

Radical Cystectomy with ileal conduit: lessons to be learned

Dr. Richard P. Meijer

Oncological Urologist

University Medical Center Utrecht

The Netherlands



Conflicts of interest

Type of affiliation / financial interest	Name of commercial company
Receipt of grants/research supports	Research support (institutional): Janssen, Astellas, Roche
Receipt of honoraria or consultation fees	Advisory role (institutional): Merck, MSD, Janssen, Bristol-Myers Squibb
Stock shareholder	-
Other support (please specify):	

Surgical steps Radical Cystectomy

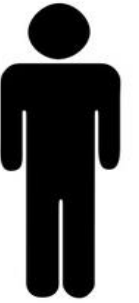
1. Resection bladder and adjacent structures
2. Pelvic lymph node dissection
3. Reconstruction urinary tract

Every step has specific risks

- 30 day overall complication rates 26-78%
- Mortality rates 1.0–4.0%

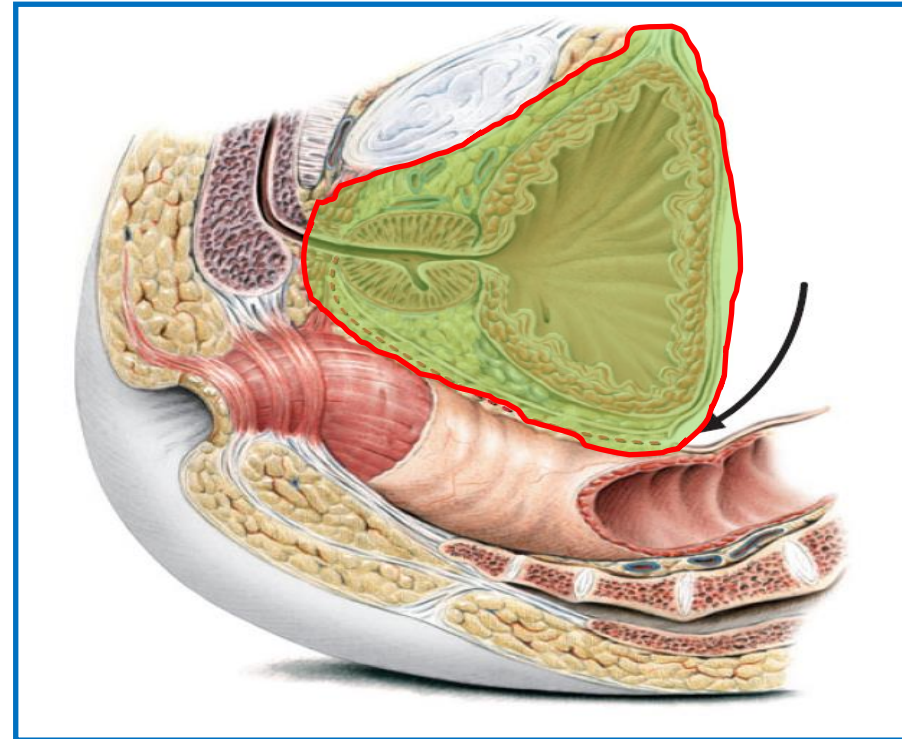


1. Resection bladder and adjacent structures



- **Radical cystoprostatectomy**

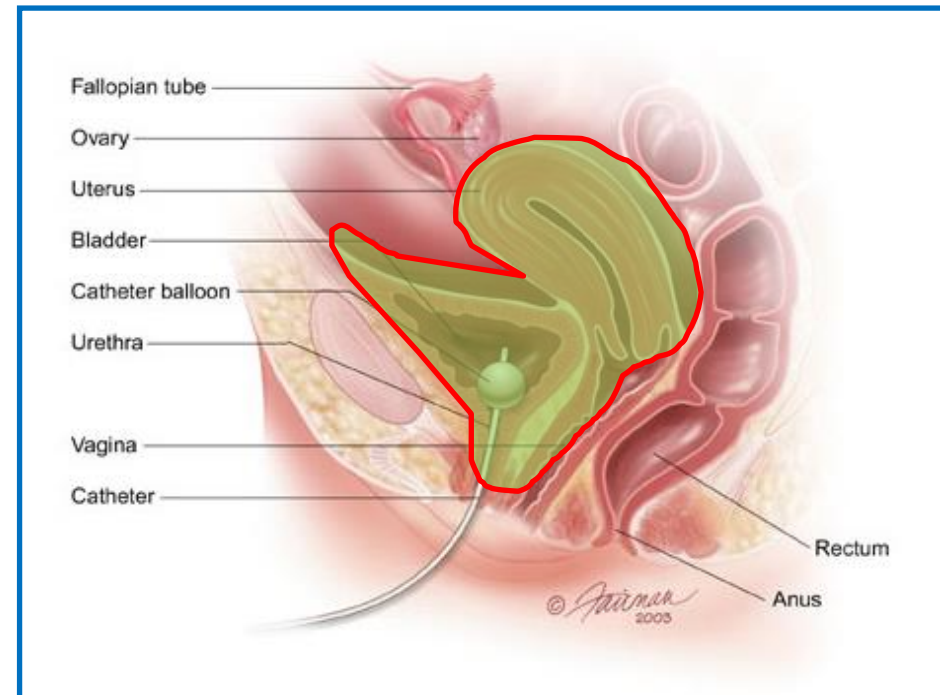
- pelvic lymph nodes
- bladder
- prostate
- seminal vesicles
(-urethra)



