

Minimally invasive management of a complex bilateral renal anomaly in an infant



A case of bilateral duplex collecting systems
with periurethral ectopic upper pole ureters and
a right cecoureterocele

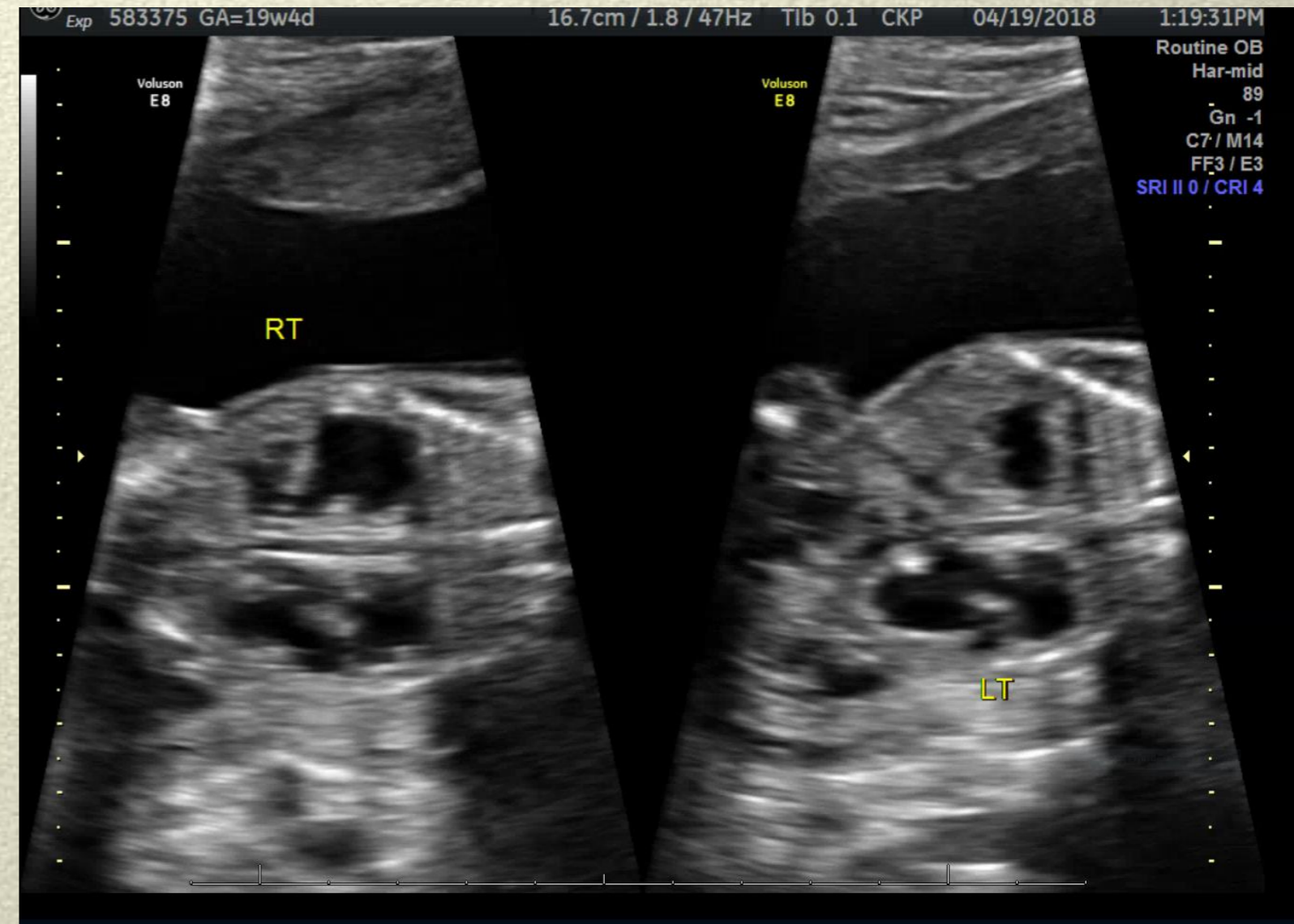
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Newborn female - prenatal UTD

- **18 weeks: UTD A2-3**
 - Bilateral hydroureteronephrosis
 - Duplex right system
 - Right ureterocele
- **Serial ultrasounds**
 - Dilation and cortical thinning continue to progress



