URETERIC ADVENTURES

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DEPT OF UROLOGY
DYPMC

CASE 1

57 yr old female complaining of

Right flank pain : 6 months

Dysuria : 15 days

o/h/o Tubectomy 33 yrs back

o/h/o Laminectomy 2 yrs developed DVT of left leg on 15th post op day , IVC filter insertion done

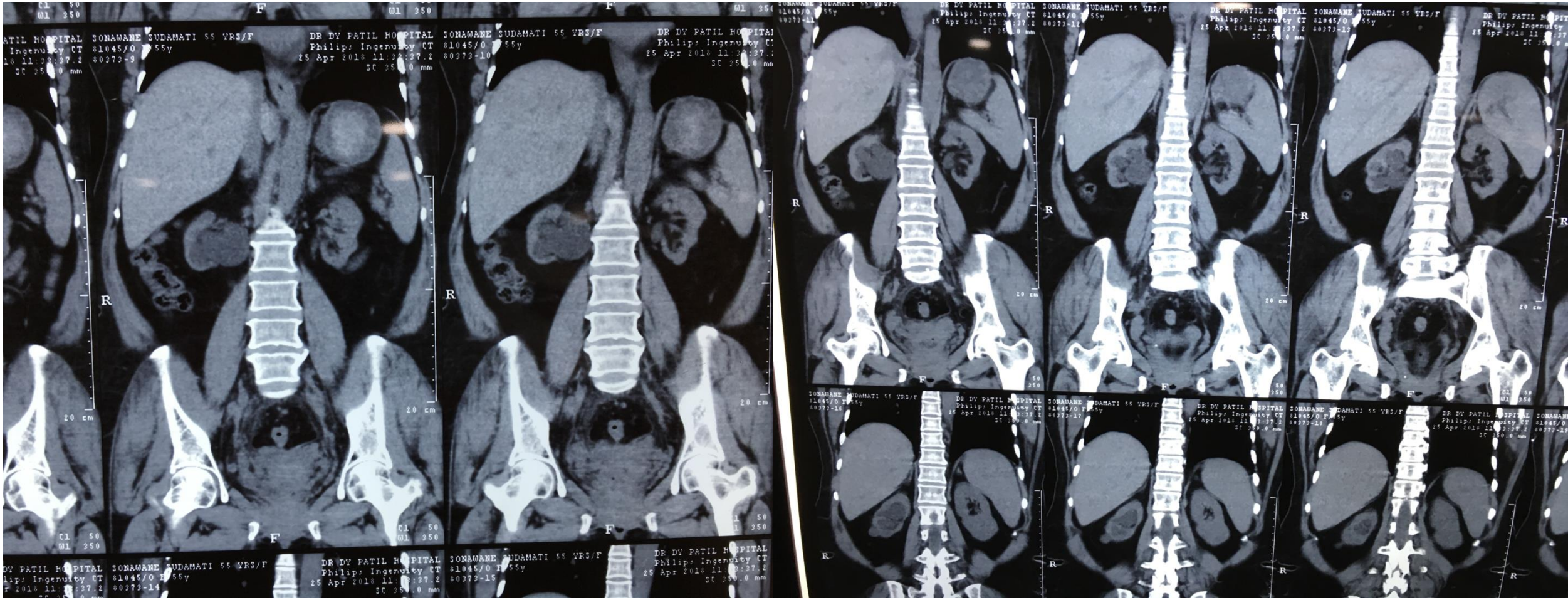
Patient was on warfarin for 1.5 yrs

Known case of hypothyroidism since 2 yrs on Eltroxin 25 microgram

IMAGING

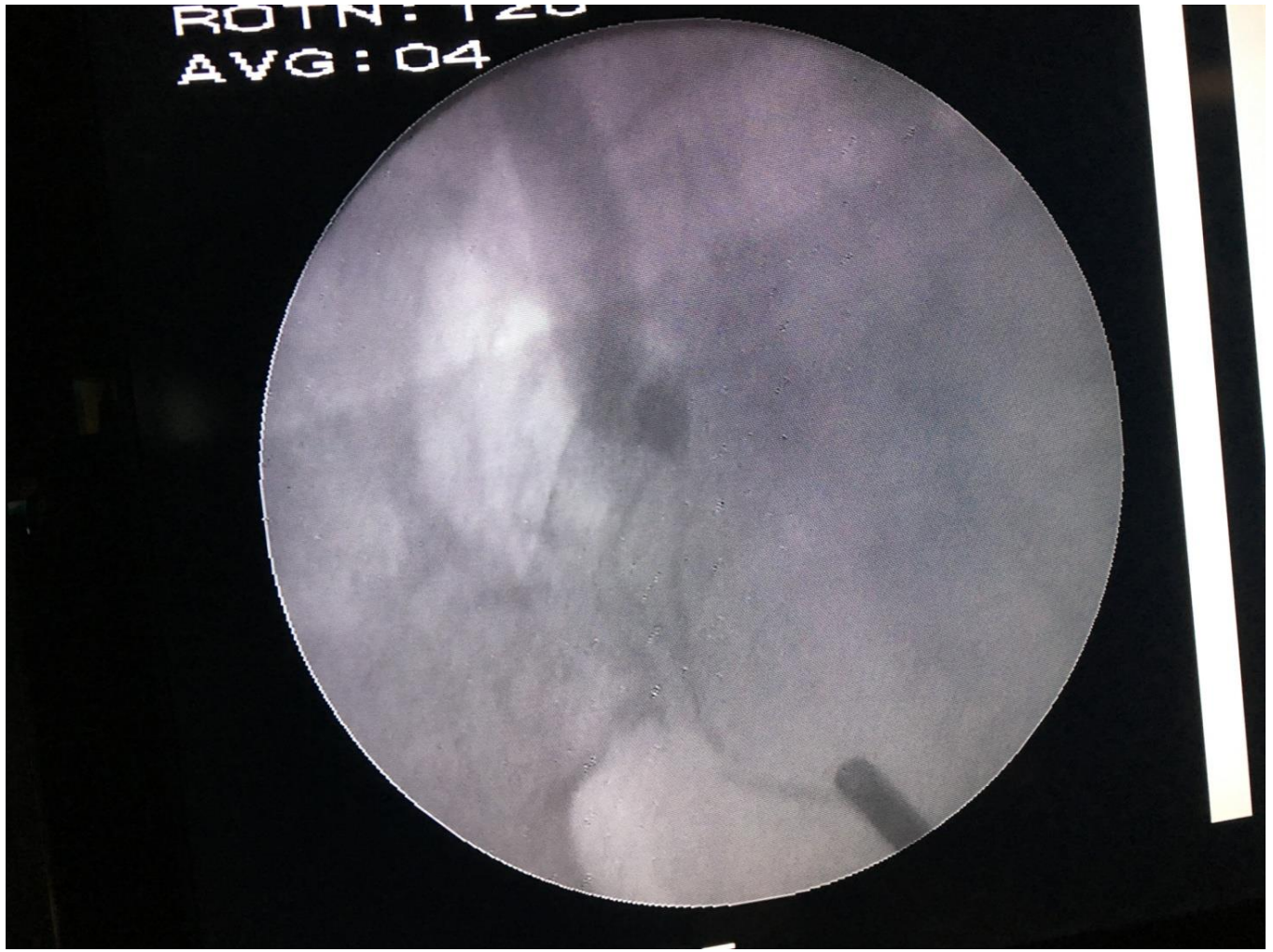
CT KUB

- RK : 7.84*3.9*3.4 cm
- LK : 8.8*4.8*4.2cm
- Gross hydronephrosis noted on right side with hydroureter seen upto the level of iliac vessels crossing.
- Urinary bladder partially distended and shows mildly thickened walls. No calculi seen in urinary bladder.
- IVC filter noted


DR DY PATIL HOSPITAL
Philips Ingenuity CT
SONAWANE SUDAMATI 55 YRS/F
81045/O
80272-9
80272-10
80272-11
80272-12
80272-13
80272-14
80272-15
80272-16
80272-17
25 Apr 2018
R
F
20 cm

CYSTO RETROGRADE PYELOGRAPHY

DYE INJECTED INTO URETER FROM LOWER END WITH CYSTOSCOPE IN BLADDER

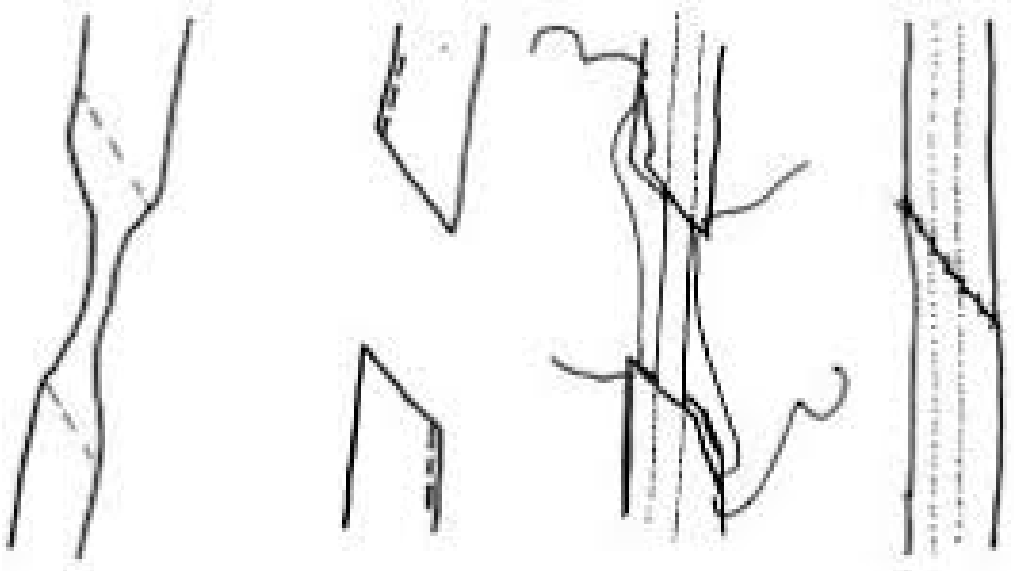


CHOICES

- Primary – repairing primarily
- Ureterostomy – taking ureter out on abdomen
- Trans-Ureteroureterostomy – one ureter to the other side ureter

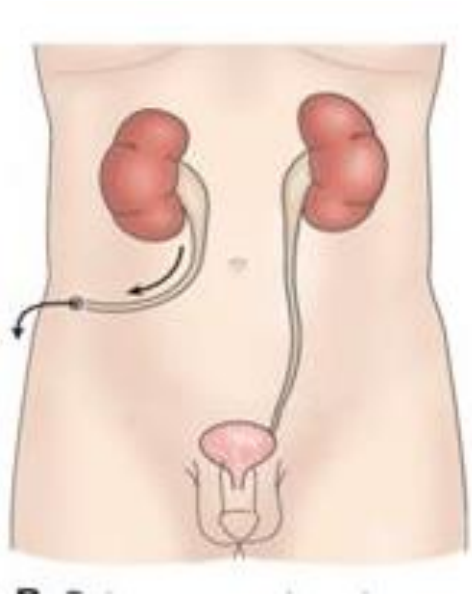
CHOICES

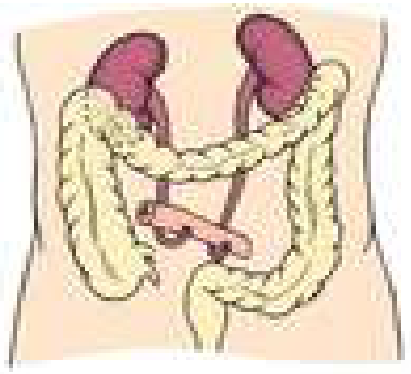
- Primary – repairing primarily
  - For short segment defects
  - End to end anastomosis
  - Good results
  - Limited use



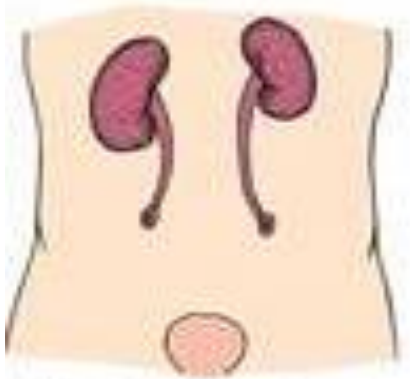
CHOICES

- Ureterostomy – taking ureter out on abdomen
  - Complications- skin excoriation, stoma bag, etc
  - Definitive 2nd surgery,
  - incontinent/continent
  - Terminal ill,
  - Last resort

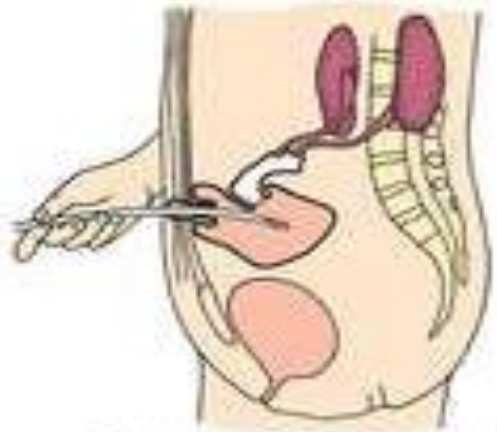




Ileal loop



Double ureterostomy

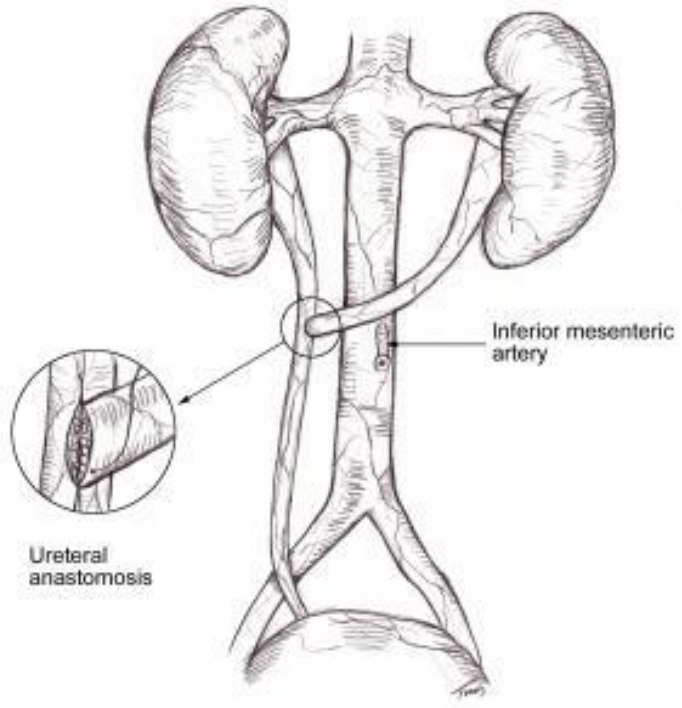


Continent urinary diversion

CHOICES

- Trans-Ureteroureterostomy – one ureter to the other side ureter

  - Should be able to reach,
  - **Reflux to other kidney,**
  - Though easy,
  - Not possible if Proximal length less



