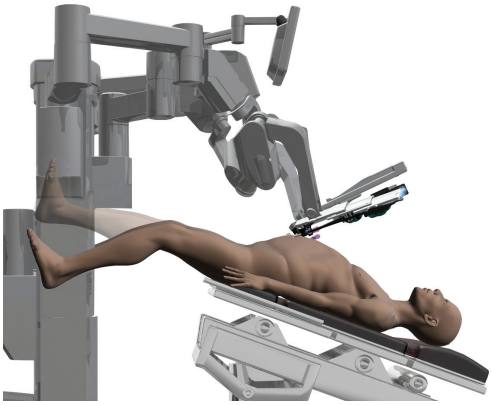
da Vinci RADICAL CYSTECTOMY

da Vinci Radical Cystectomy maintains the oncologic principles of open radical cystectomy via a minimally invasive approach.

Patient Positioning & Preparation

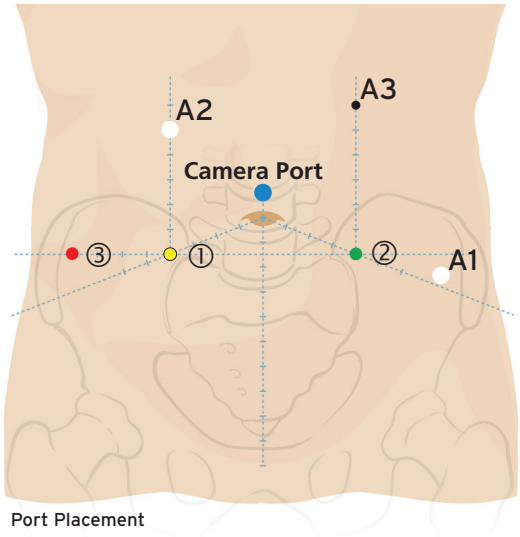
- Pad, secure and prep patient while in supine position (legs abducted, thighs at table-level)
- DVT prophylaxis
- Shave patient from costal margins to pubic bone
- Sterilely prepare and drape abdomen, penis, scrotum, perineum and peri-anal region
- Insert Foley catheter and rectal bougie
- Place patient in steep Trendelenburg position



Steep Trendelenburg Position (>20°)

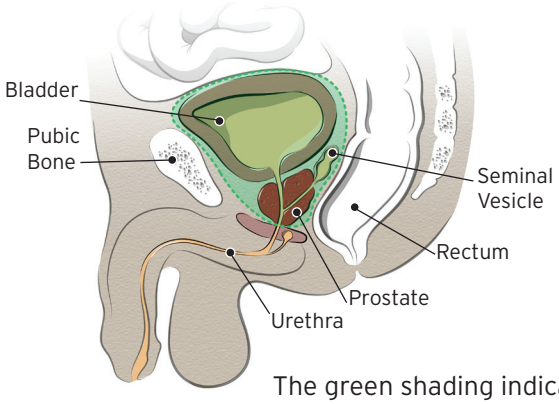
Port Placement (Assumes a left-side assistant)

- ***da Vinci* Camera Port, 12 mm (Blue):** Place near umbilicus, 20 cm above symphysis pubis.
- **Right *da Vinci* Instrument Arm ①, 8 mm (Yellow):** Place 8 cm from the endoscope port along the line from the umbilicus to the right anterior superior iliac spine (ASIS).
- **Left *da Vinci* Instrument Arm ②, 8 mm (Green):** Place 8 cm from the endoscope port along the line from the umbilicus to the left ASIS.
- **3rd *da Vinci* Instrument Arm ③, 8 mm (Red):** Place 8 cm directly lateral to the right instrument port.
- **Assistant Port (A1), 12 mm (White):** Place two-finger breadths medial and cephalad to the left ASIS, and at least 8 cm from the left instrument port.
- **Assistant Port (A2), 12 mm (White):** Place 10 cm cephalad to the right instrument port.
- **Assistant Port (A3), 5 mm (Black):** Place 12 cm cephalad to the left instrument port.

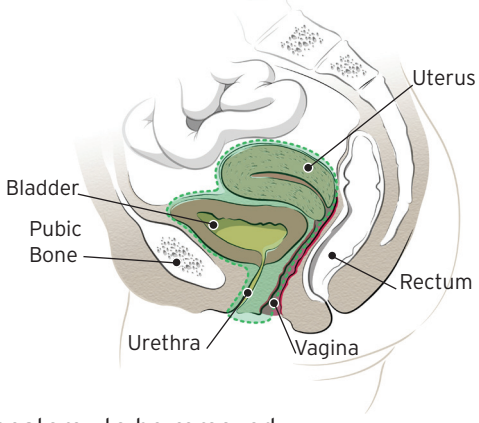


Port Placement

MALE: Radical Cystectomy (Cystoprostatectomy)
Surgery to remove the bladder, prostate, seminal vesicles and lymph nodes



FEMALE: Radical Cystectomy (Anterior Pelvic Exenteration)
Surgery to remove the bladder, urethra, uterus, cervix, ovaries, anterior wall of the vagina* and lymph nodes
*Spare vagina when appropriate.