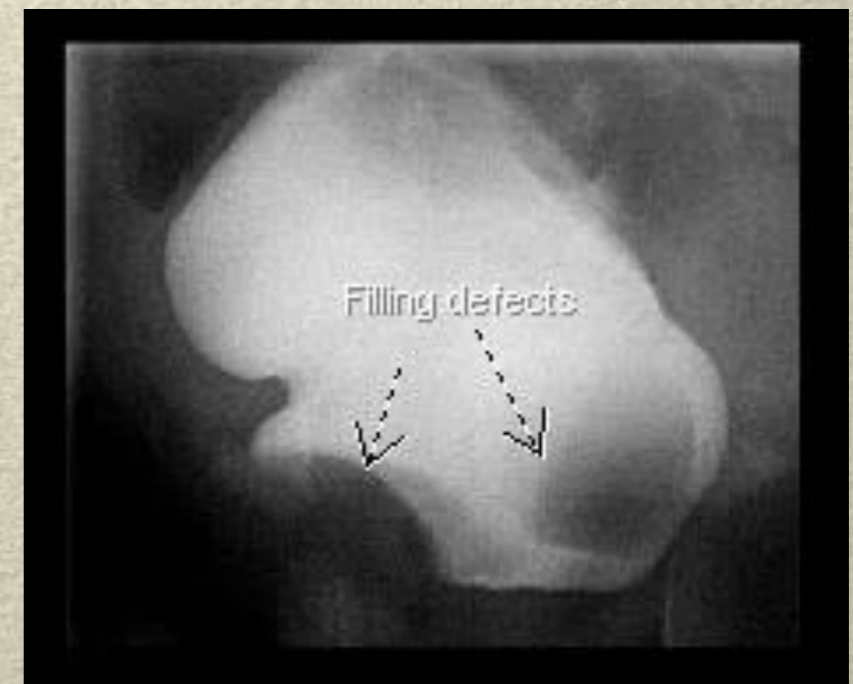
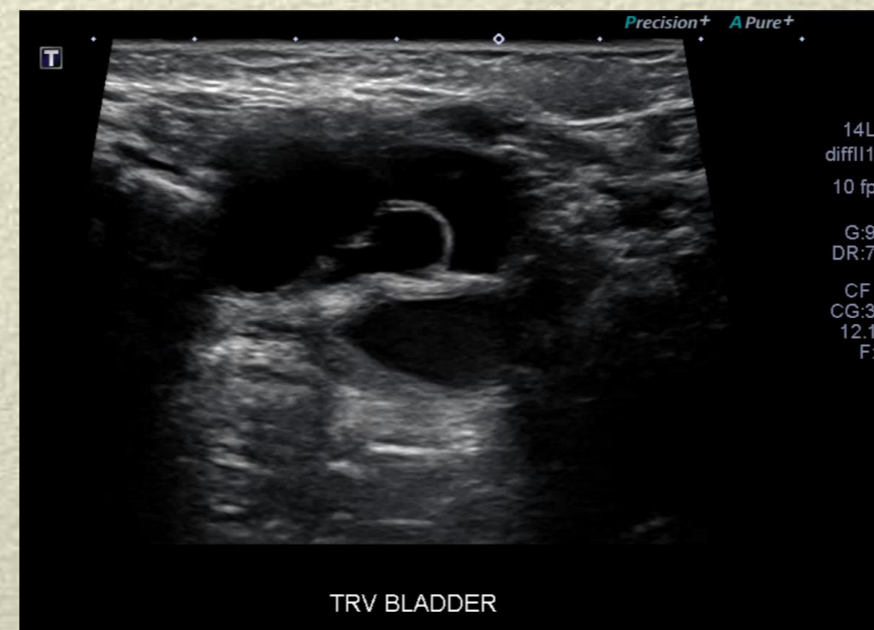
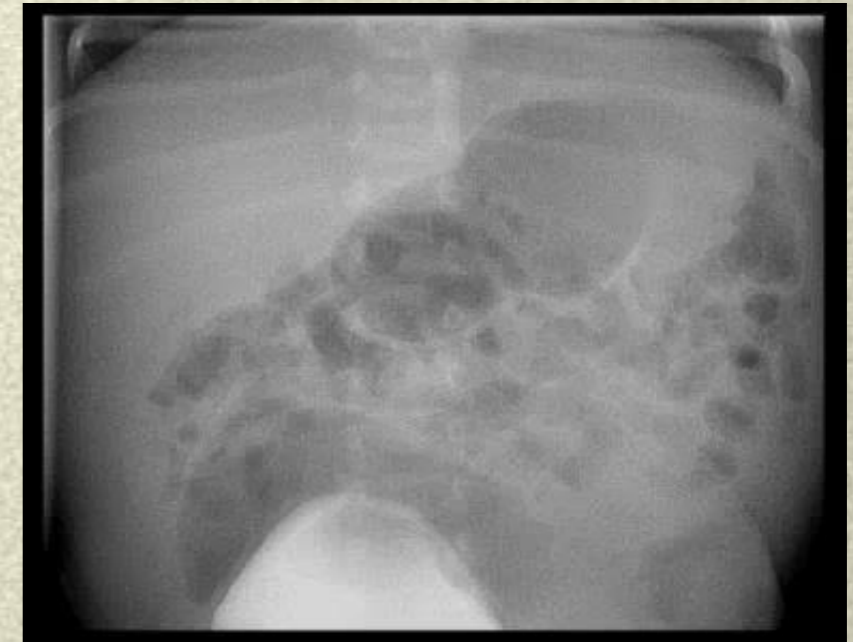
Ultrasound - 2 days of life