1. Resection bladder and adjacent structures



- **Anterior exenteration**
 - pelvic lymph nodes
 - bladder
 - uterus
 - anterior vaginal wall (-urethra)

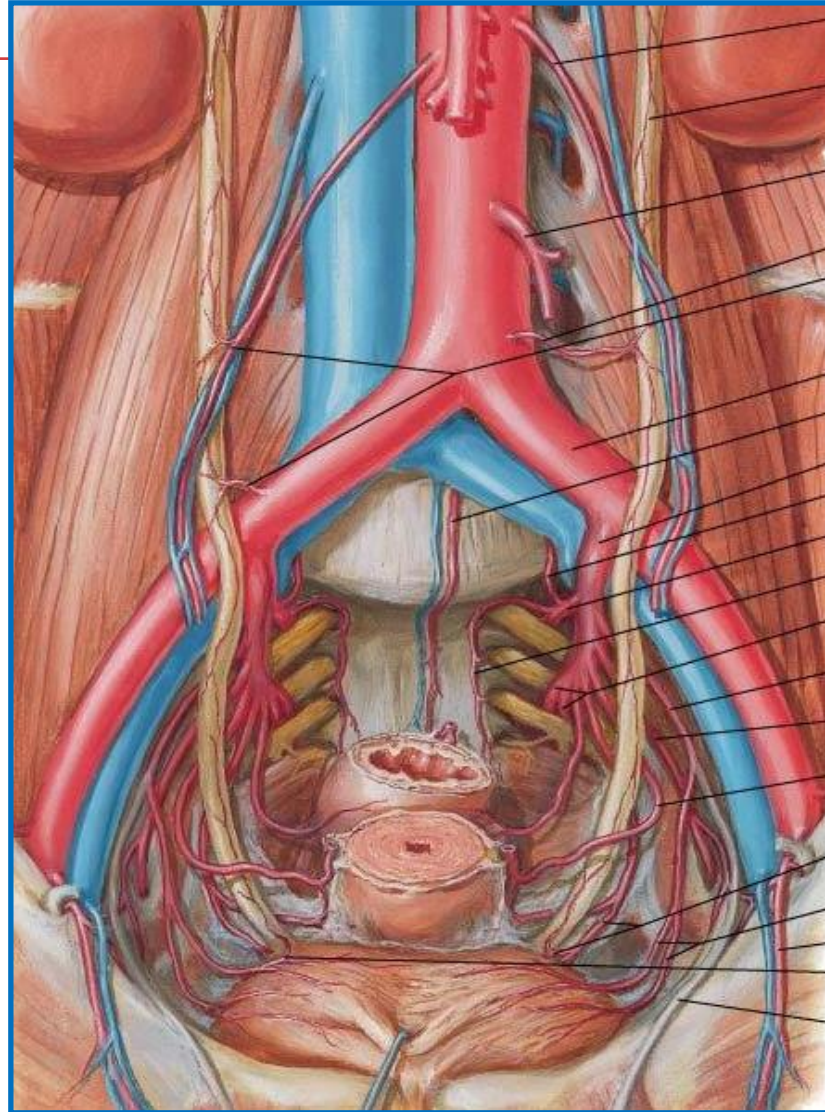


1. Resection bladder and adjacent structures

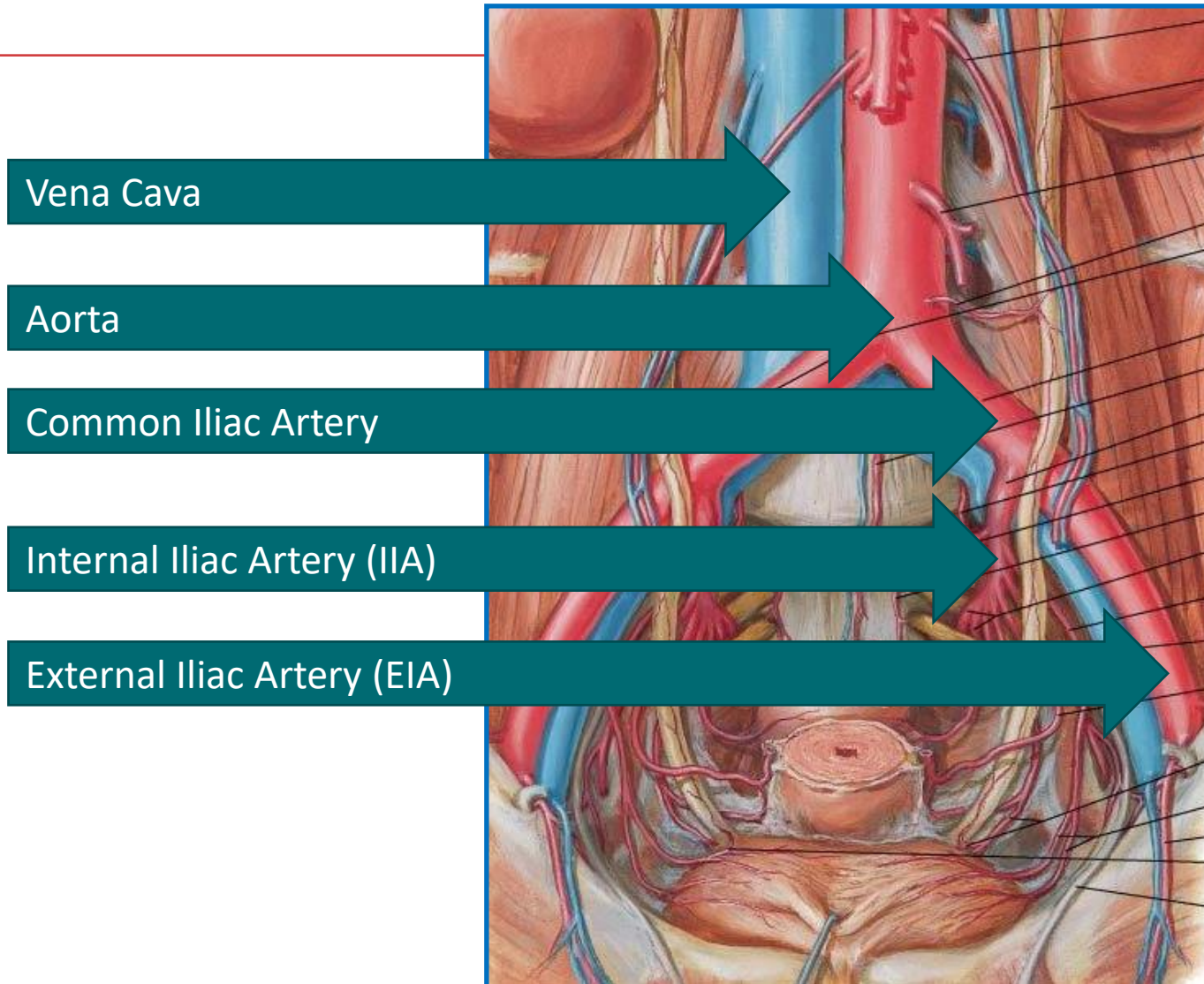
- **Bleeding** (bladder pedicles; dorsal vein complex)
 - Use Ligasure/Vessel sealer or Metal Clips
- **Bowel injury** (e.g. rectum)
 - Close a defect in 2 layers
 - In case of prior radiation therapy, consider (temporary) diverting colostomy