BOARI FLAP

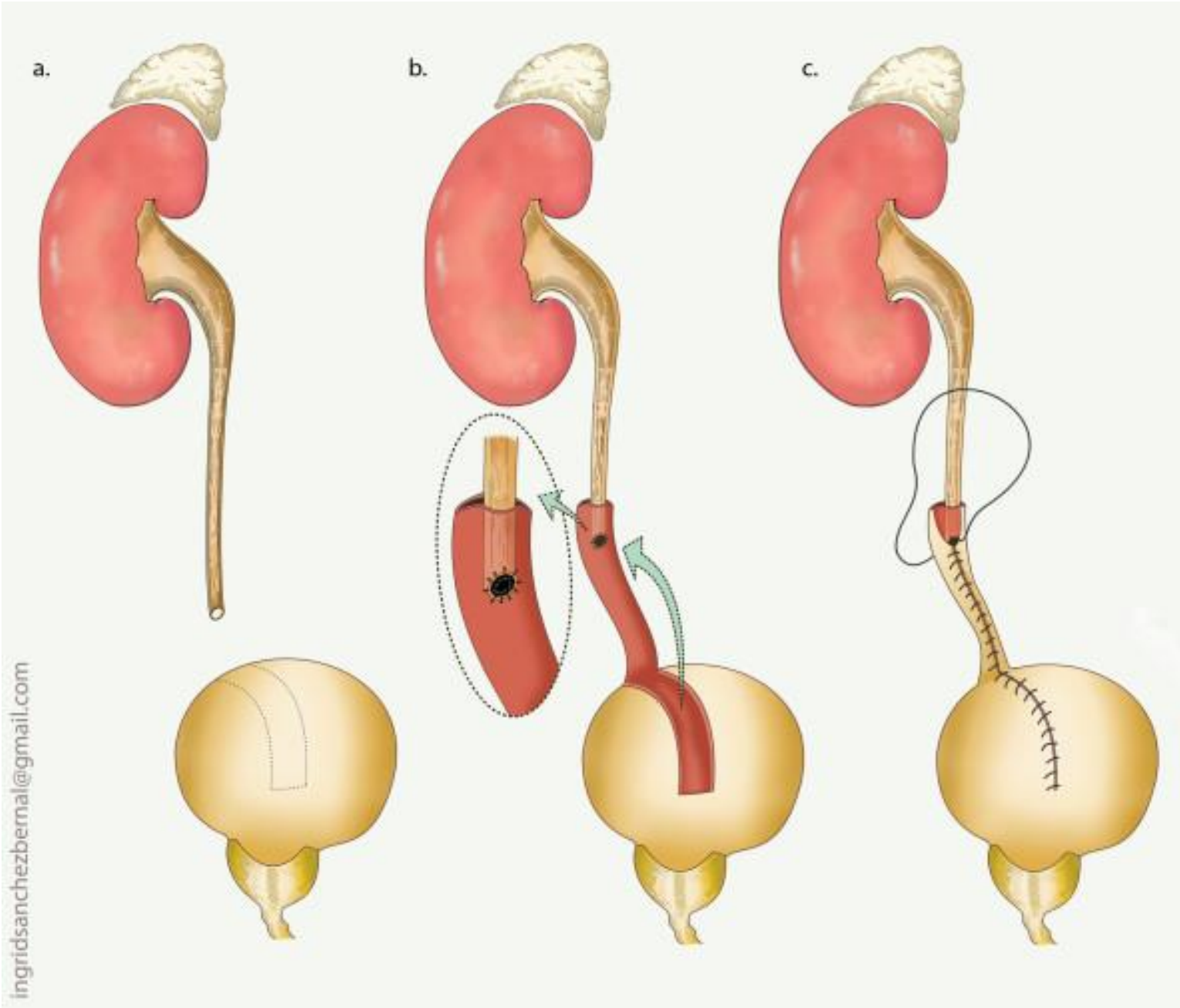
BOARI FLAP

POSTEROLATERAL FLAP OF BLADDER WALL ON SUPERVESICAL ARTERY

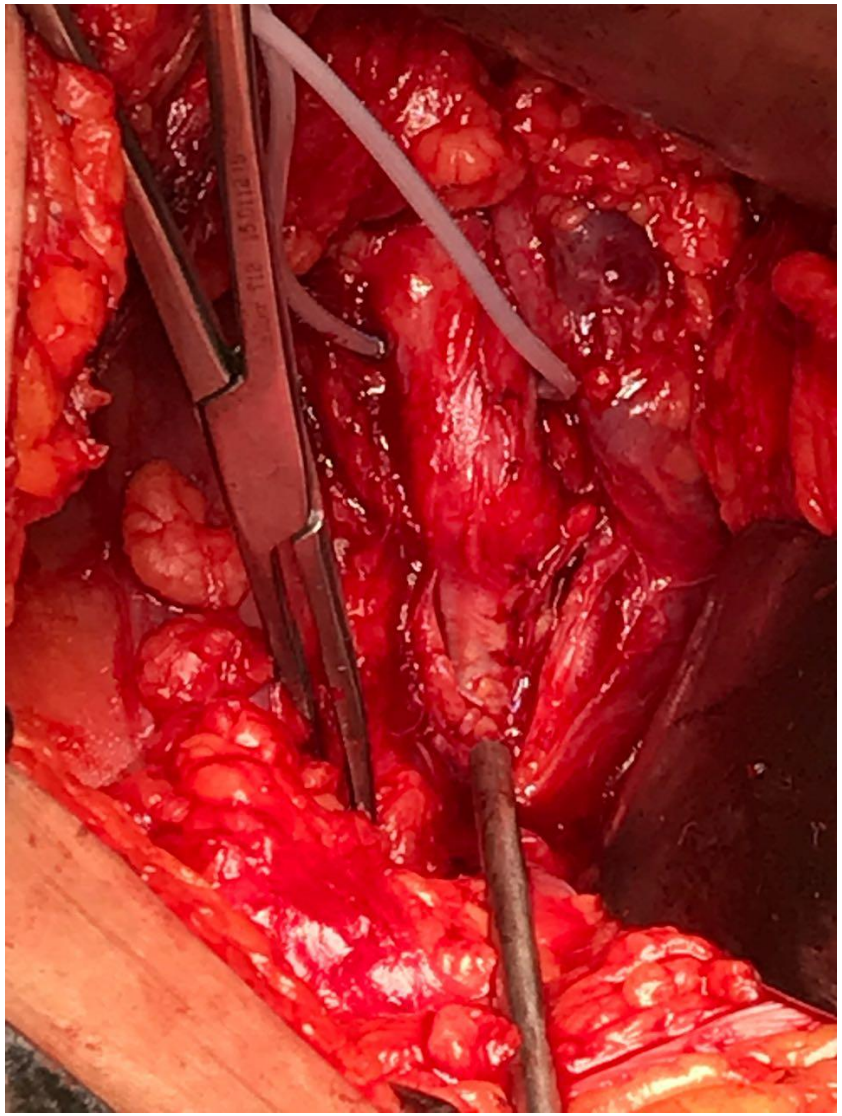
URETER ANASTMOSED END TO SIDE

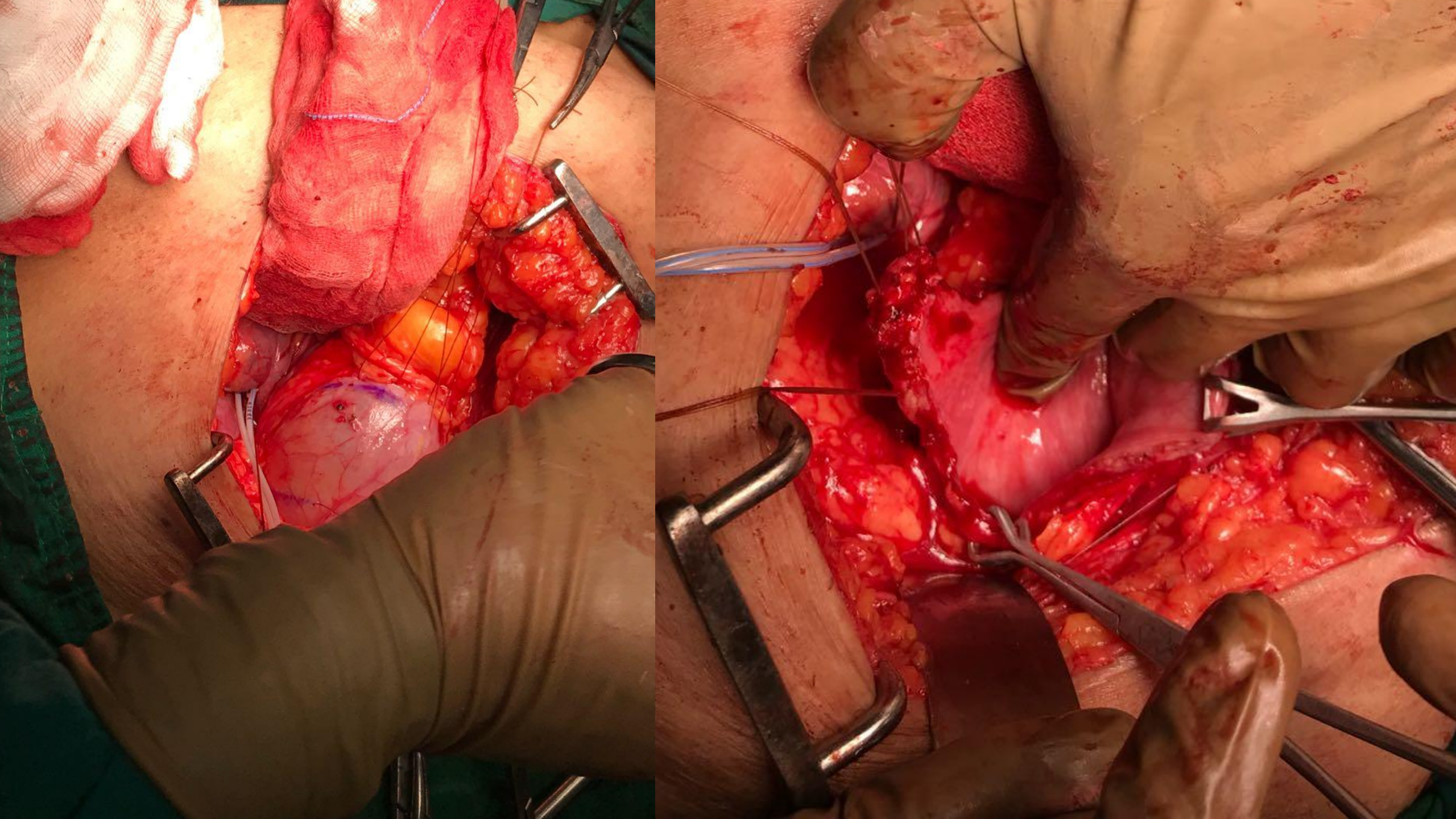
FLAP CLOSED AS A TUBE

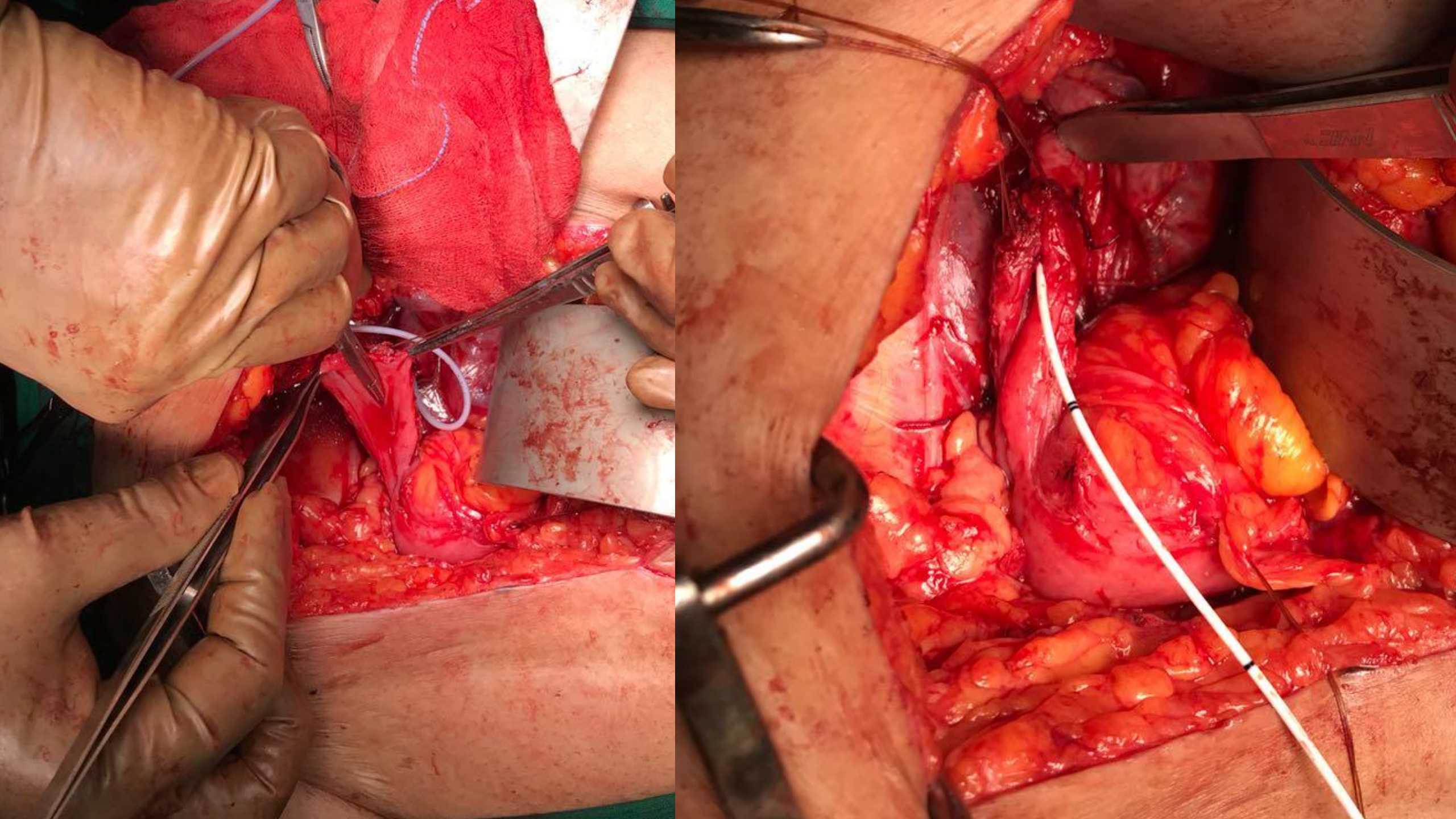
ONE STAGE DEFINITIVE MANAGEMENT FOR LOWER THIRD STRICTURES

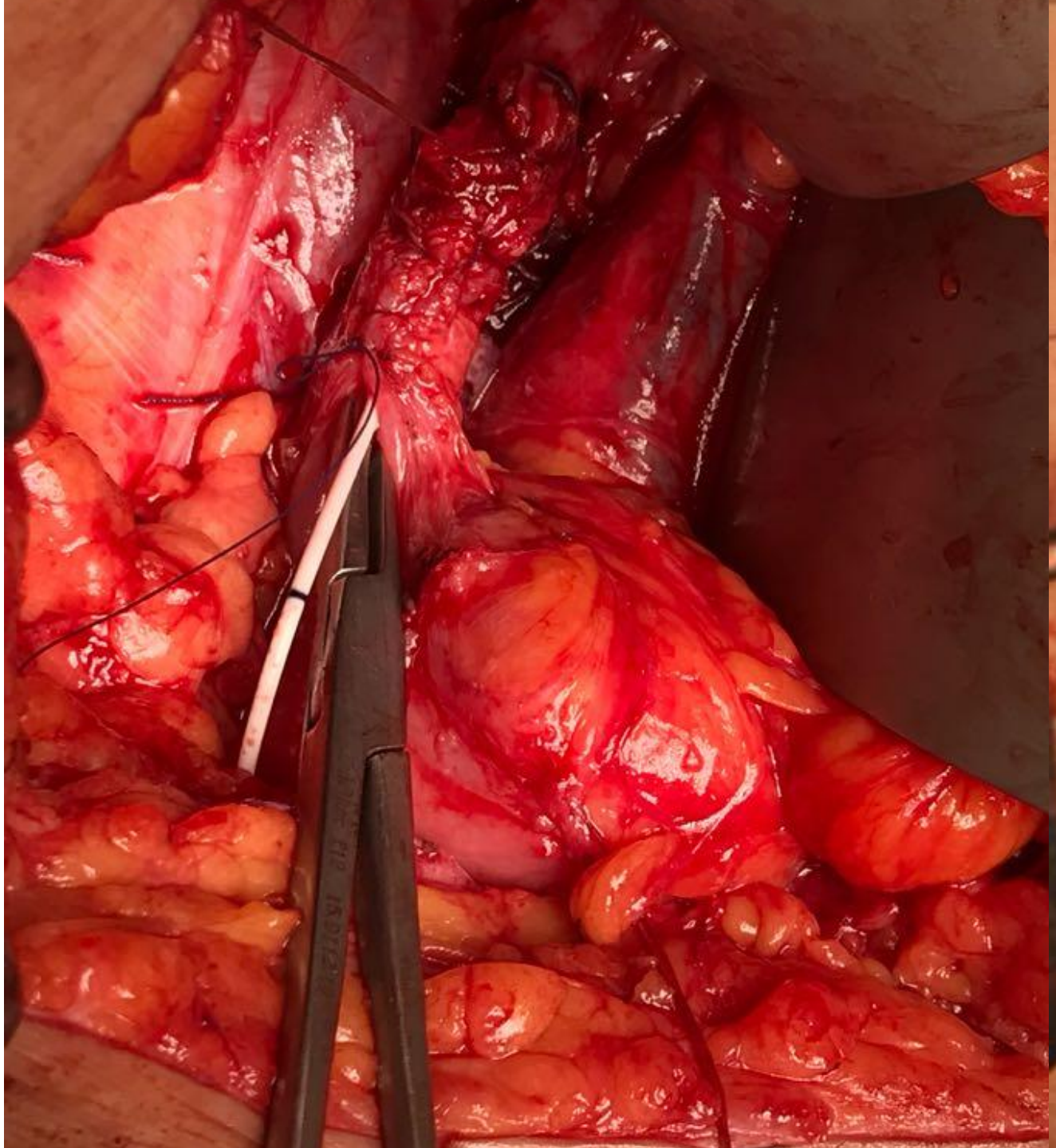


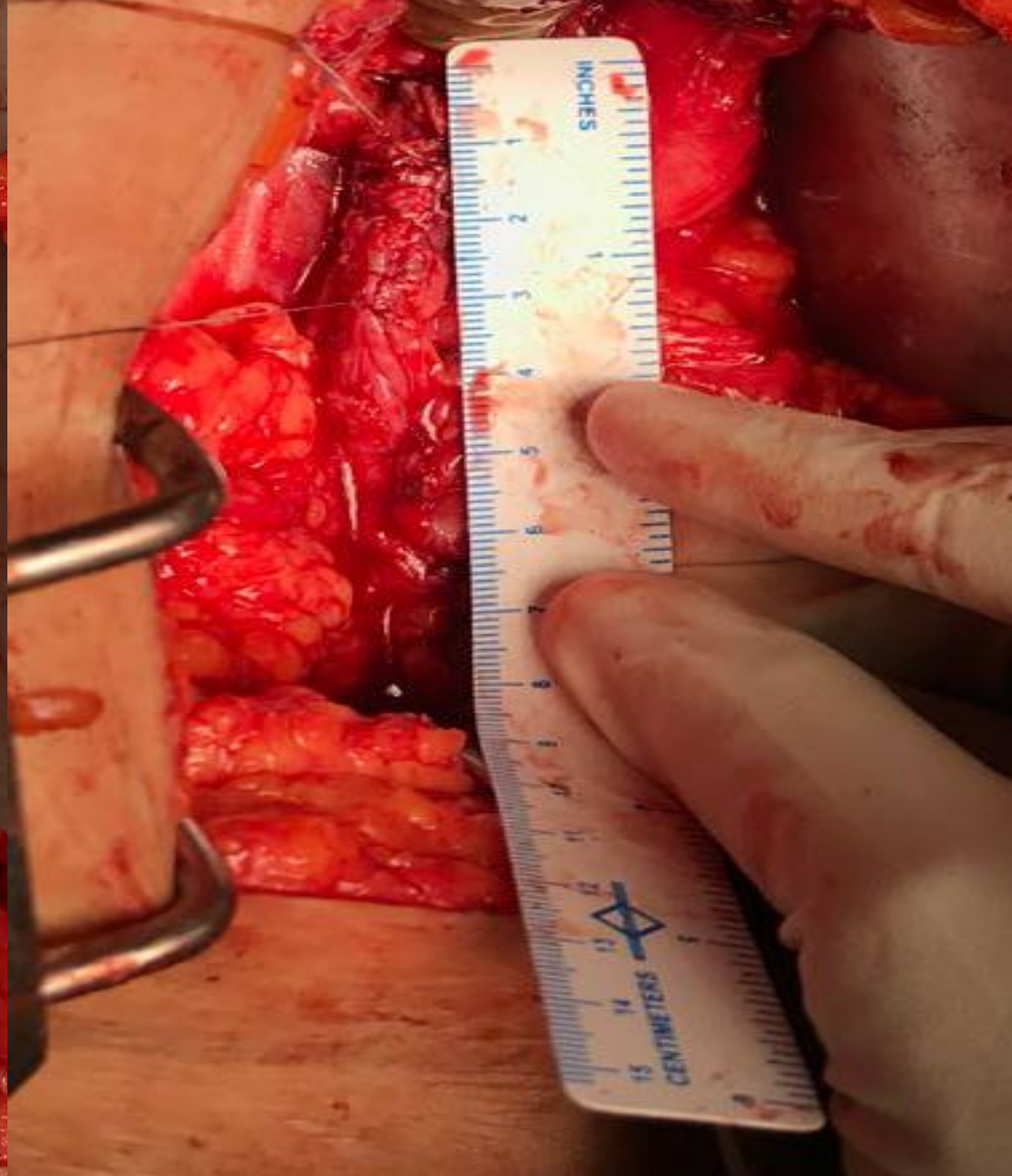
FIBROSED DISTAL URETER










INCHES
CENTIMETERS

CASE 2

HISTORY

- A 60yr old female presented to us with right flank pain, nausea, vomiting, with fever on & off associated with chills
- Patient had history on undergoing a URETEROSCOPIC LITHOTRIPSY for a ureteric stone (Feb 2018) following which she was stented and DJ stent removal was 1 month later (March 2018).