- **RIGHT system:**
Complete duplication and a dilated right upper pole ureter
- **LEFT system:**
Severe hydronephrosis. Also a complete duplication
- **BLADDER:** Possible ureterocele

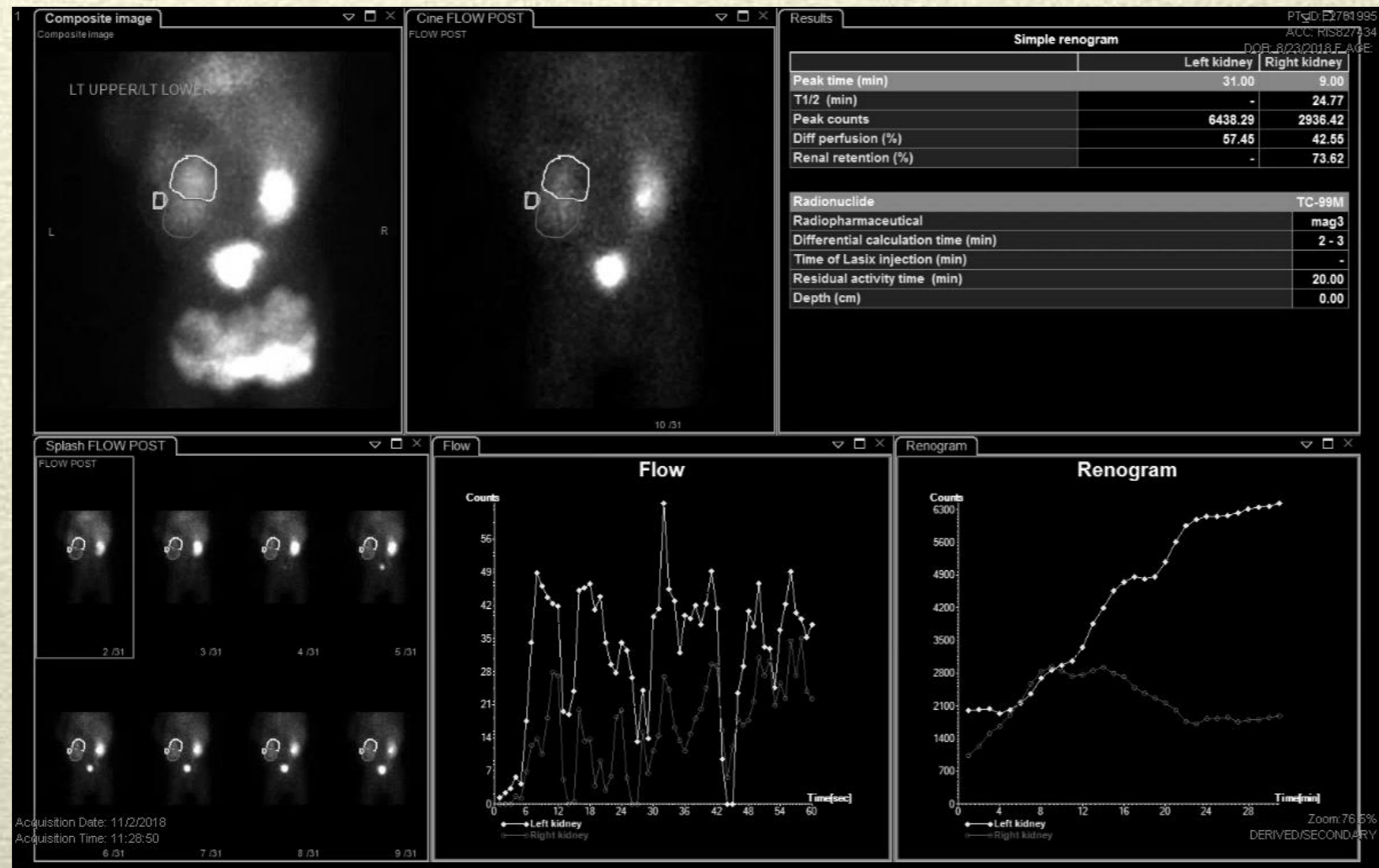


Ultrasound, VCUG - 2 weeks

- Patient doing well, no UTIs
- **Physical exam** unremarkable
- **Repeat renal ultrasound** ~ stable
- **VCUG** w/o evidence of reflux, + filling defects