2. Pelvic lymph node dissection



2. Pelvic lymph node dissection



Vena Cava

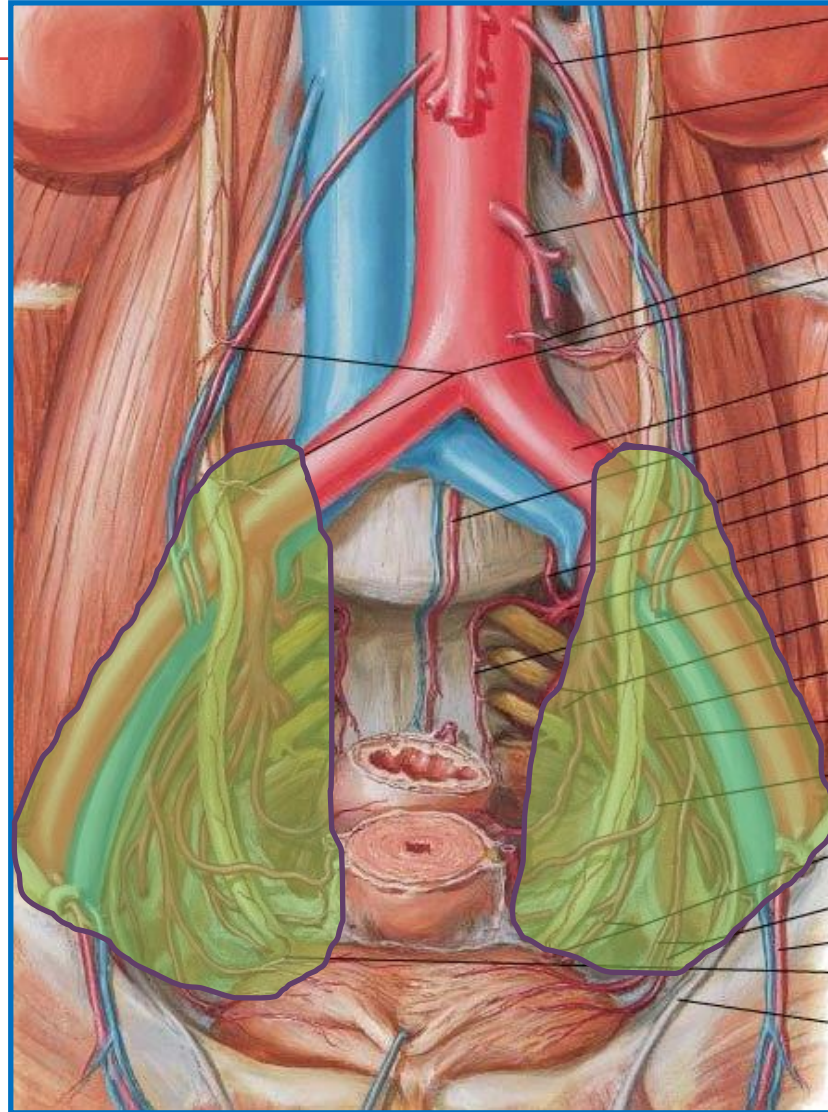
Aorta

Common Iliac Artery

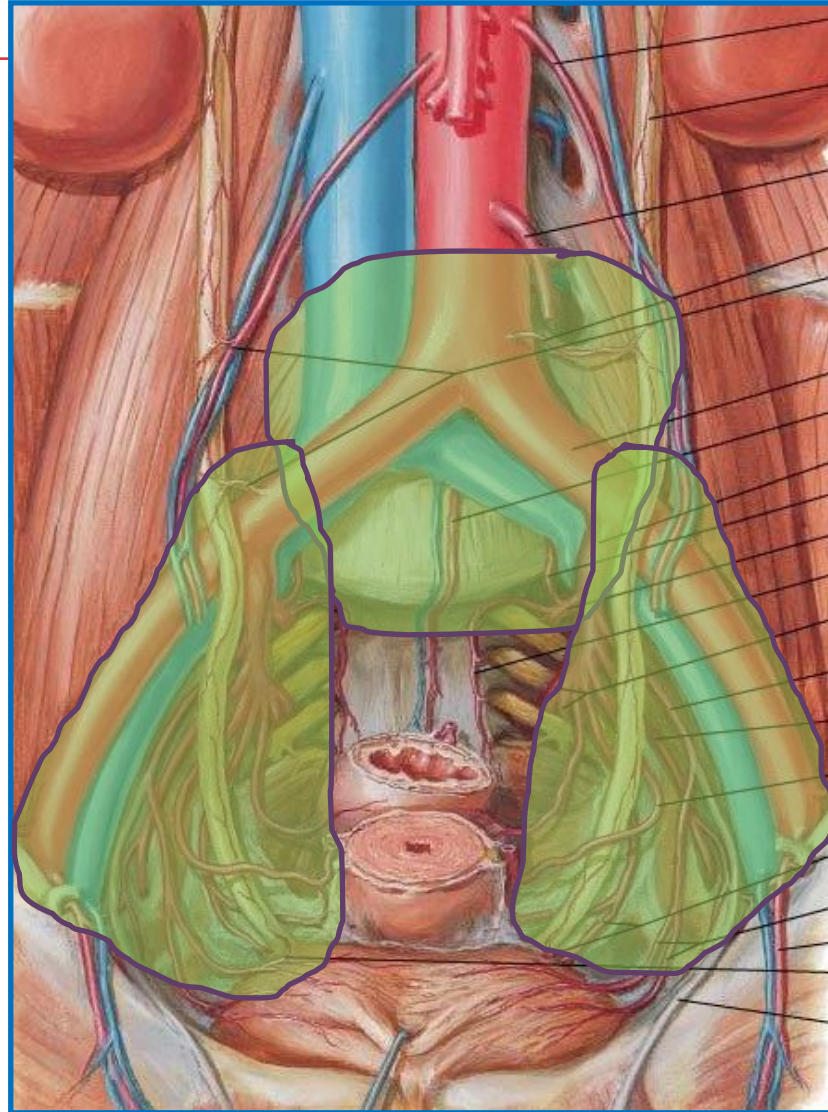
Internal Iliac Artery (IIA)