- 1 month after stent removal she came to the OPD (April 2018) with the above complaints
- Patient had no comorbities
- USG SHOWED PYONEPHROSIS AND HENCE PER CUTANEOUS NEPHROSTOMY WAS PUT INT RIGHT KIDNEY TO DRAIN THE PUS

FURTHER IMAGING

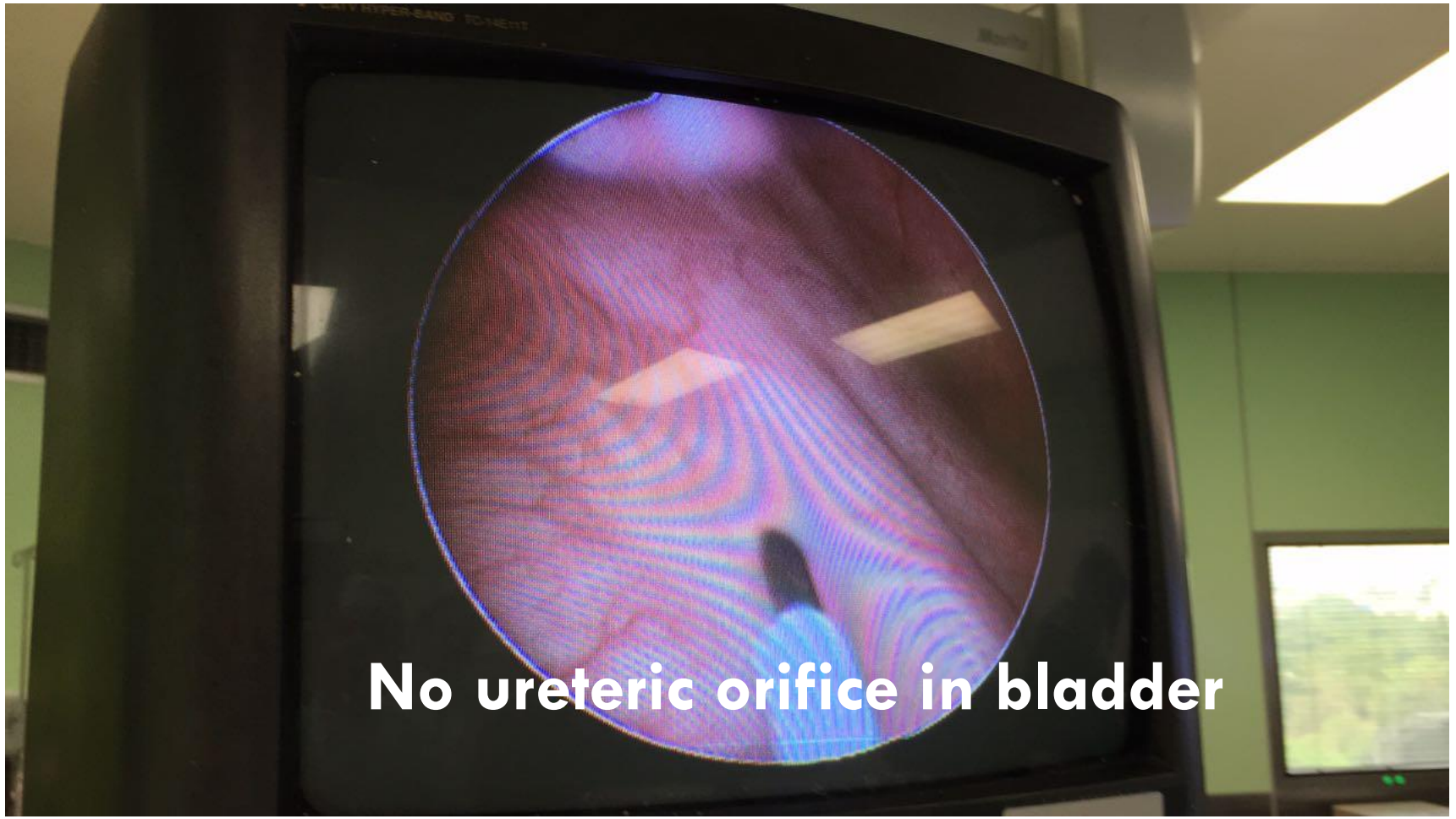
CECT abdomen

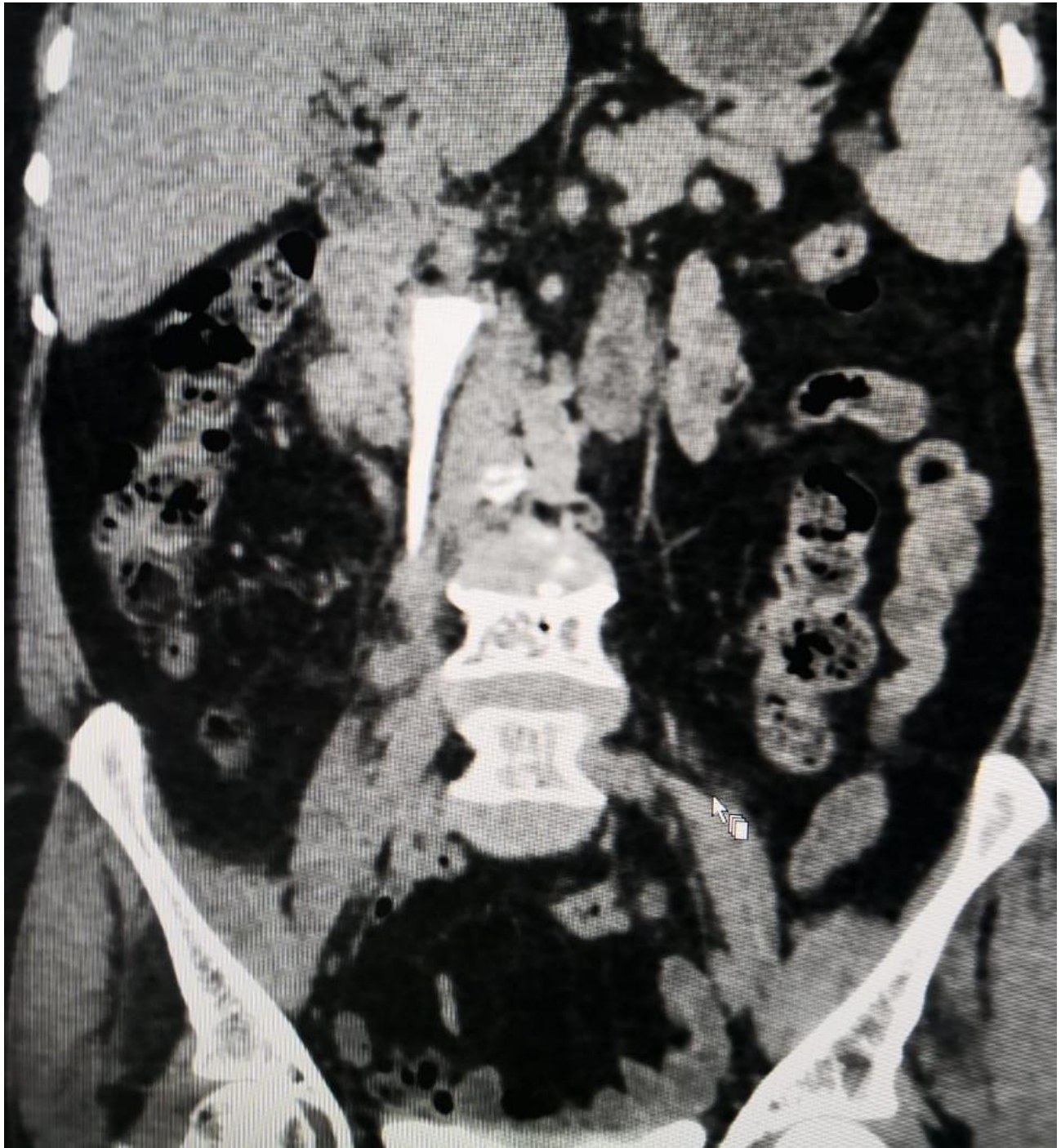
- Nephrostomy tube in situ with its tip at pelvis
- Right kidney shows mild fat stranding likely post operative/infective
- Mild fullness shown on right collecting system
- Distal ureter not visualized

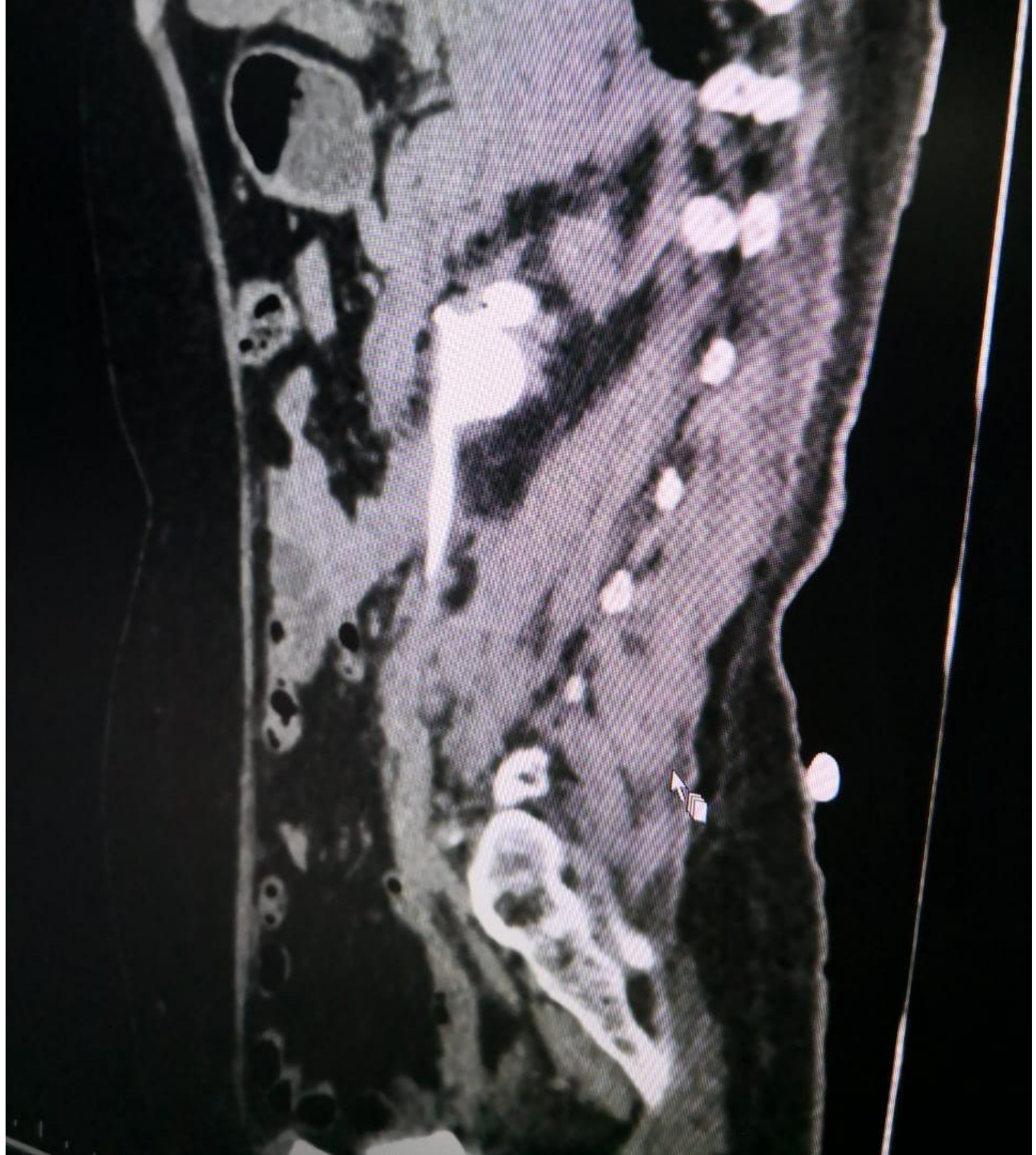
Cysto- RETROGRADEPYELOGRAPHY planned

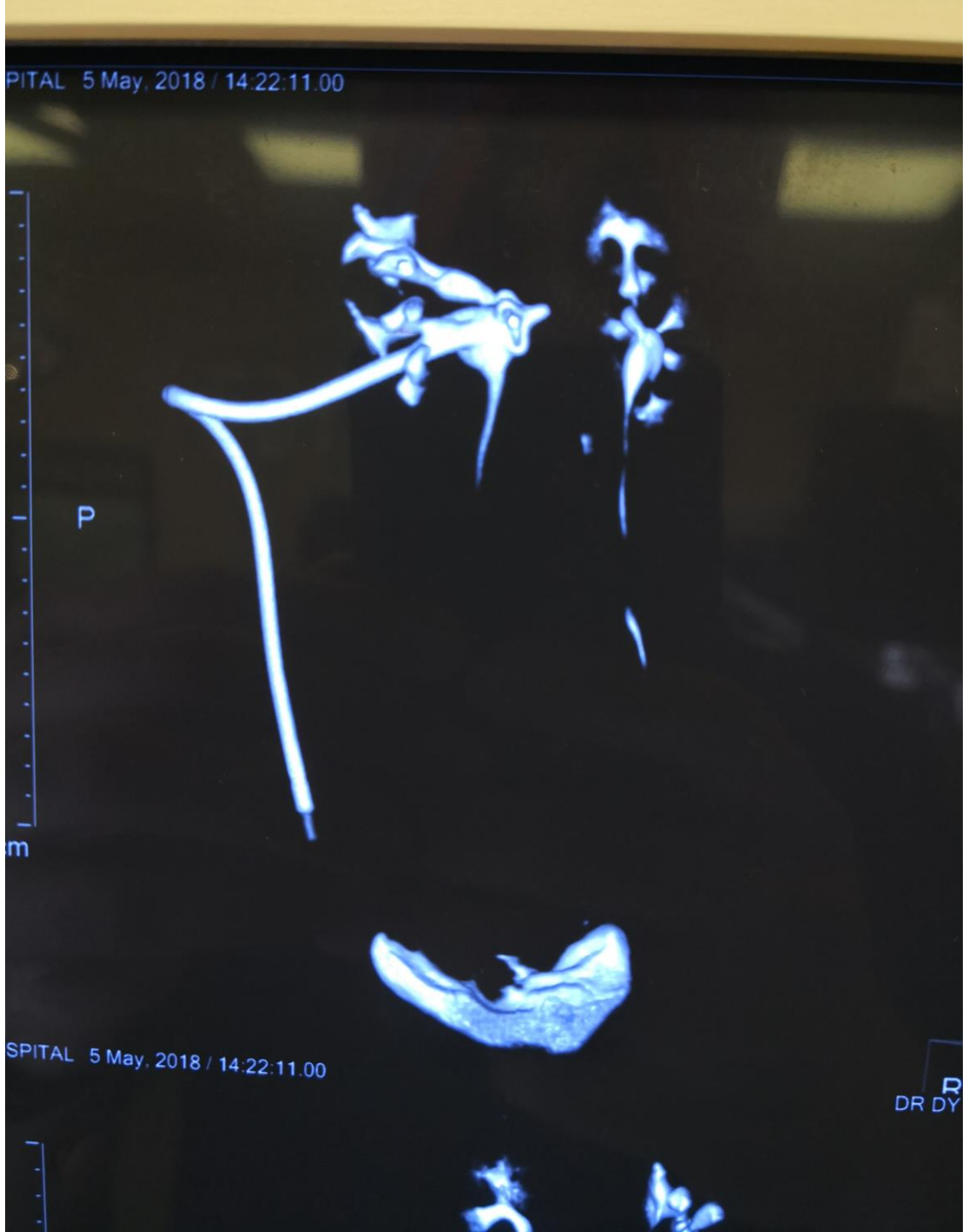
- LEFT UV ORIFICE NORMAL, RIGHT URETERIC ORIFICE COULD NOT BE SEEN ? SCAR TISSUE OVER THE AREA OF RUGHT VUJ
- METHYLENE BLUE INJECTED THRU PCN . DYE NOT COMING TO BLADDER

URETERIC STRICTURE???