MAG3 – 6 weeks



- **Right = 71%**

upper moiety: 54%
lower moiety: 46%

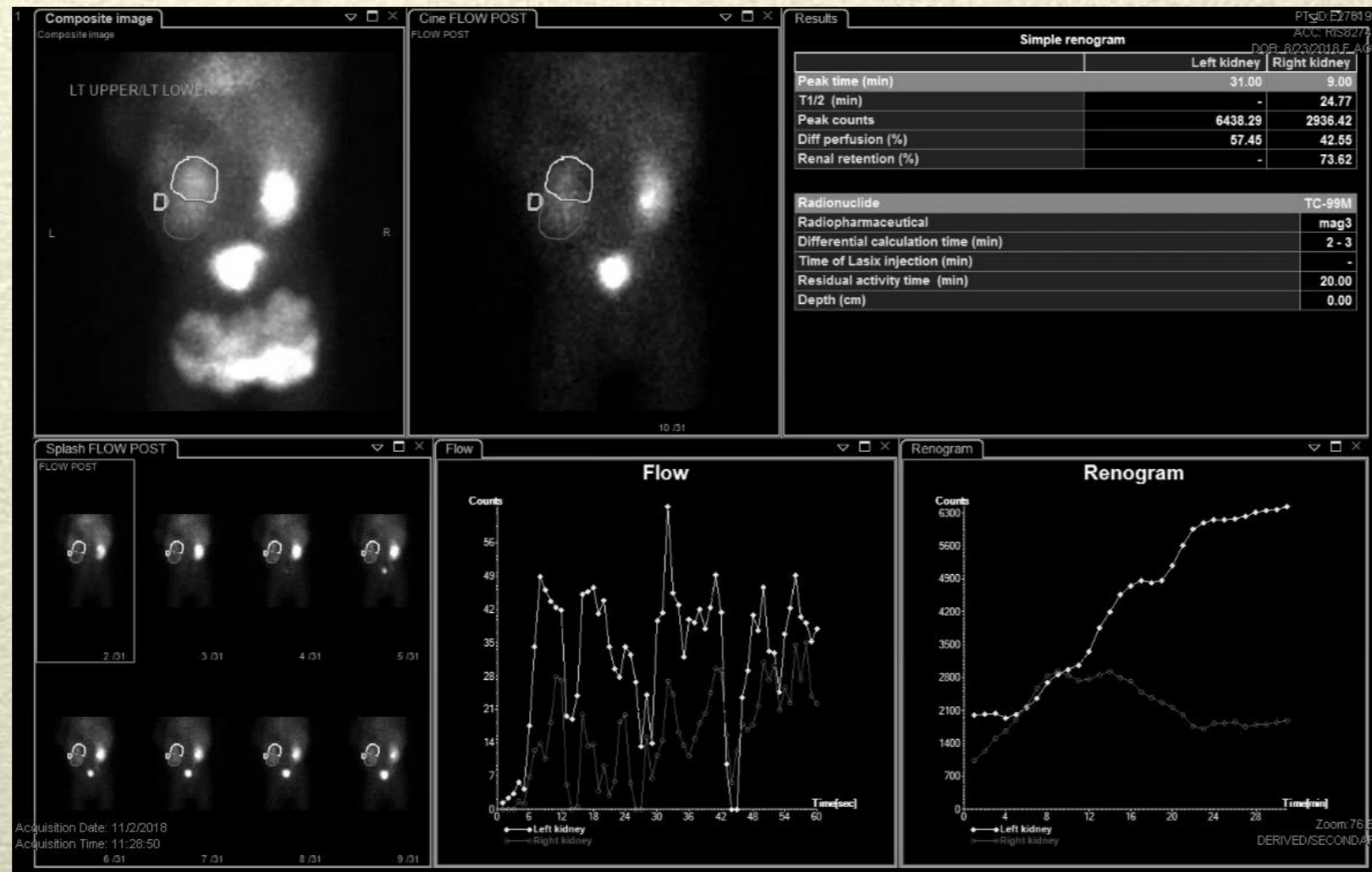
- **Left = 29%**

upper moiety: 57%
lower moiety: 43%



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MAG3 – 6 weeks



• Right = 71%

upper moiety: 54%
lower moiety: 46%

• Left = 29%

upper moiety: 57%
lower moiety: 43%



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EUA, Cysto, & Puncture - 8 months