External Iliac Artery (EIA)

2. Pelvic lymph node dissection

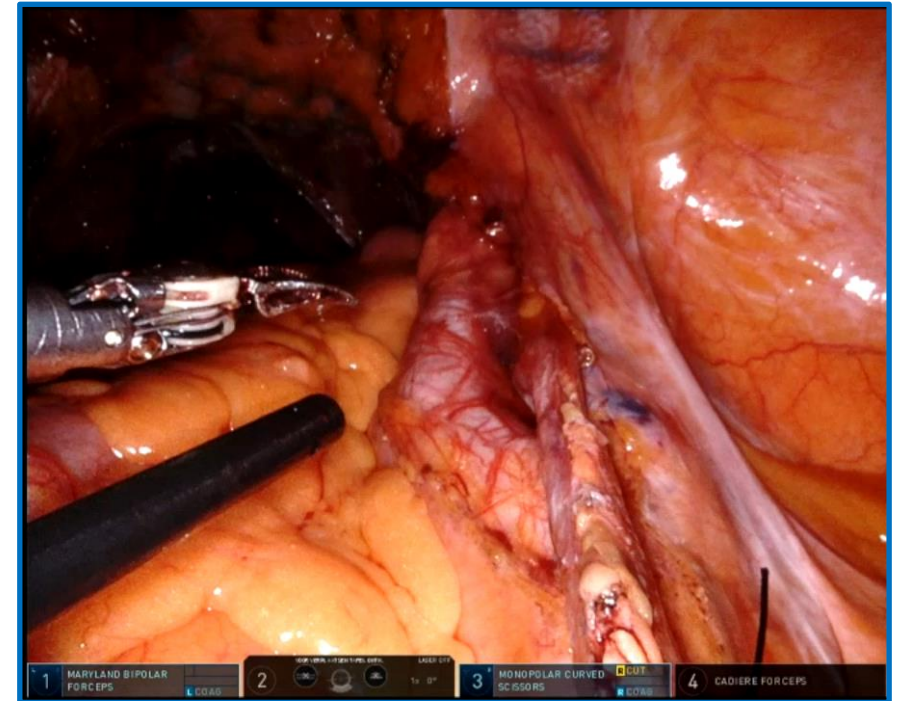


2. Pelvic lymph node dissection

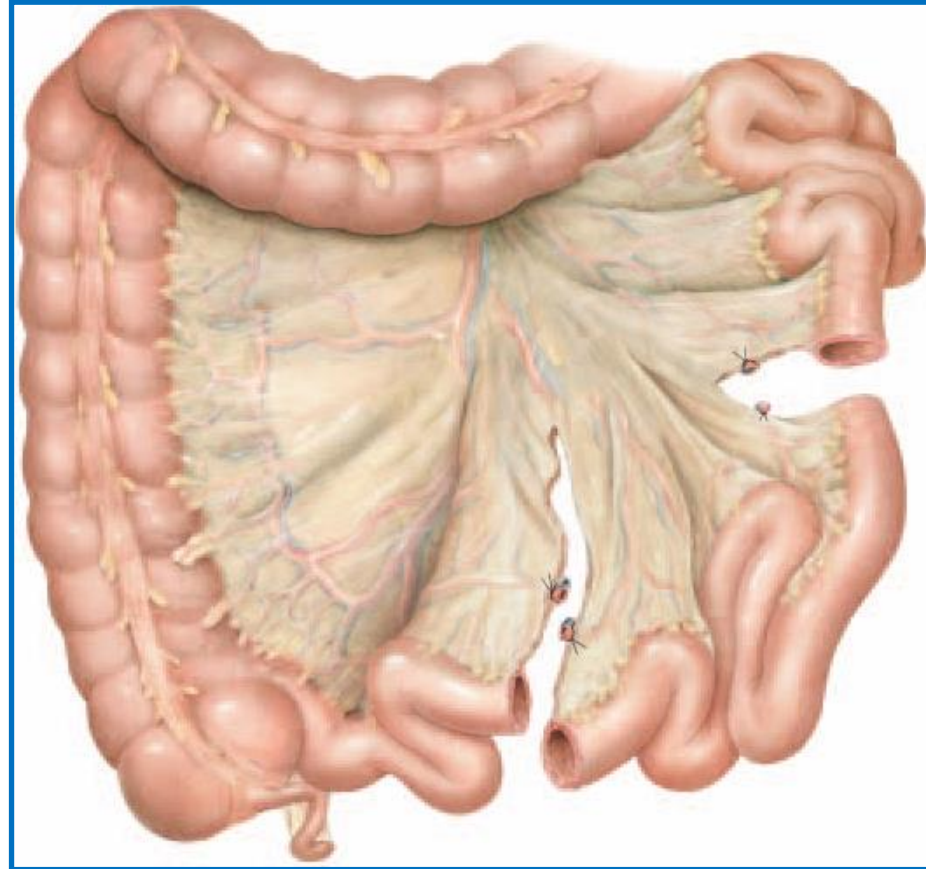


2. Pelvic lymph node dissection

- **Vascular injury** (ext/int iliac artery/vein)
- **Lymphocele**
 - Drainage via urethra or percutaneous
- **Obturator Nerve**
 - Neuropraxia: time
 - Transection: primary suturing