PITAL 5 May, 2018 / 14:22:11.00
P
m
SPITAL 5 May, 2018 / 14:22:11.00
DR DY

URETERIC STRICTURE???

Patient was posted for open surgery with a working diagnosis of ureteric stricture

Modified Gibson incision taken, Abdomen opened up

URETER IDENTIFIED AS FIBROUS BAND WITH NO PALPABLE LUMEN AND ADHESIONS PRESENT WITH THE SURROUNDING STRUCTURES

Dissection done from surrounding tissue till proximal normal end reached which was 3cm from PUJ

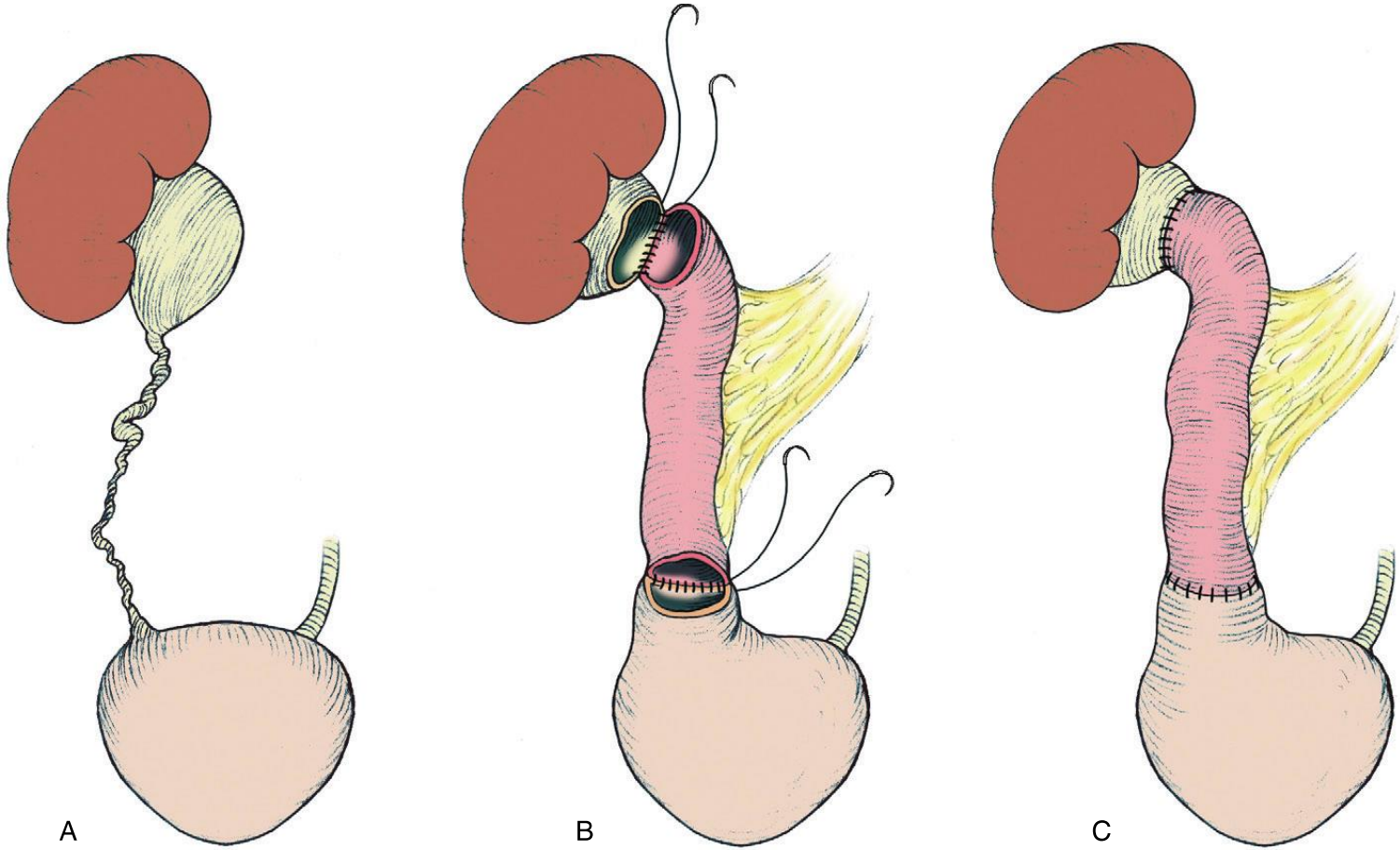
CHOICES

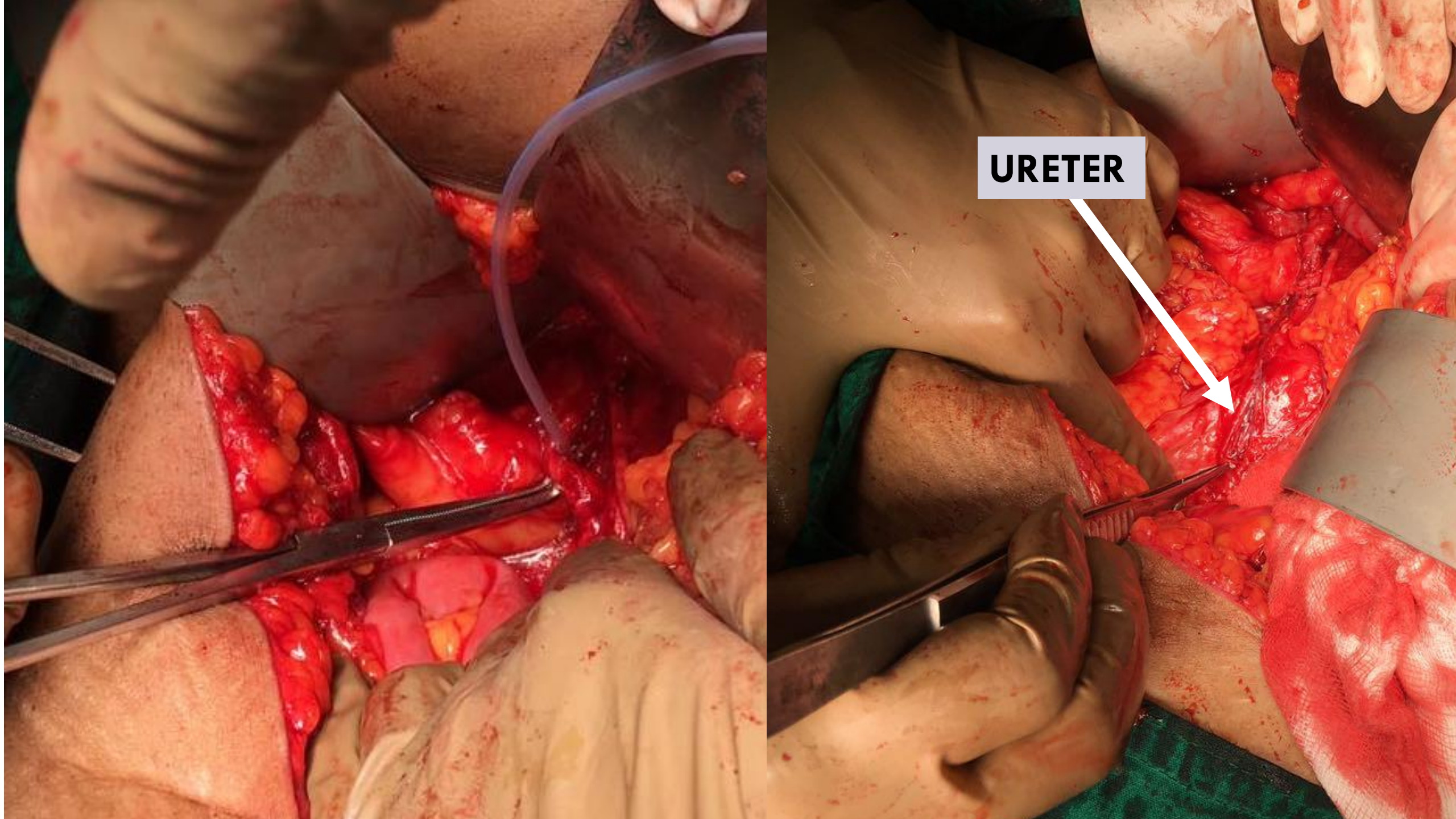
- Primary – repairing primarily
- Ureterostomy – taking ureter out on abdomen
- Trans-Ureteroureterostomy – one ureter to the other side ureter
- Boari's Flap- for lower third strictures