Campbell-Walsh Urology



Exam Under Anesthesia

- Orifice to the left of the urethra



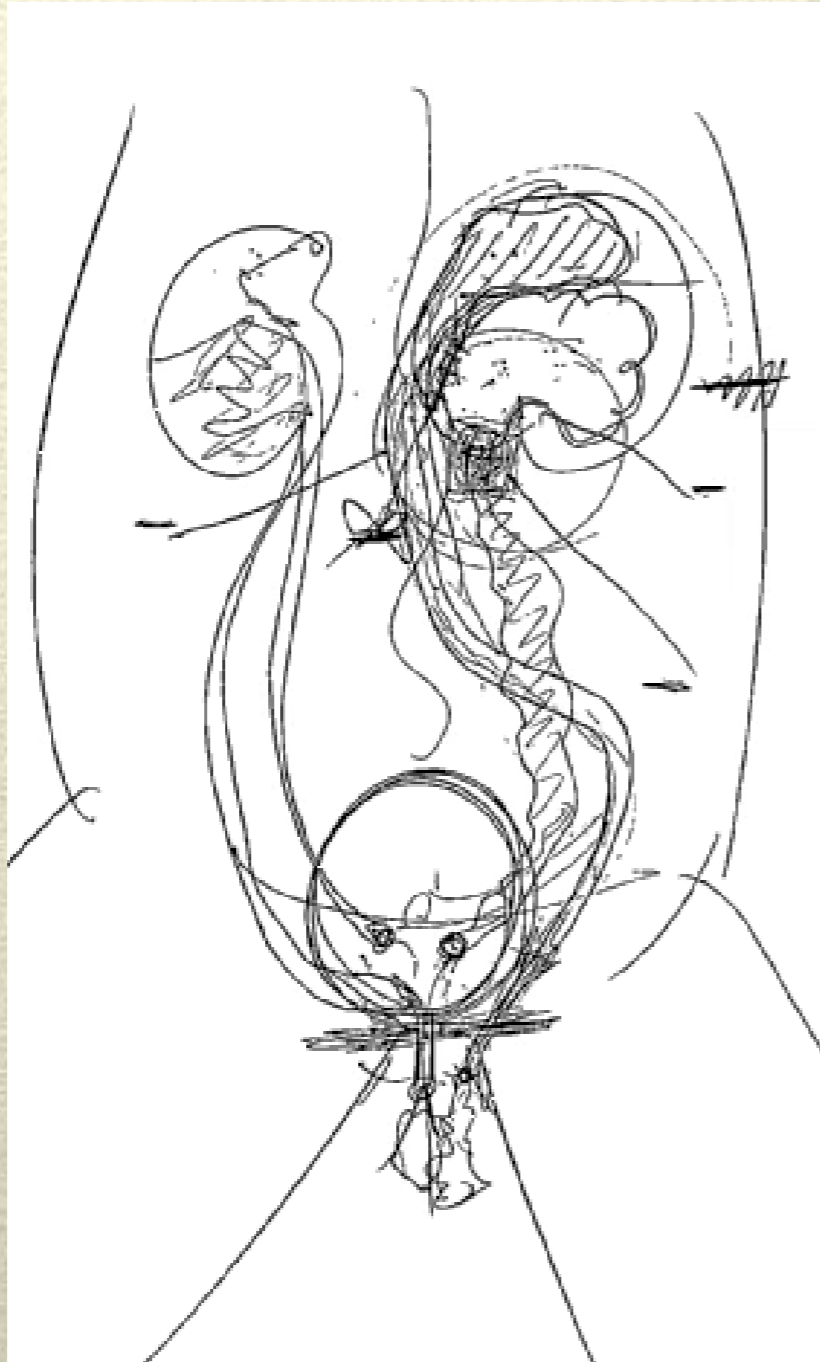
Cystoscopy

- Tortuous, dilated left lower pole ureter, no passage of contrast into the pelvis
- Unable to cannulate right orifice
- Right ureterocele decompressed



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Surgical Planning - 8 months



PLAN:

Robot-assisted laparoscopic
left lower pole pyeloplasty
and left upper to lower
ureteropyelostomy



