benign, malignant, and cystic lesions. With the increase number of renal incidentalomas, we have seen an increase in therapeutic choices (surgery, ablation therapies and active surveillance). The role of imaging has progressively grown over the decades and became currently a cornerstone that is needed to perform diagnosis, treatment and follow-up of SRMs after ablation treatment. Hence, in this review, we critically assess recent literature on the role of imaging in the context of ablation management of SRMs with a focus on the diagnosis and follow-up protocol.

## **20. Review**

**The role of the renal biopsy and surveillance in the management of small renal masses**

[HTML](#) [PDF](#)

Cite this article: Muttin F, Barret E. The role of the renal biopsy and surveillance in the management of small renal masses. *Mini-invasive Surg* 2019;3:10.

<http://dx.doi.org/10.20517/2574-1225.2018.005>

## **Abstract**

Cross-sectional imaging shows a limited diagnostic accuracy for the histological discrimination of small renal masses (SRM). In this scenario, a renal tumor biopsy is a safe, feasible and effective diagnostic tool that can guide treatment strategy by providing the histological characterization of a SRM. Although nephron-sparing

surgery is still considered the gold standard treatment for patients with SRM, more and more evidence suggests that active surveillance (AS) is a reasonable alternative option, especially in old and comorbid patients. Indeed, owing to the relatively slow growth and favorable biology of SRM, AS followed up by, if necessary, a delayed intervention provides an optimal oncological outcome with low rates of systemic progression or death.

## 21. Review

### Laparoscopic ablative techniques

[HTML](#) [PDF](#)

**Cite this article:** Silvestri T, de Concilio B, Zeccolini G, Celia A. Laparoscopic ablative techniques. *Mini-invasive Surg* 2019;3:5.

<http://dx.doi.org/10.20517/2574-1225.2018.67>

#### Abstract

Ablative techniques (AT) offer a combination of nephron-sparing and minimally invasive approaches. AT include different options and cryoablation (CA) and radiofrequency ablation (RFA) have been relatively safe and traditionally can be either performed laparoscopically or percutaneously. CA and RFA have emerged as a leading option for renal ablation, and compared with surgical techniques they offer benefits in preserving renal function with fewer complications, shorter hospitalization times, and allow for quicker convalescence. A mature dataset exists at this time, with intermediate and long-term follow up data available. Generally, laparoscopic access was the first technique used in the past, and typically for anterior and lateral mass. Afterwards, with the improvements in imaging and percutaneous techniques, laparoscopic approaches are progressively decreased and currently limited in few lesions and in relation with the surgeon's and center's experience. Nevertheless, laparoscopic CA and RFA could be useful techniques and currently,

recommendations as a first-line therapy are made at this time in limited populations, including elderly patients, patients with multiple comorbidities, and those with imperative indications of a nephron sparing surgery. As more data emerge on oncologic efficacy, and technical experience continue to improve, the application of AT will likely be extended in future treatment guidelines and laparoscopic approaches will be a valid option in the era of tailored therapy.