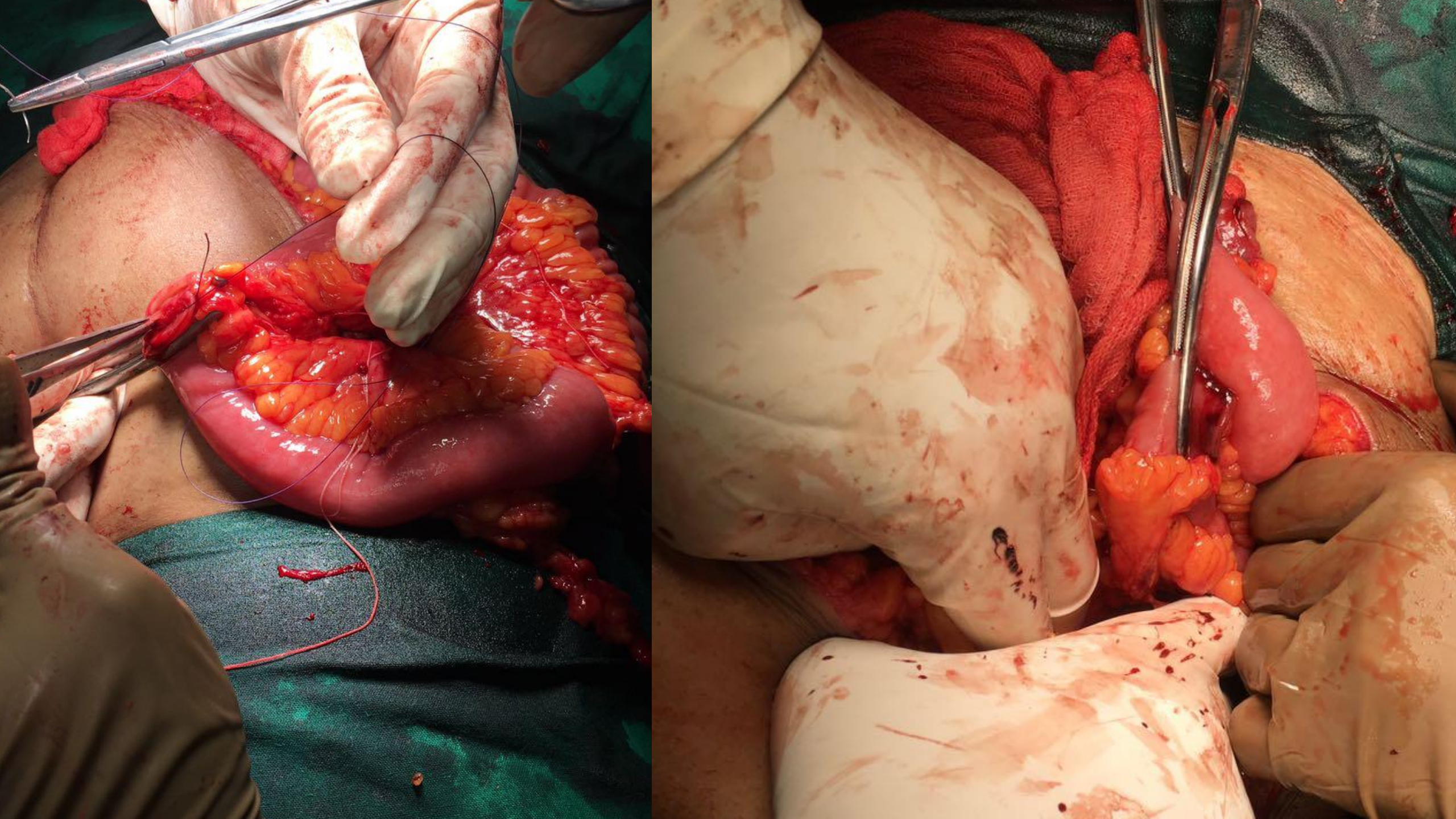
ILEAL TRANSPOSITION

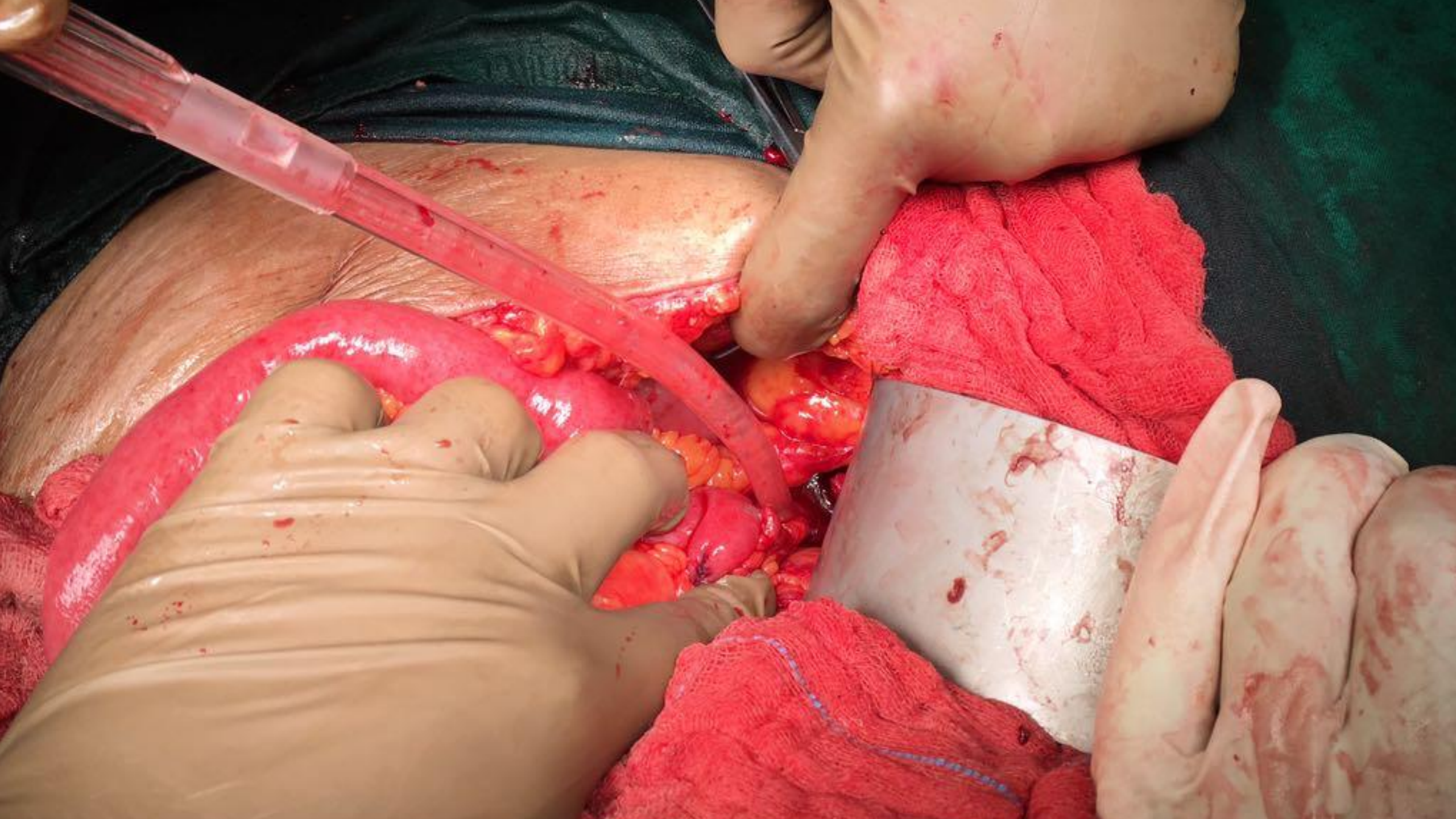
ILEAL TRANSPOSITION

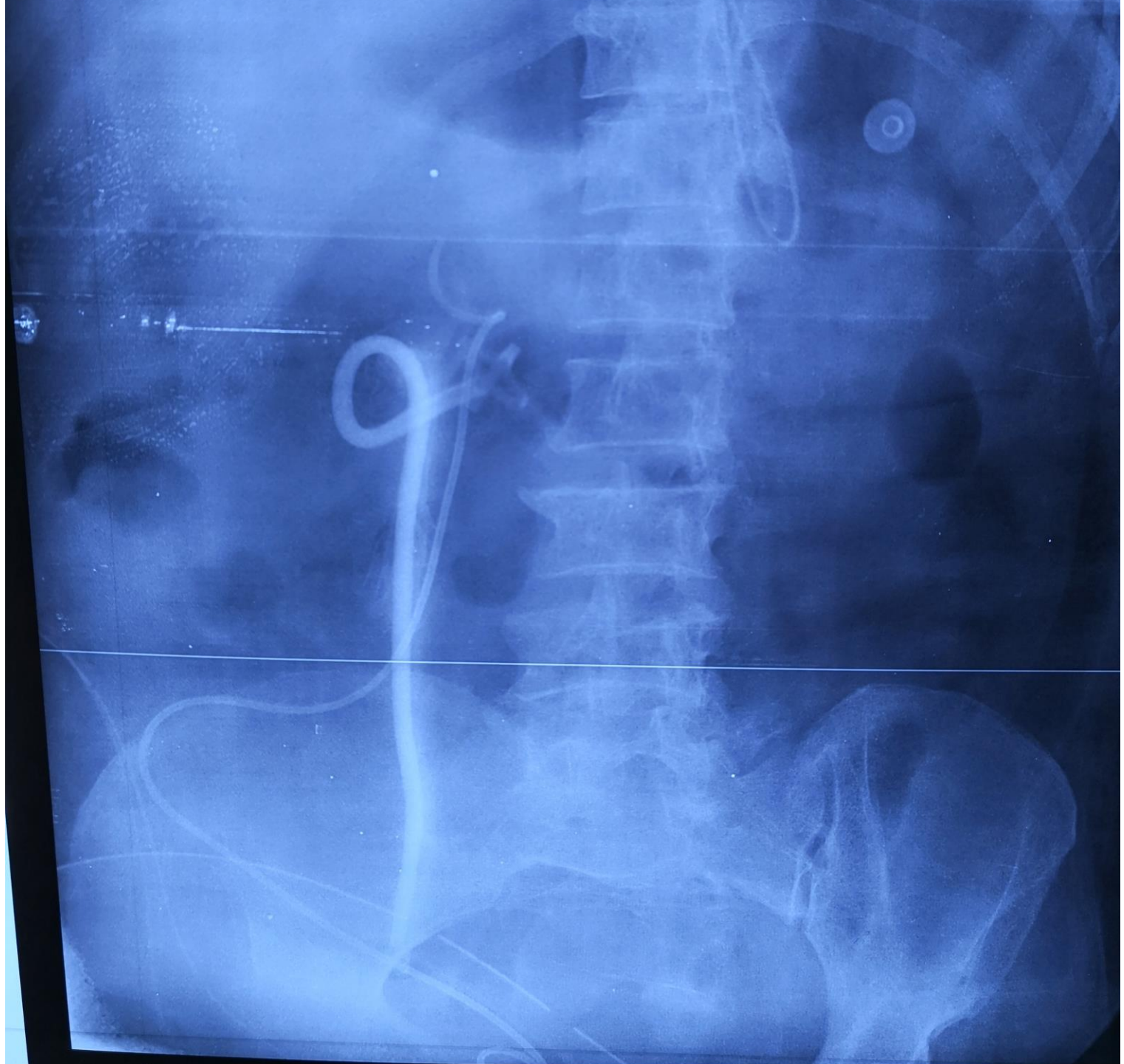
- Ileal segment was identified resected and transposition of 20cm of ileum segment was done
- Proximal end of bowel with ureter as end to side anastomosis and distal end to bladder's post lateral wall (Isoperistaltic anastomosis and non reflexing anastomosis)



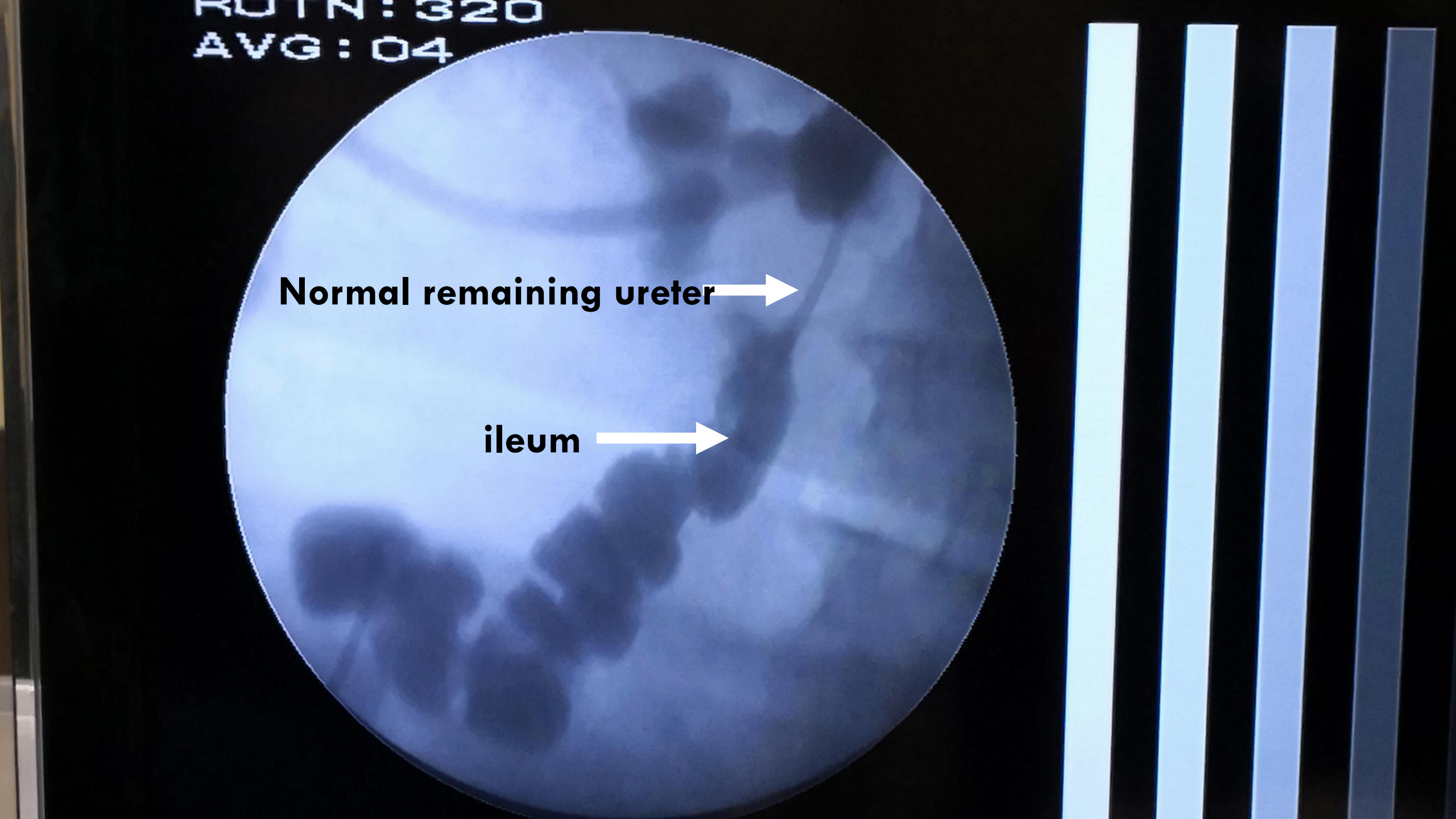

URETER

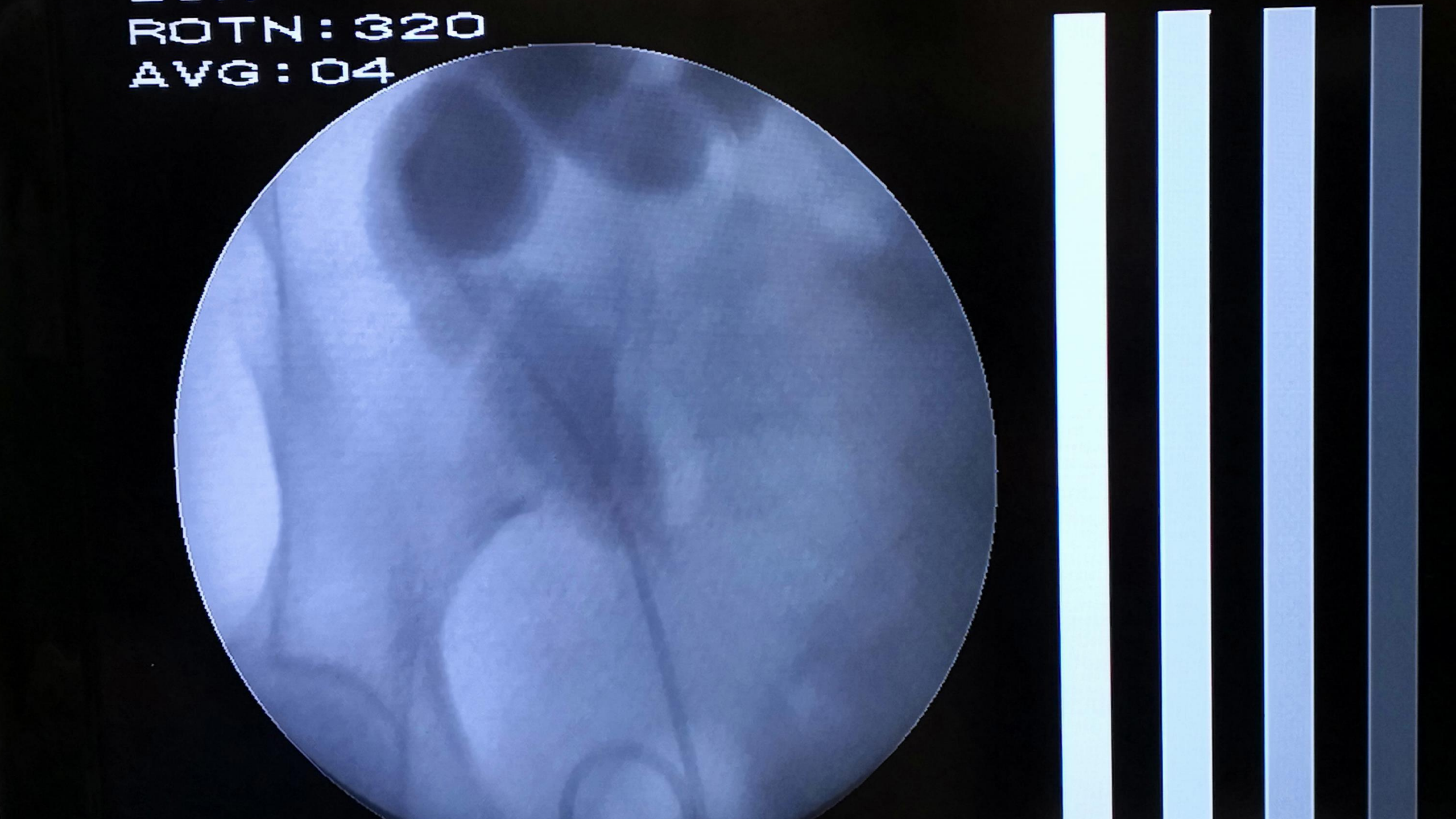


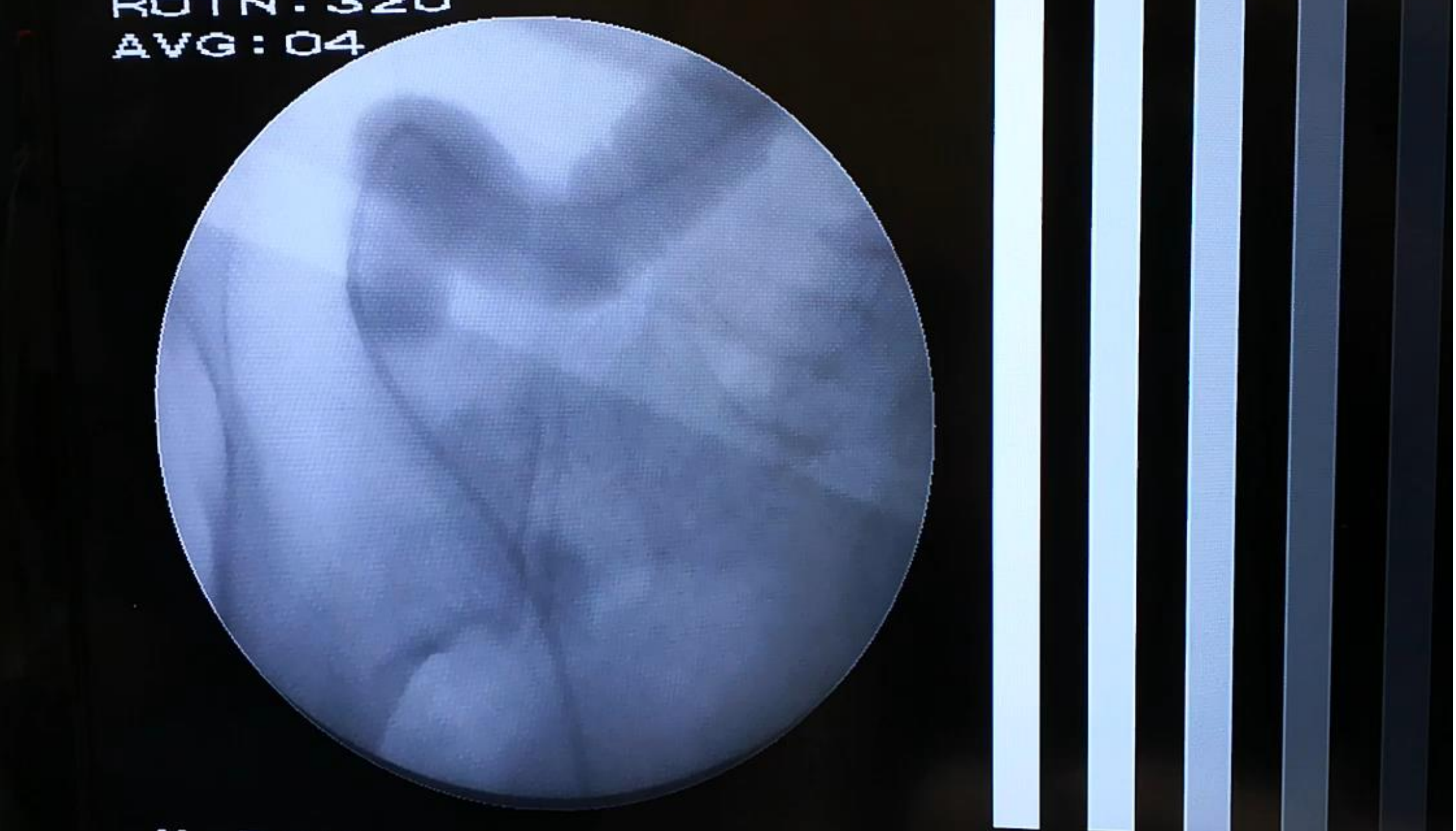


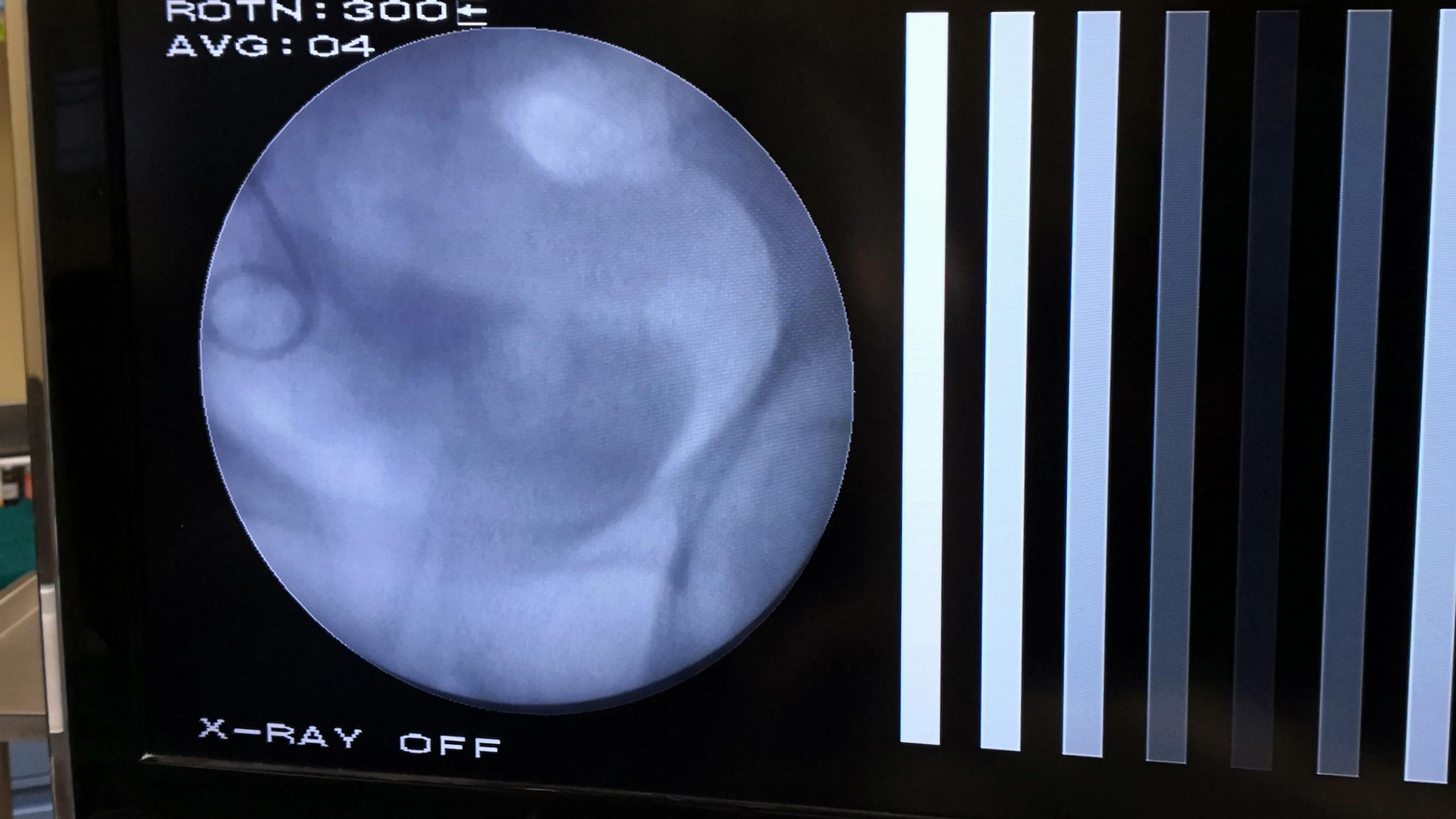


Nephrostogram post surgery 1 month- dye injected from the PCN


RUTN:320
AVG:04
Normal remaining ureter
ileum


ROTN:320
AVG:04


RUTN:320
AVG:04


ROTN:300
AVG:04
X-RAY OFF

CASE 3

THE CALL

On Saturday 1230 PM we got a call from a surgery resident that they need us to look into a case they were operating.