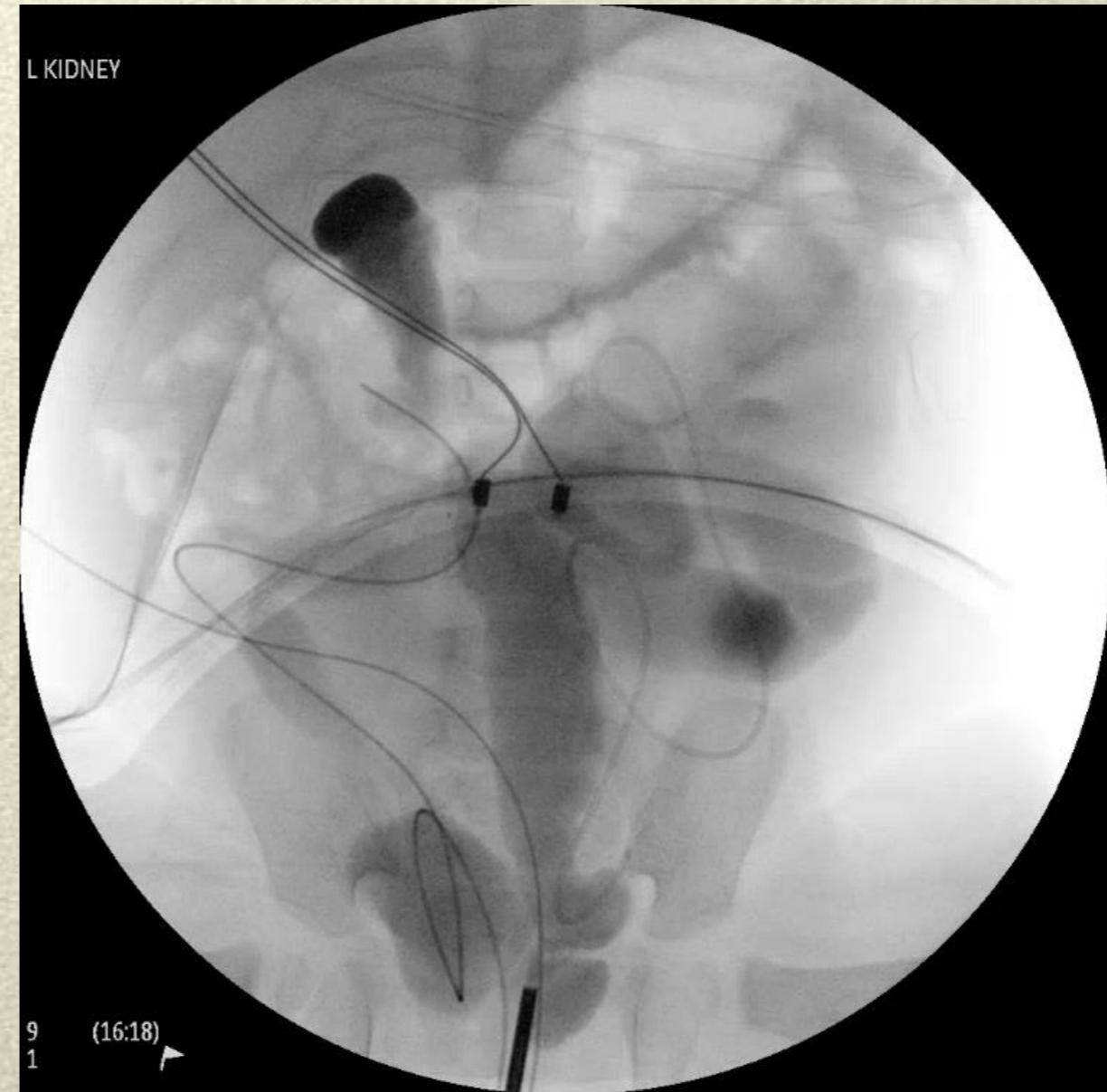
Surgical repair - 10 months

Intra-op findings

- Additional right ectopic periurethral opening
- Right cecoureterocele
- Patent left UPJ

Procedure performed:

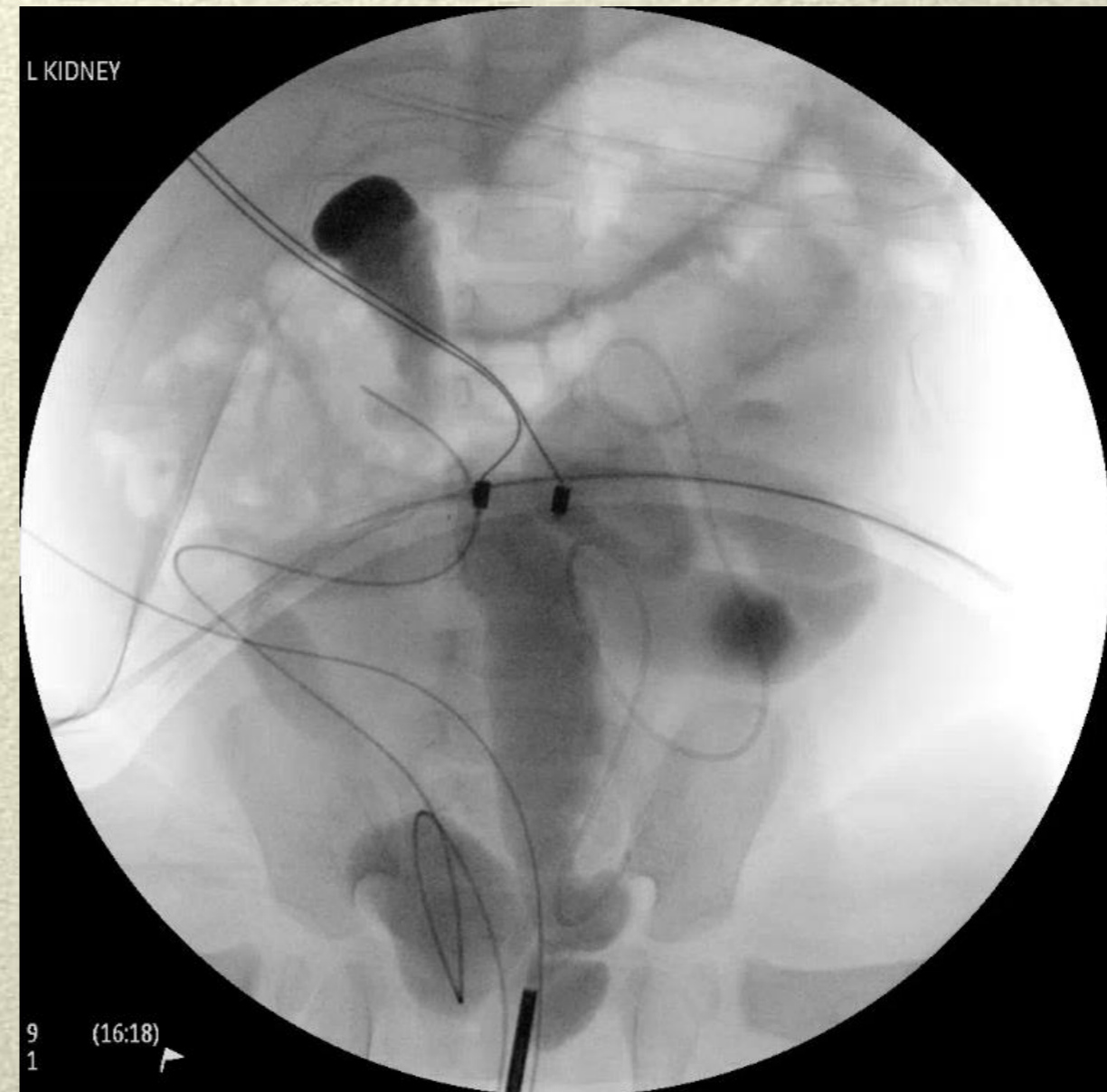
robotic- assisted laparoscopic
bilateral ureteroureterostomies