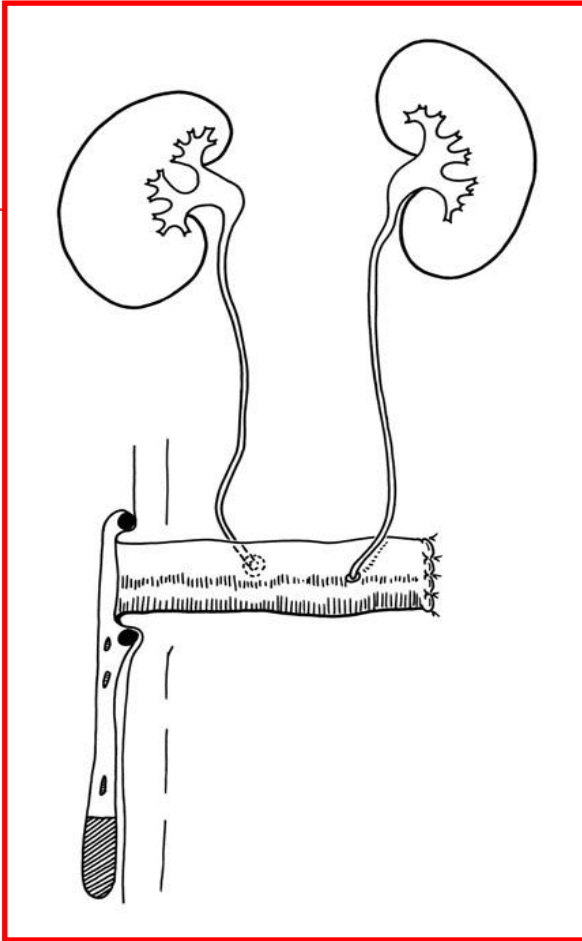


3. Reconstruction urinary tract

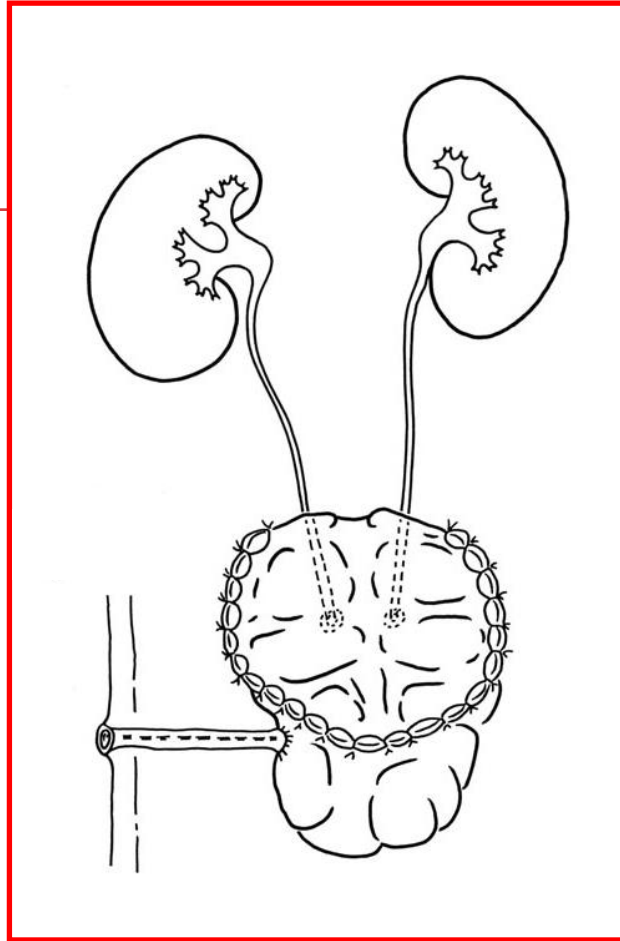


Isolation Bowel Segment

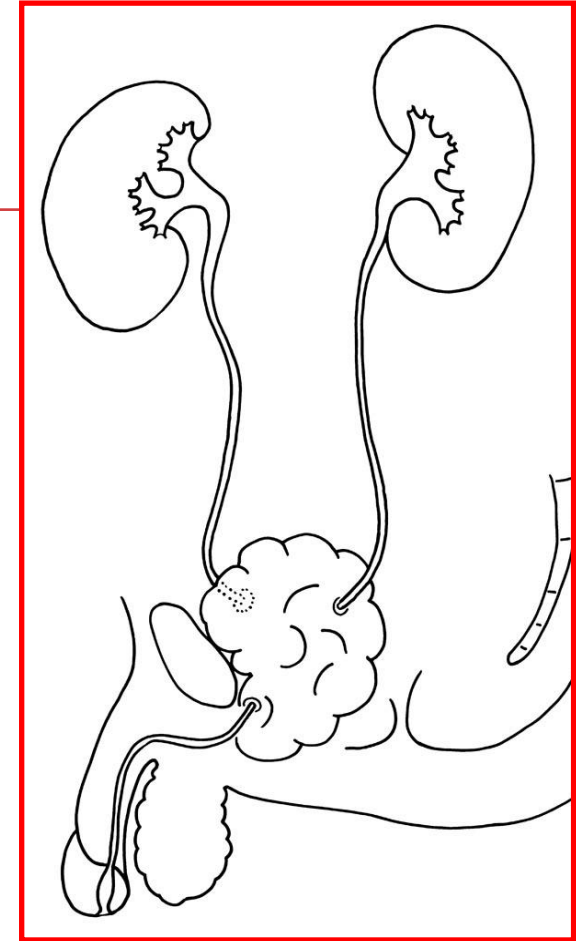
Studer; BJUI 2004



Ileal Conduit



Indiana Pouch



Neobladder

Complications

- **Infections**
 - Rule out obstruction
 - Antibiotics
- **Ileus**
 - 1.6-23.5% (definition variable)
 - ERAS protocols
- **Leakage/dehiscence of ureteral anastomosis**
 - Too much tension (move bowel -> ureter)
 - Ischemia
 - Insufficient suturing
 - Percutaneous Nephrostomy
 - Single J-stents
 - Catheter in conduit/reservoir