A Sigmoid tumor (probably GIST) with ureter encasement and while removing the same a segment of ureter had to be removed.

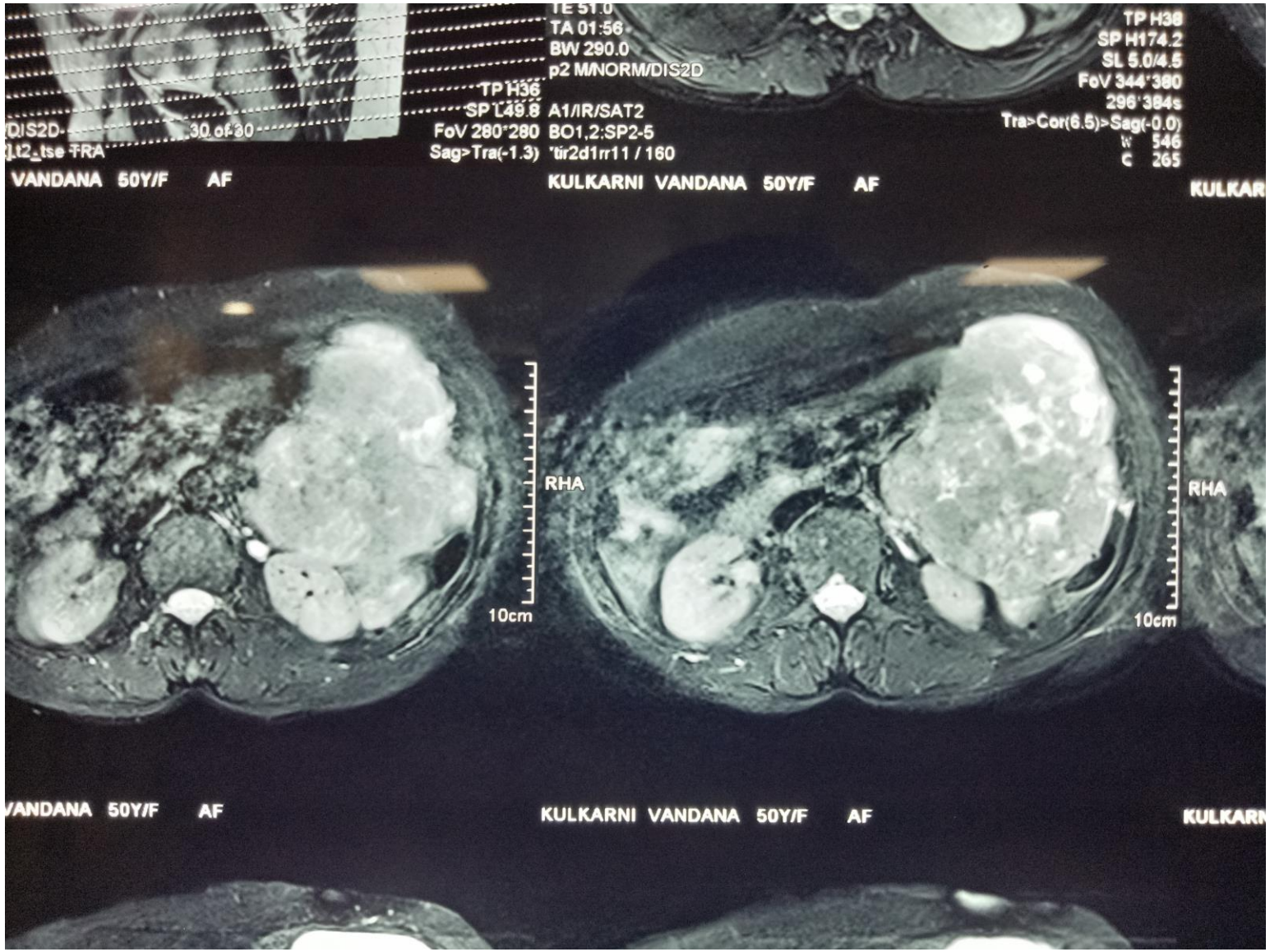
CASE HISTORY

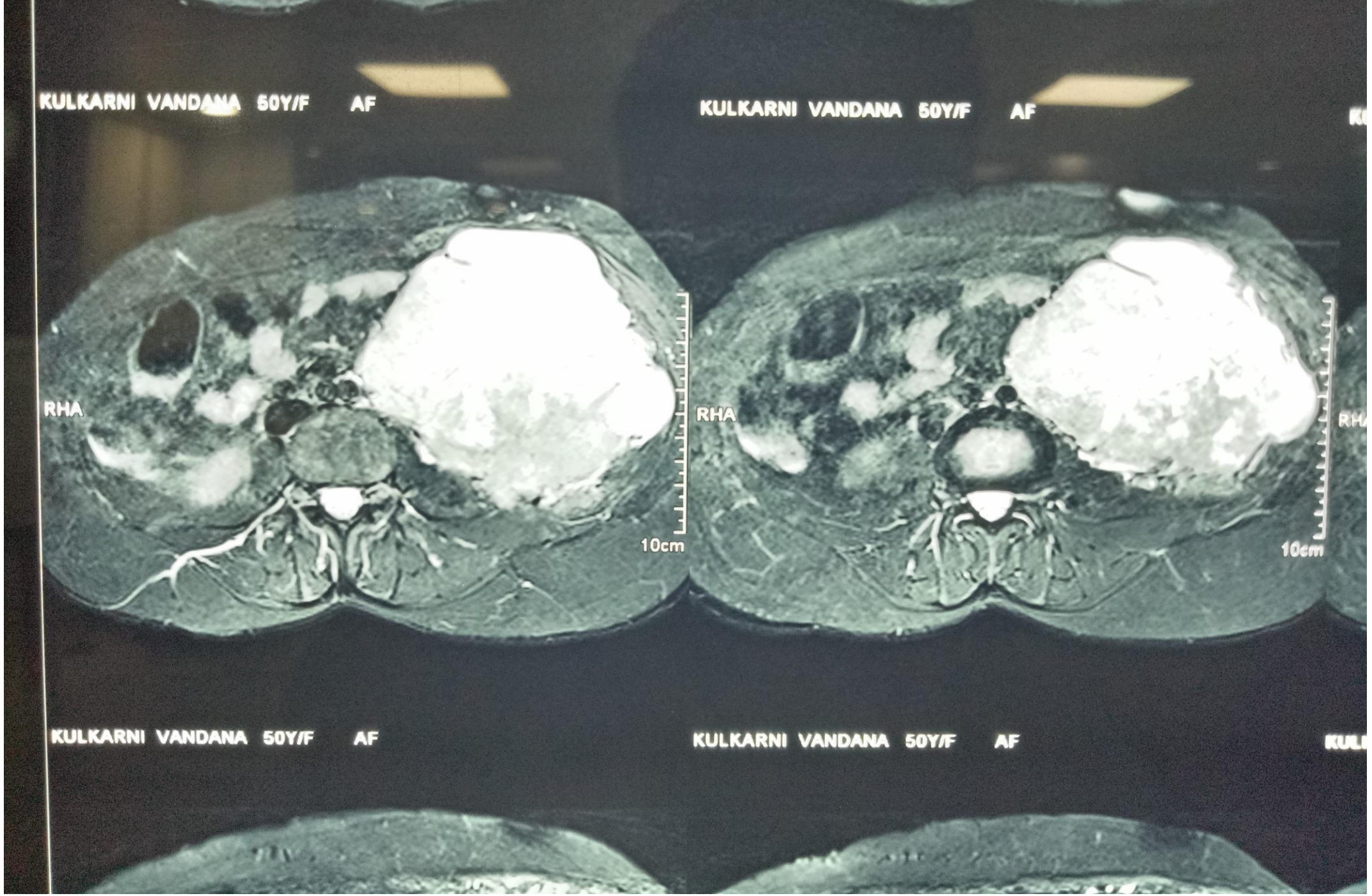
A 51yr old female with complaints of pain lower abdomen and history of gradually increasing swelling in the abdomen for the past 1.5 months

No associated comorbidities

P/A a 15cmx15cm mass felt at the LIF , irregular, solid, nontender, not mobile , extending to left lumbar and hypogastrium

MRI Suggestive of Mesenchymal/ Stromal tumor ?? GIST- Gastrointestinal stomal tumor of size 12cmx12cm causing mass effect on ureter and hydro nephrosis


TE 51.0
TA 01:56
BW 290.0
p2 M/NORM/DIS2D
TP H36
SP L49.8
FoV 280*280
Sag>Tra(-1.3)
A1/IR/SAT2
BO1,2:SP2-5
'tir2d1rr11 / 160
30 of 30
VANDANA 50Y/F AF
KULKARNI VANDANA 50Y/F AF
TP H38
SP H174.2
SL 5.0/4.5
FoV 344*380
296*384s
Tra>Cor(6.5)>Sag(-0.0)
W 546
C 265
RHA
10cm
RHA
10cm
VANDANA 50Y/F AF
KULKARNI VANDANA 50Y/F AF


KULKARNI VANDANA 50Y/F AF
RHA
10cm
KULKARNI VANDANA 50Y/F AF
RHA
10cm
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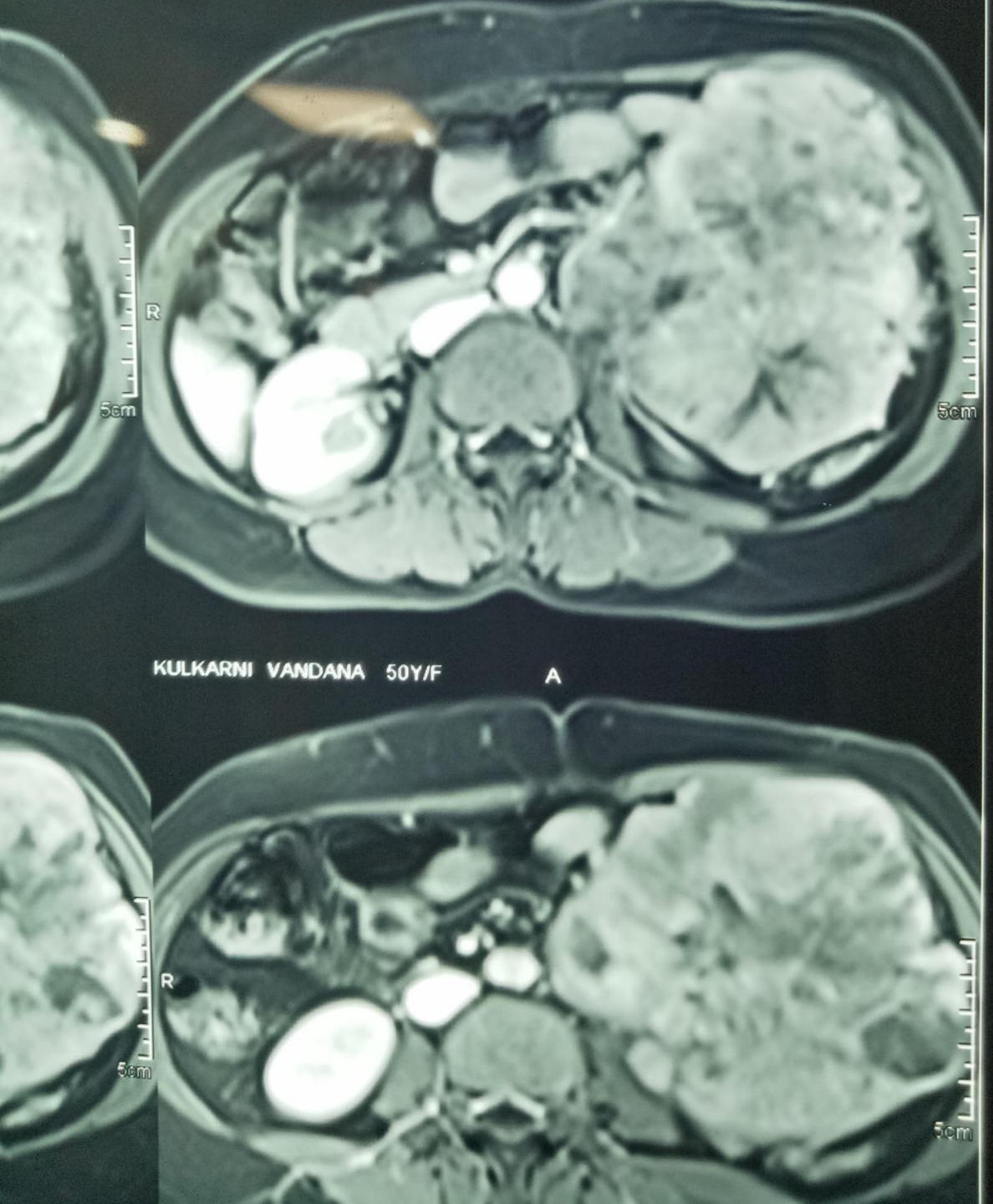
KULKARNI VANDANA 50Y/F AF