The green shading indicates anatomy to be removed.

INTUITIVE SURGICAL®

Patient Cart Positioning

Place patient in steep Trendelenburg position (>20°) before rolling in patient cart. Align camera arm, camera arm set-up joint and center column with target anatomy (bladder). Position and dock patient cart directly between legs.

Docking

- **Dock the camera arm first**
  Use port and arm clutch maneuvers to ensure camera is aligned with target anatomy. If 3rd instrument arm will be used, shift the camera arm set-up joint towards the patient's side with just one instrument arm.
- **Dock the remaining instrument arms**
  Maximize spacing between all instrument arms.

4-Arm *da Vinci* System
(set-up assumes left-side assistant)

da Vinci Radical Cystectomy - Procedure Steps, Instrumentation & Accessories

Surgical Step	Recommended *EndoWrist*® Instrument	Camera/Scope & Ancillary Supplies
Isolate Ureters - Dissect the ureters distally to the level of the bladder; ligate and transect. **Female:** Identify and divide ovarian pedicles prior to ureteral isolation.	**Monopolar Instrument** *Hot Shears™* (Monopolar Curved Scissors) or Permanent Cautery Hook	0° scope; large *Hem-o-lok*® clips
Posterior Dissection - Incise the peritoneum between the bladder and rectum; mobilize the bladder and posterior prostate off the rectum and dissect to Denonvilliers' fascia. **Female:** Dissect between the uterus/vagina and bladder. May enter and excise anterior vaginal wall en bloc with bladder or spare vagina when appropriate.		30° scope (up) if needed
Lateral Dissection - Incise the peritoneum just lateral to the medial umbilical ligaments bilaterally. Develop the space between the bladder and lateral pelvic side wall using blunt dissection. **Female:** Complete division of the cardinal and uterosacral ligament bilaterally.		
Secure Bladder Pedicles - Ligate and transect the pedicles using an endoscopic linear stapler/cutter, or bipolar cautery and clips.		stapler/cutter or large *Hem-o-lok*® clips
Anterior Dissection - Drop the bladder (as is done in *da Vinci*® Prostatectomy) by incising the peritoneum anteriorly.		
Control of Prostatic Apex and Urethra - Incise the endopelvic fascia and develop the prostatic apex. Ligate the DVC and transect the anterior aspect of urethra.	**Bipolar Instrument** Maryland Bipolar Forceps or *PK™* Dissecting Forceps	DVC stitch: 0 Vicryl™ on CT-2 (cut to 6")
Prostatic Dissection (Male Only) - Use clips and/or bipolar cautery to secure pedicles. Nerve-Sparing (Select Patients): Use clips and cold scissors to secure pedicles.		large *Hem-o-lok*® clips
Hysterectomy and Bi-Lateral Salpingo-Oophorectomy (Female Only) - Retract the uterus superiorly, excise the uterus and remove the fallopian tubes, ovaries and cervix with the bladder specimen.		
Bag Specimen - Place the specimen in a retrieval bag and bring into upper quadrants of the abdomen. Irrigate and ensure hemostasis.	**3rd Arm Options** Fenestrated Bipolar Forceps *ProGrasp™* Forceps Cadiere Forceps Cobra Grasper	specimen bag
Reconstruct Vagina (Female Only) - Reconstruct vagina when needed.		O-Vicryl™ on CT-2
Bilateral Pelvic Lymphadenectomy - Lymphadenectomy generally includes: obturator nodes, external and common iliac nodes. Para-aortic dissection is possible with the *da Vinci*® *S™* System.		
Tag the Ureters/Pre-Place Anastomotic Stitch (Option 1) - Tag ureters for ready localization during open diversion. In cases of neobladder, pre-place posterior anastomostic stitches in urethra if performing the urethra-neobladder anastomosis extracorporally.		3-0 Vicryl™ on SH, full-length
Urinary Diversion (Neobladder or Ileal Conduit) - Extract specimen, tunnel ureters and harvest bowel through the 6-8 cm periumbilical midline incision. Perform the urinary diversion and ureteroenteric anastomosis extracorporally.		
Urethra-Neobladder Anastomosis (Option 2) - Utilize pre-placed urethral anastomotic stitches if performing the urethra-neobladder anastomosis extracorporally. If anastomosis is to be performed robotically, close the periumbilical incision, dock the patient cart and complete the anastomosis.	**Other Instruments** *Hem-o-lok*® Clip Applier, Large	