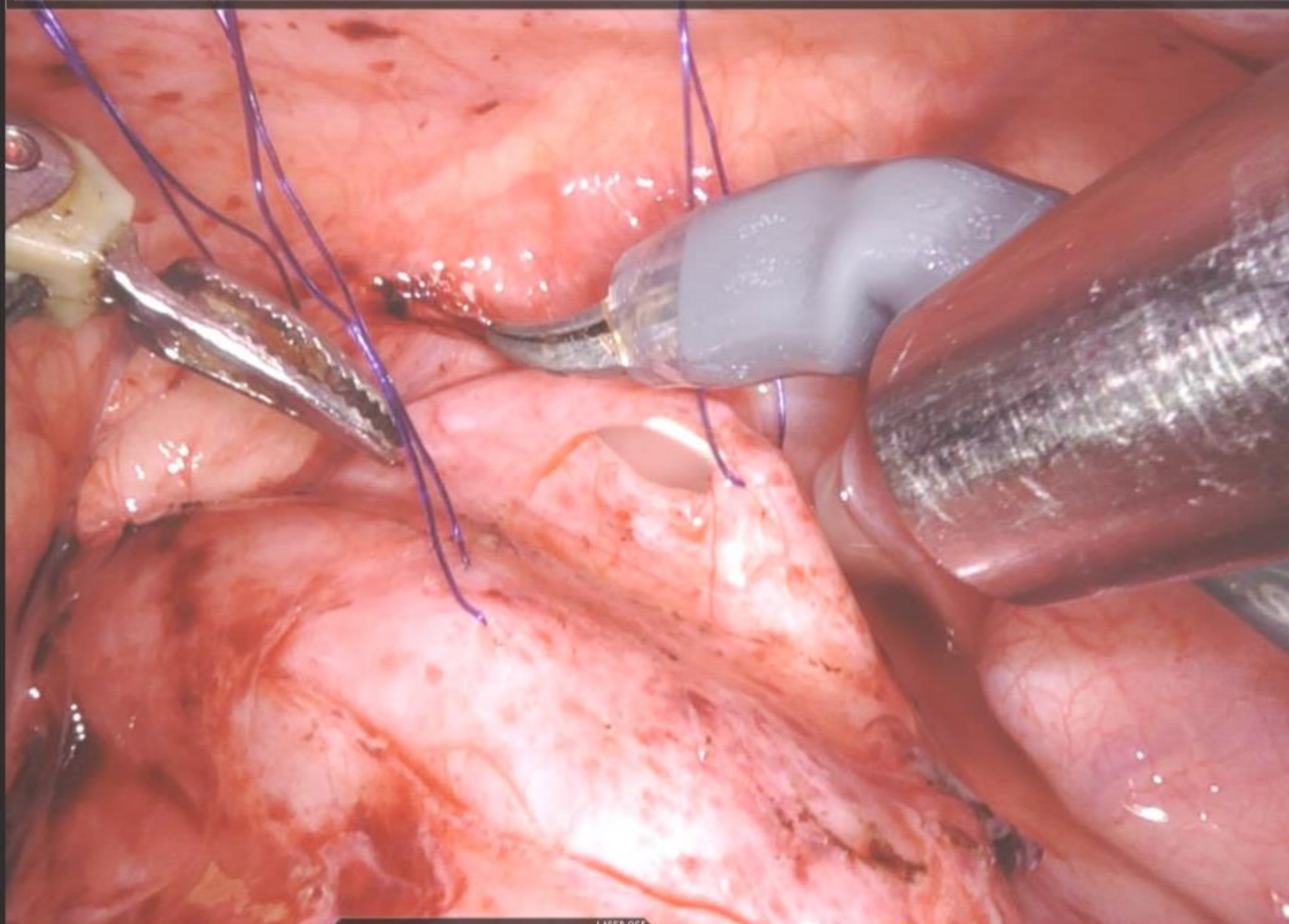
Surgical repair - 10 months

Bilateral ureteroureterostomies

- (4) 8 mm ports
- Ectopic (donor) ureter divided at the pelvic brim
- Recipient ureter opened and end-to-side anastomosis was performed over a double J stent in the recipient ureter



① FIBER CABLE CONNECTORS REQUIRE CLEANING.