R
5cm
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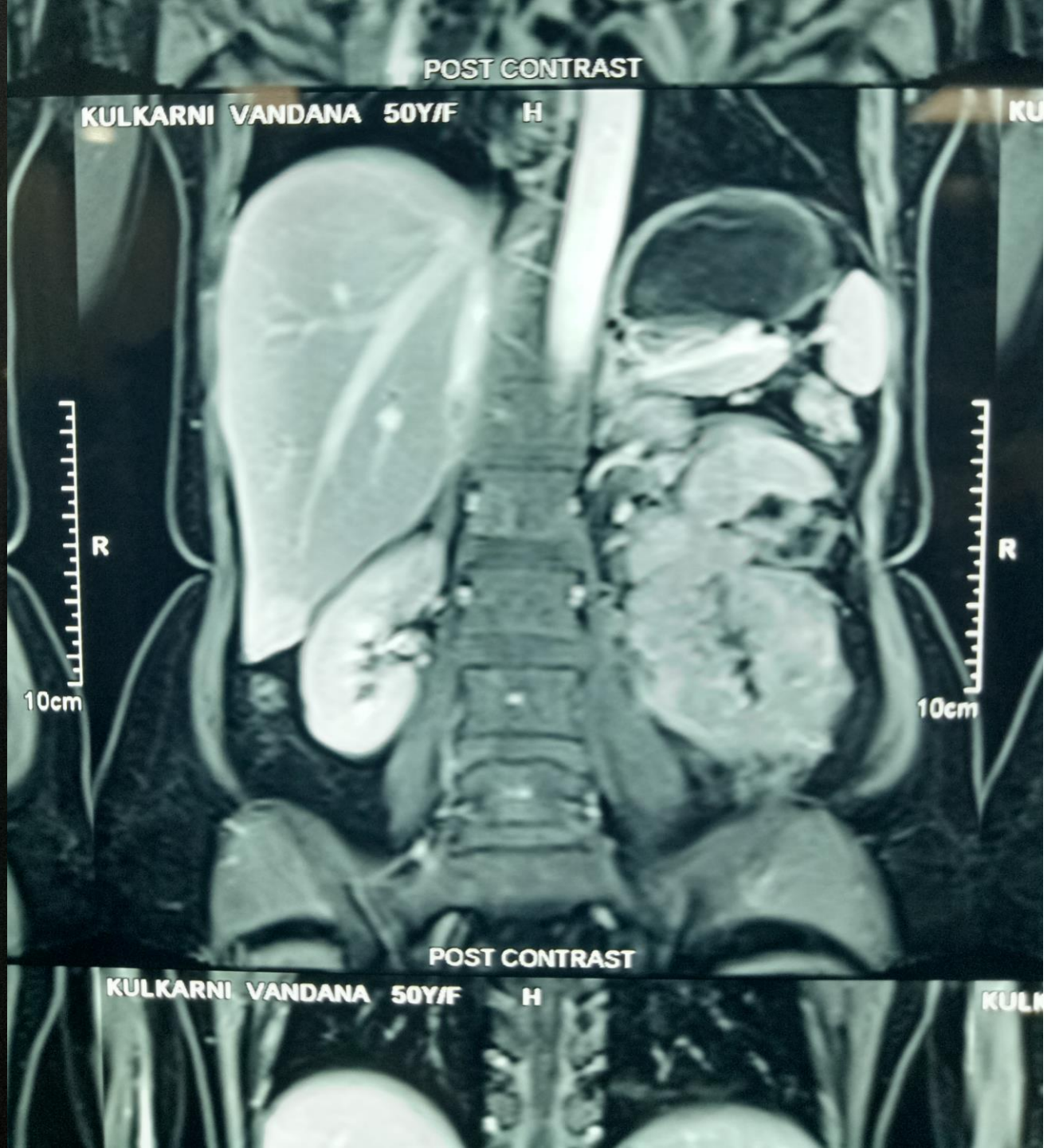
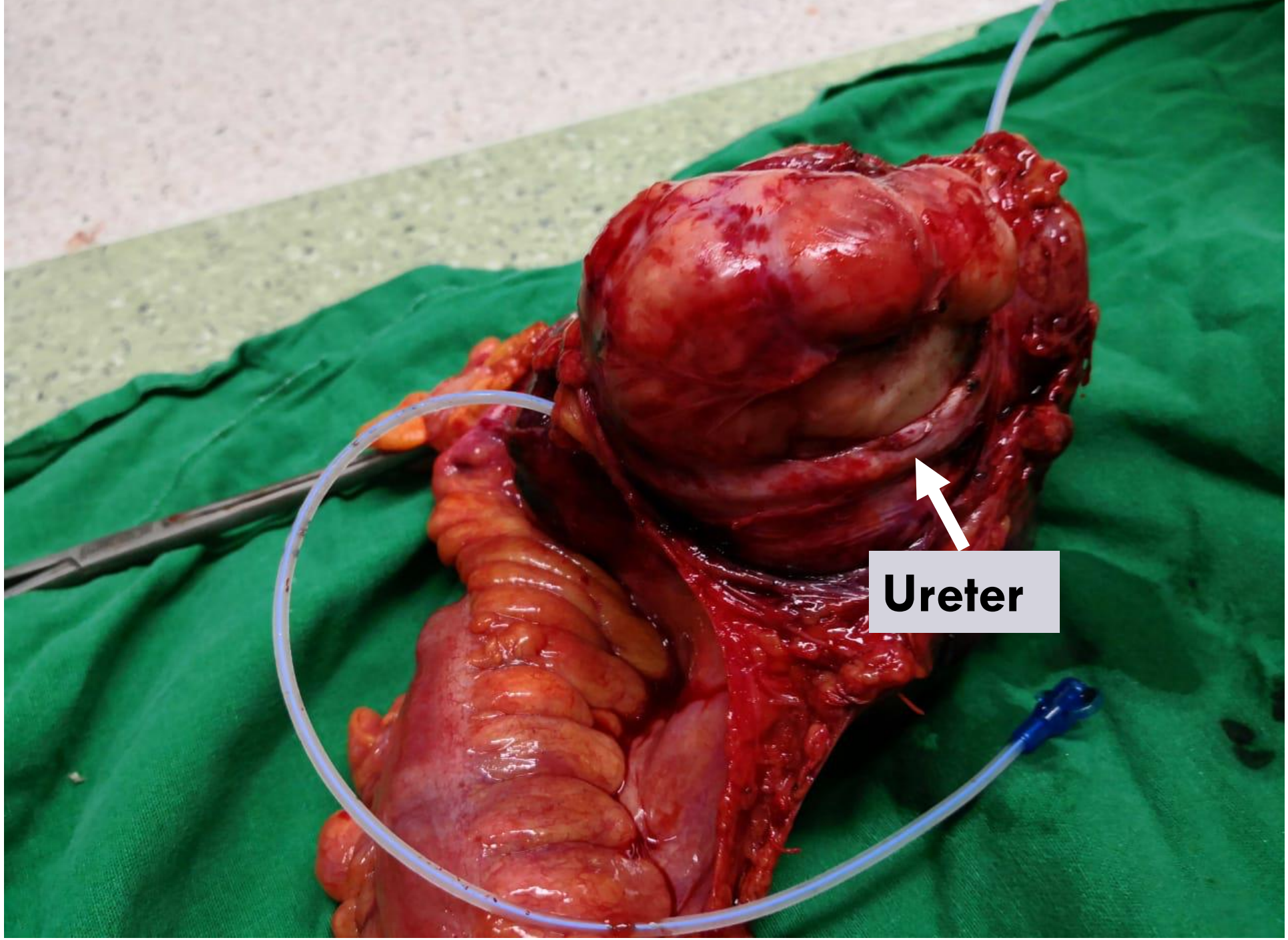
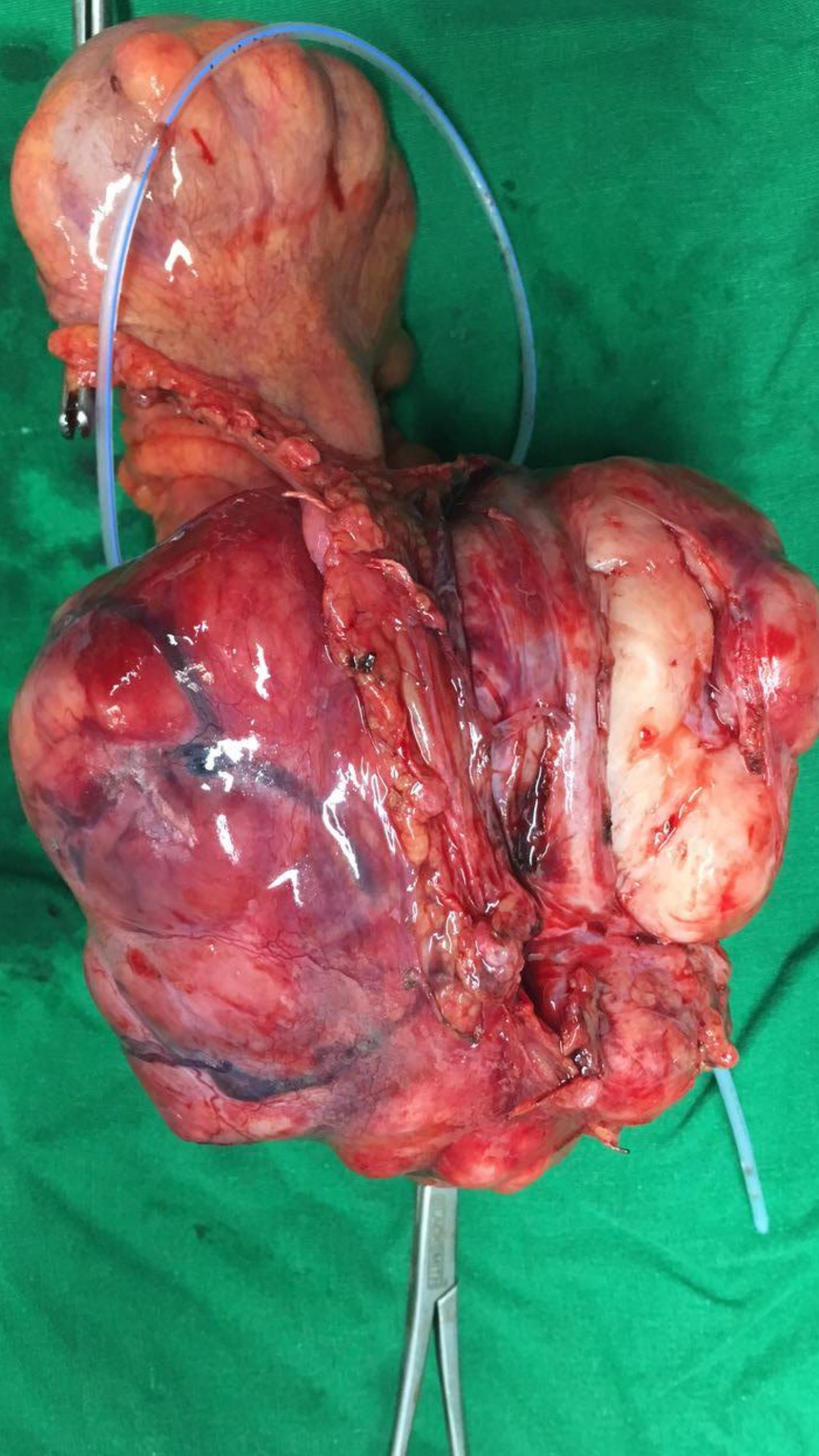
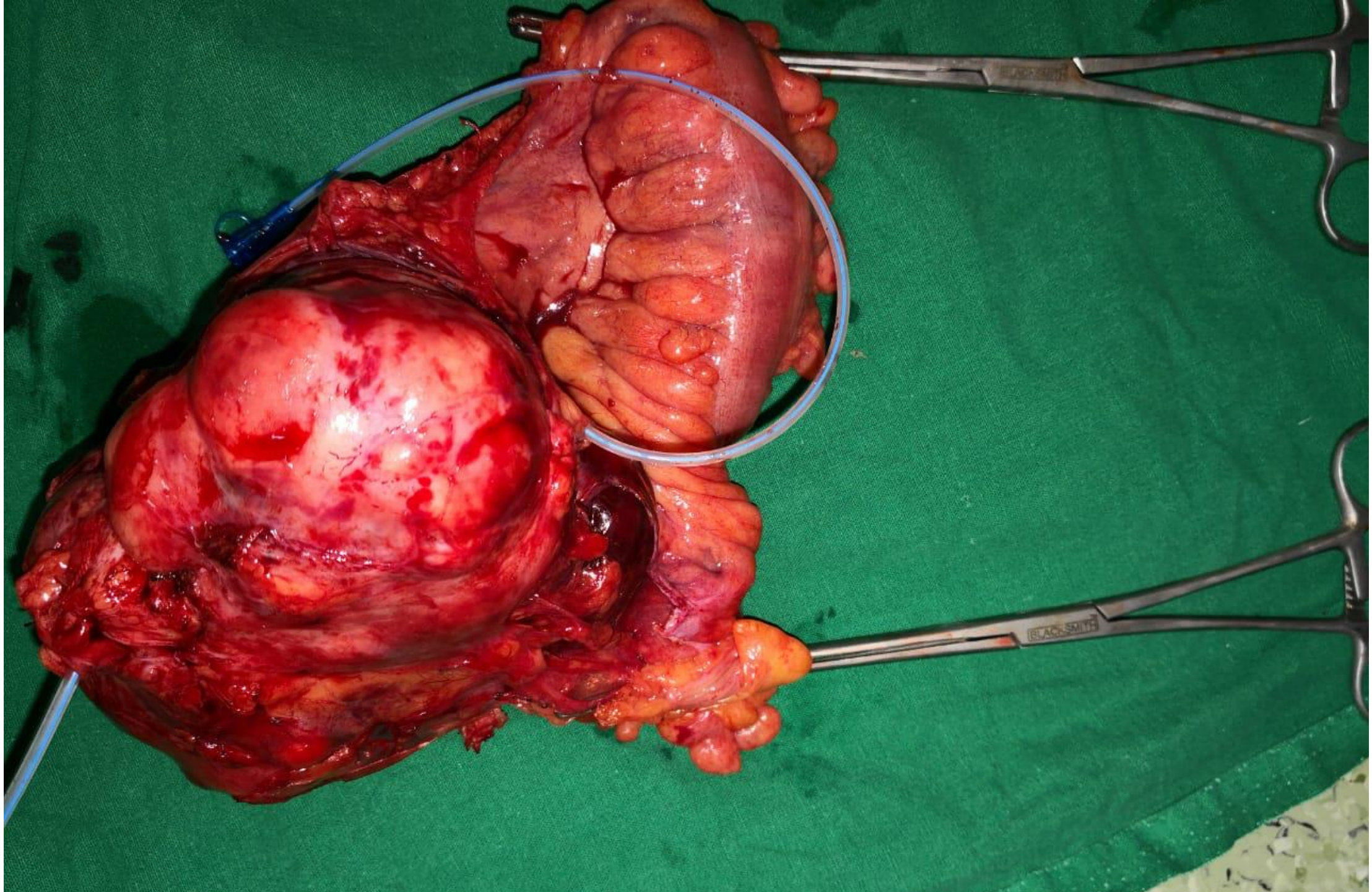
KULKARNI VANDANA 50Y/F A
R
5cm
5cm