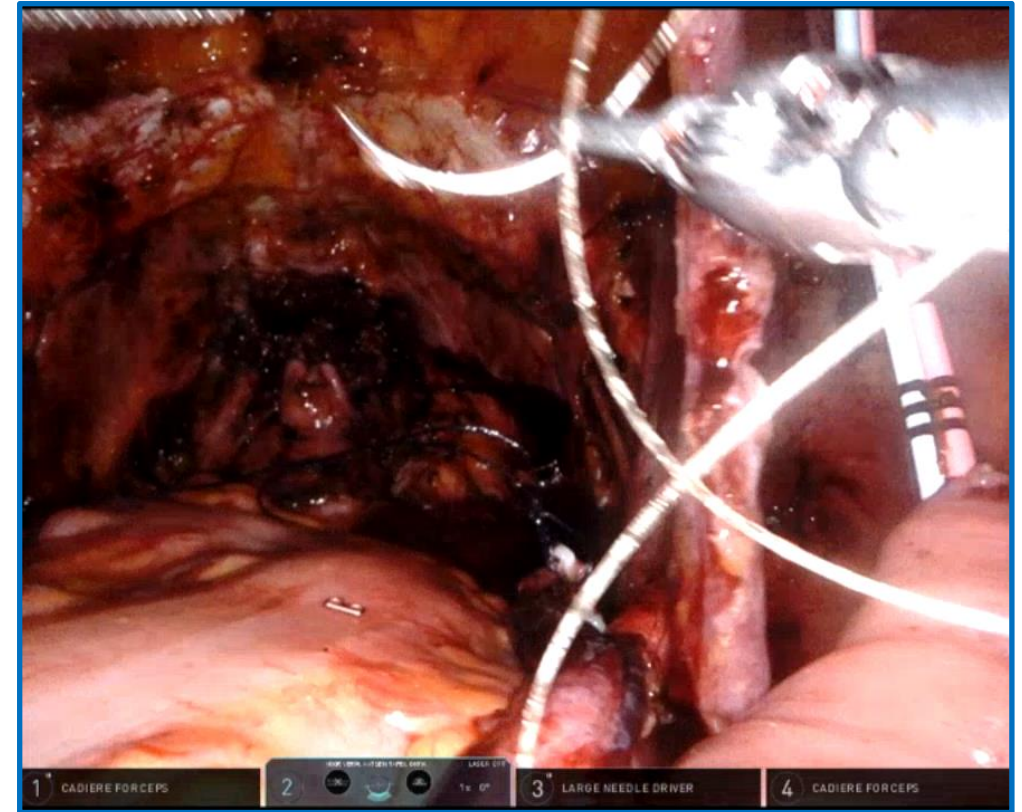
Complications

- **Obstruction of ureteral anastomosis**
 - Edema
 - Angulation at insertion in bowelsegment
 - Hematoma compressing the ureter
 - Percutaneous Nephrostomy
 - Single J-stents
- **Leakage intestinal anastomosis**
 - Rare (especially with staple technique)
 - Pelvic abscess (drainage)



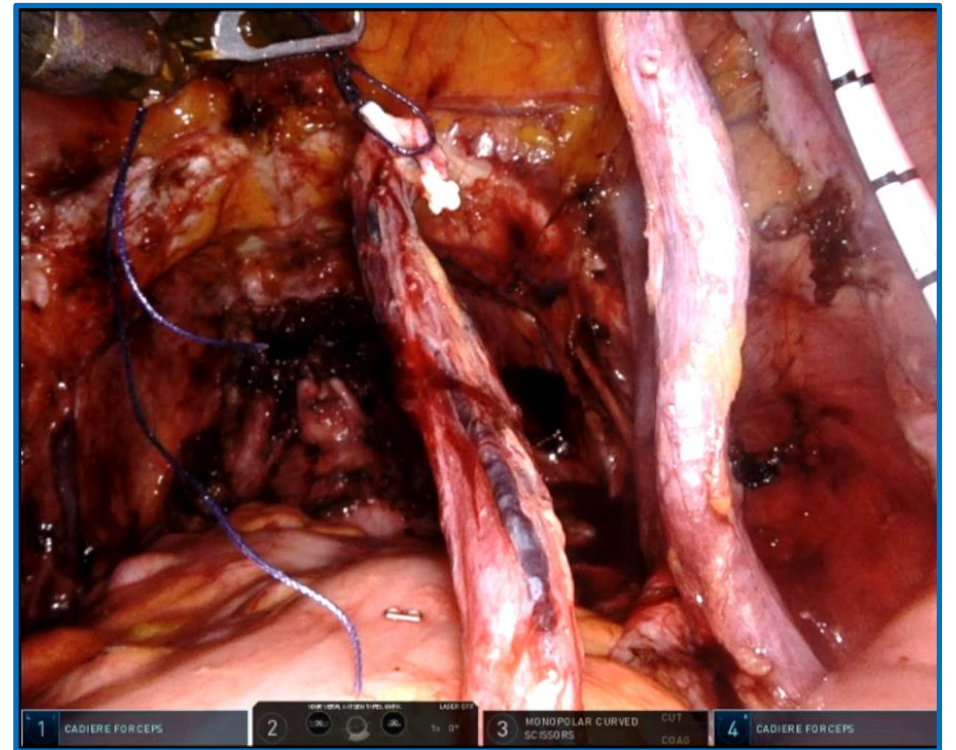
Ureteroenteric anastomotic strictures (UES)

- Literature: prevalence up to 12-25%
 - Mainly < 12 months
 - Ischemia/kinking
 - Prior radiotherapy
 - Following leakage: local fibrosis
 - Cancer (Persistence/Recurrence)
 - Bricker vs Wallace no stat. differences
 - **Options:**
 - Endo-dilatation and single J-stent
 - Excision and reimplantation
- **Long term followup!**



Ischemia

- Prevent traction on anastomosis/kinking
- Preservation of periureteric adventitial tissues
- Bring bowel toward ureter
- Vascularization distal ureter
 - ICG (Indocyanine Green fluorescent dye)
 - Firefly (Da Vinci Robot)



Late complications urinary diversion

- **Diarrhea**
 - Especially following radiotherapy
- **Vit B12 Deficiency**
 - After the terminal ileum is harvested
 - Anemia, mental changes, neurologic defects
- **Metabolic disturbances**
 - Hyperchloremic metabolic acidosis
- **Renal insufficiency**
 - Ultrasound and Lab-tests
 - Urinary stasis
- **Ureteroenteric anastomotic strictures**



Late complications urinary diversion

- **Urostomy related complications**
 - Peristomal dermatitis (poor fit of appliance)
 - Hyperkeratosis, scarring, stenosis
 - Stenosis/Retraction
 - Stomal revision
- **Incisional hernia**
 - Parastomal hernia
 - Problems fitting appliance/material
 - Bowel incarceration
 - Conservative or mesh repair