1 MARYLAND BIPOLAR FORCEPS L COAG

2 LASER OFF 0° 26° R 1x 30°

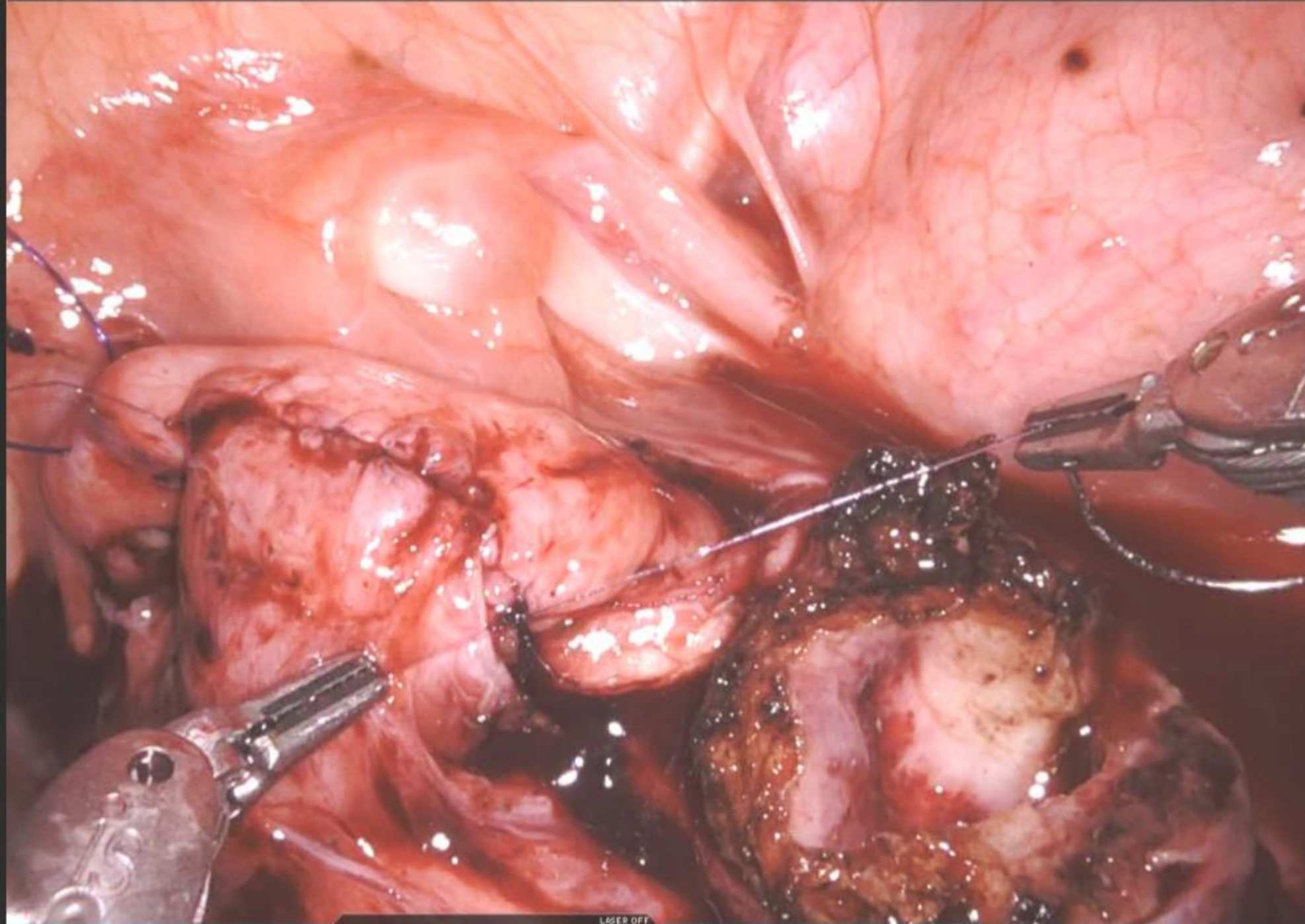
3 MONOPOLAR CURVED SCISSORS R CUT R COAG

4



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① FIBER CABLE CONNECTORS REQUIRE CLEANING.



1 LARGE NEEDLE DRIVER

2



LASER OFF

3 LARGE NEEDLE DRIVER

4



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Bilateral robotic-assisted ureteroureterostomies

Uncomplicated post-operative course

Advantages

- Single anesthetic
- Minimal blood loss
- Decreased morbidity

Disadvantages

- Decreased working space
- Increased OR time

→ Bilateral repair safe and effective in this patient



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Thank you!



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