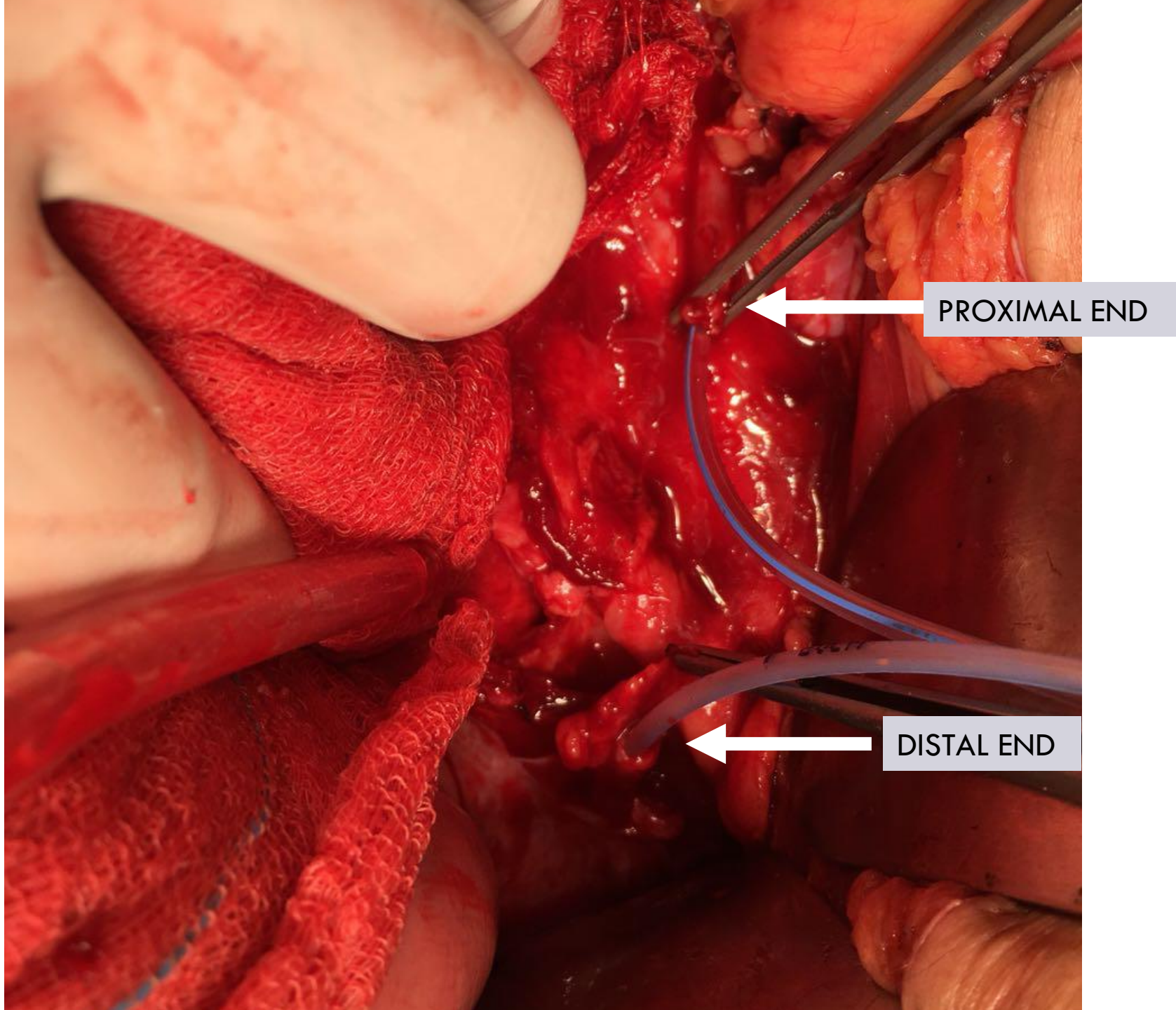

POST CONTRAST
KULKARNI VANDANA 50Y/F H
R
10cm
R
10cm
POST CONTRAST
KULKARNI VANDANA 50Y/F H

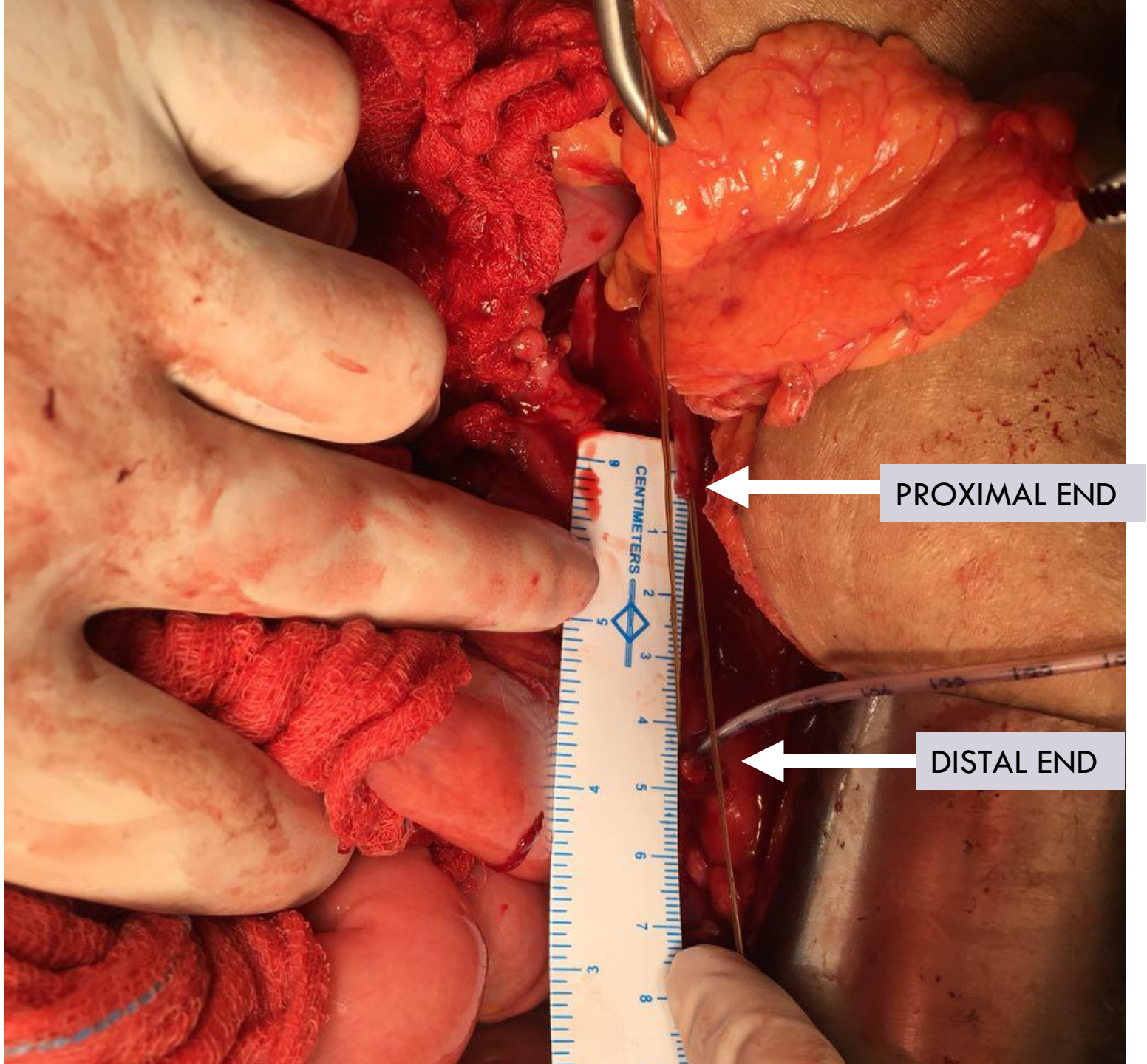
LETS GO


Ureter






PROXIMAL END
DISTAL END


PROXIMAL END
DISTAL END
CENTIMETERS

CHOICES

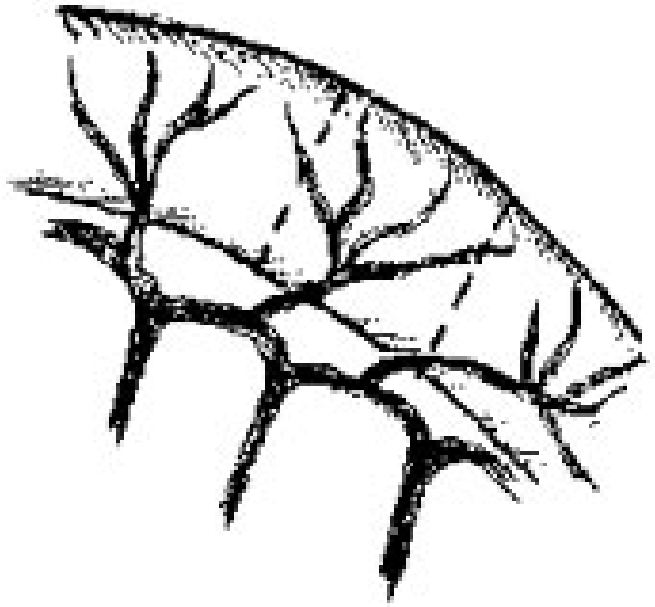
- Primary – repairing primarily
- Ureterostomy – taking ureter out on abdomen
- Trans-Ureteroureterostomy – one ureter to the other side ureter
- Boari's Flap – using bladder flap to create a tube to fill in the gap
- Ileal Transposition – putting in segment of ileum
  - Resovoir formation,
  - lumen disparity,
  - bowel will absorb significant electrolytes,
  - mucus plugs,
  - length required 6 to 8 inches
- Appendicular interposition- better for right side middle ureter loss, if healthy appendix with adequate diameter, with intact blood flow

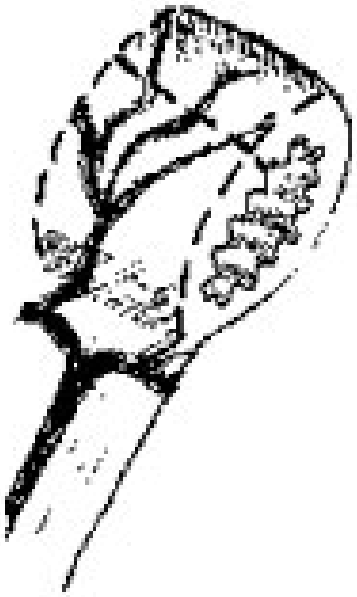
YANG MONTI

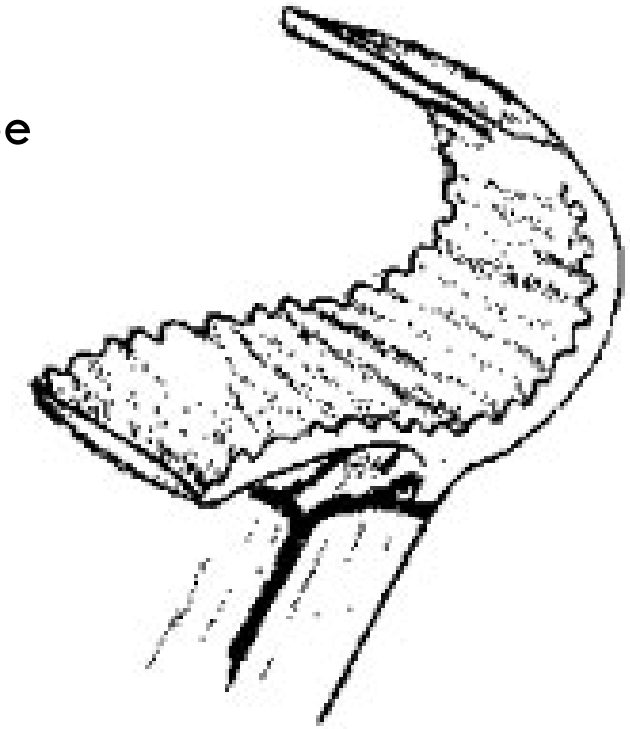
YANG MONTI

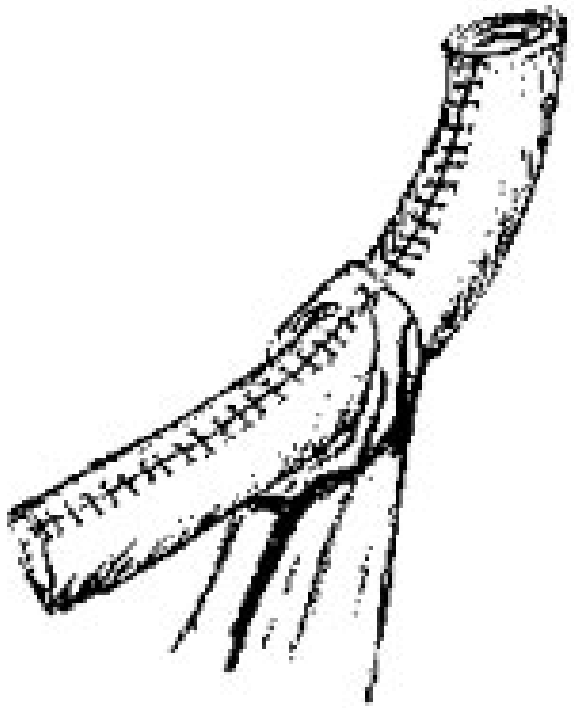
A short length of bowel is opened longitudinally along the anti-mesenteric border

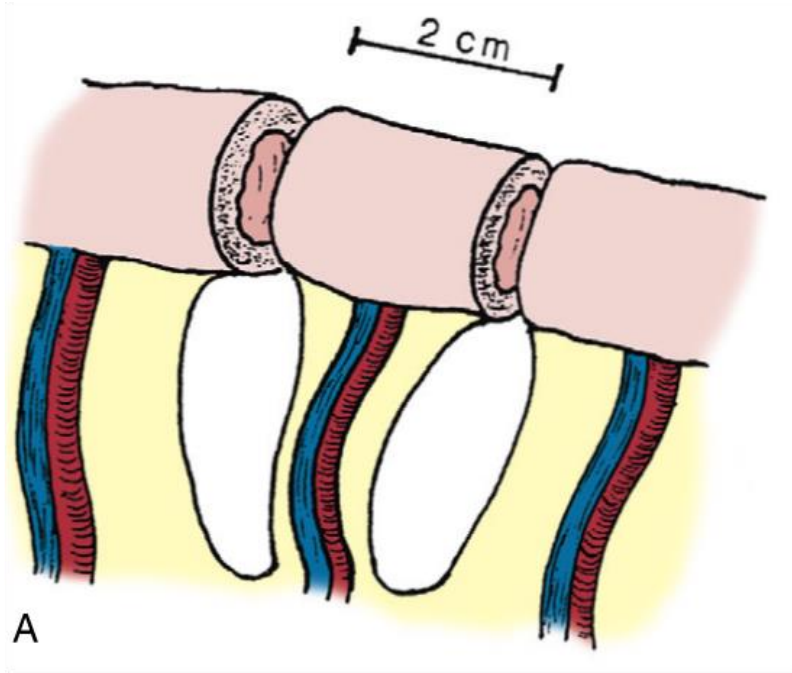
And then closed transversely to create a tube which can be used to fill in the defect of ureter

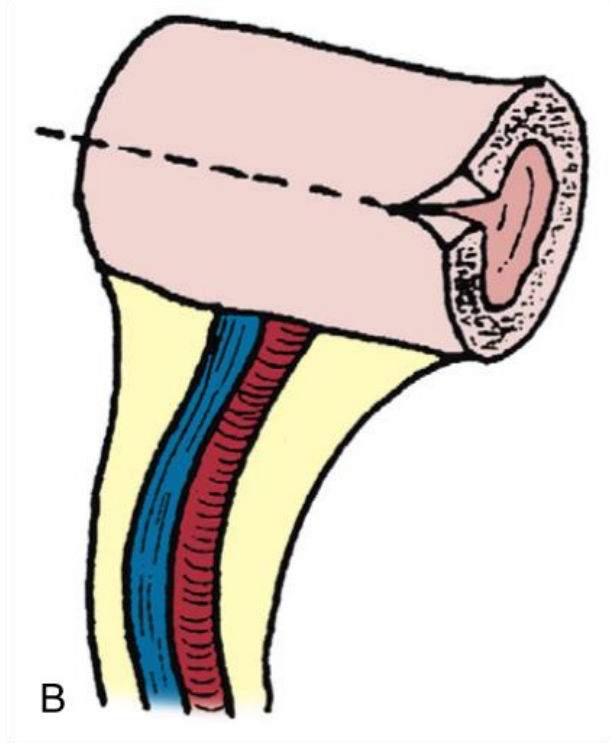


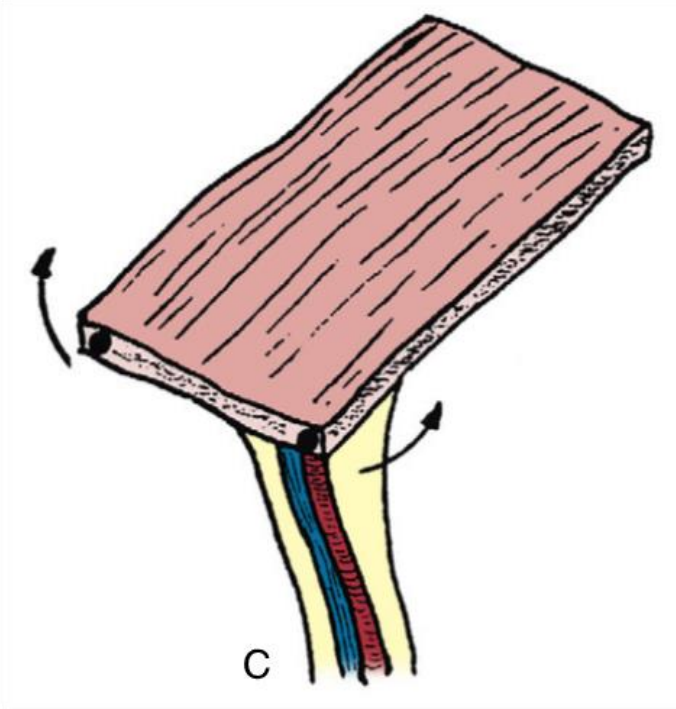


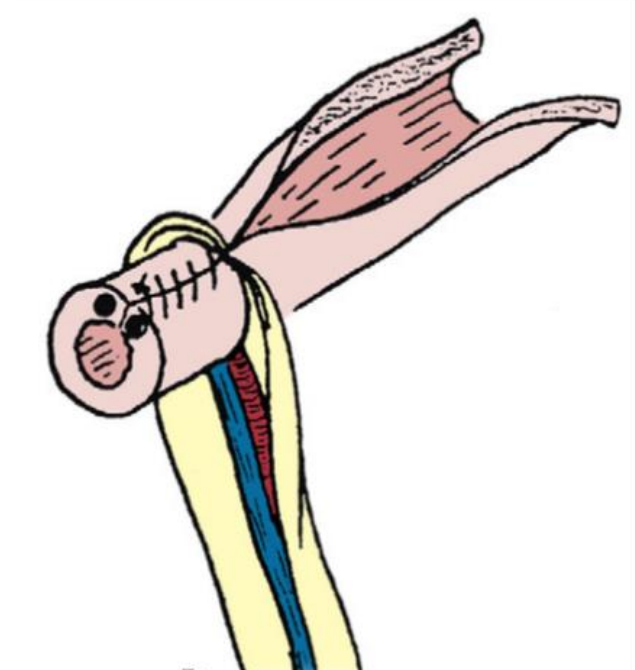


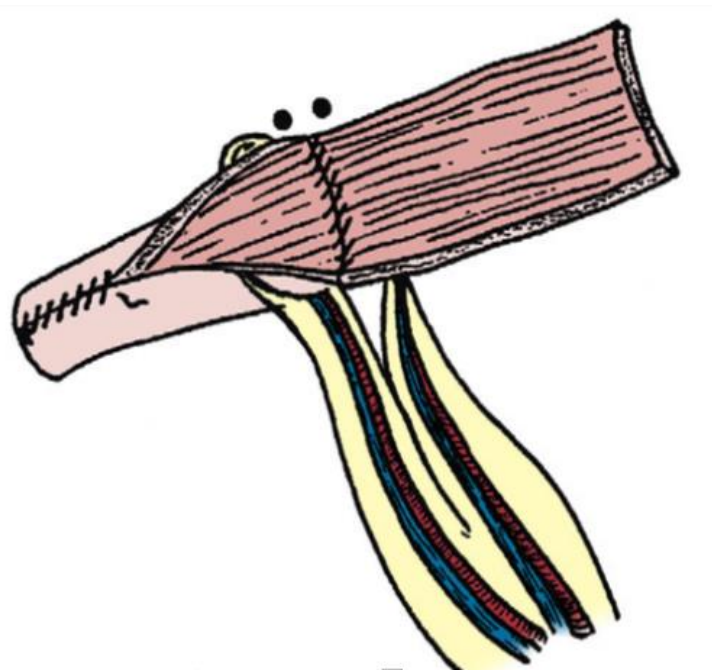


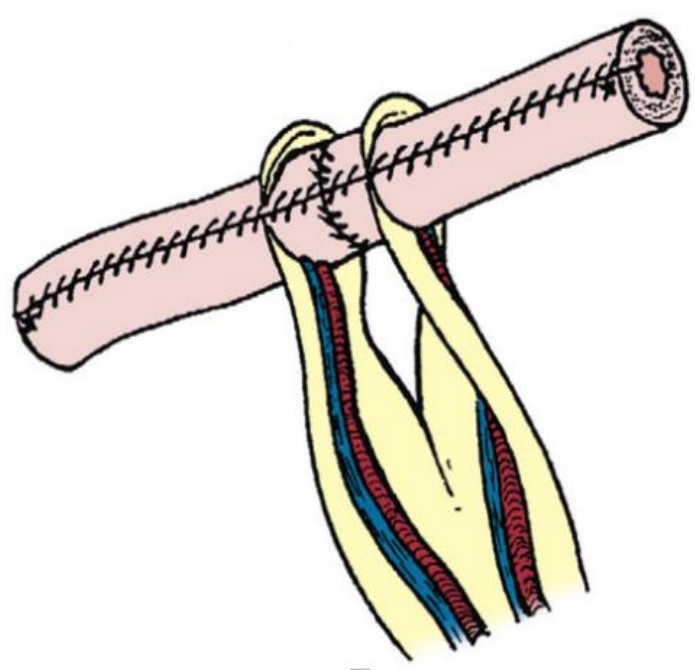

2 cm
A


B


C







YANG MONTI

Appropriate length

Appropriate diameter

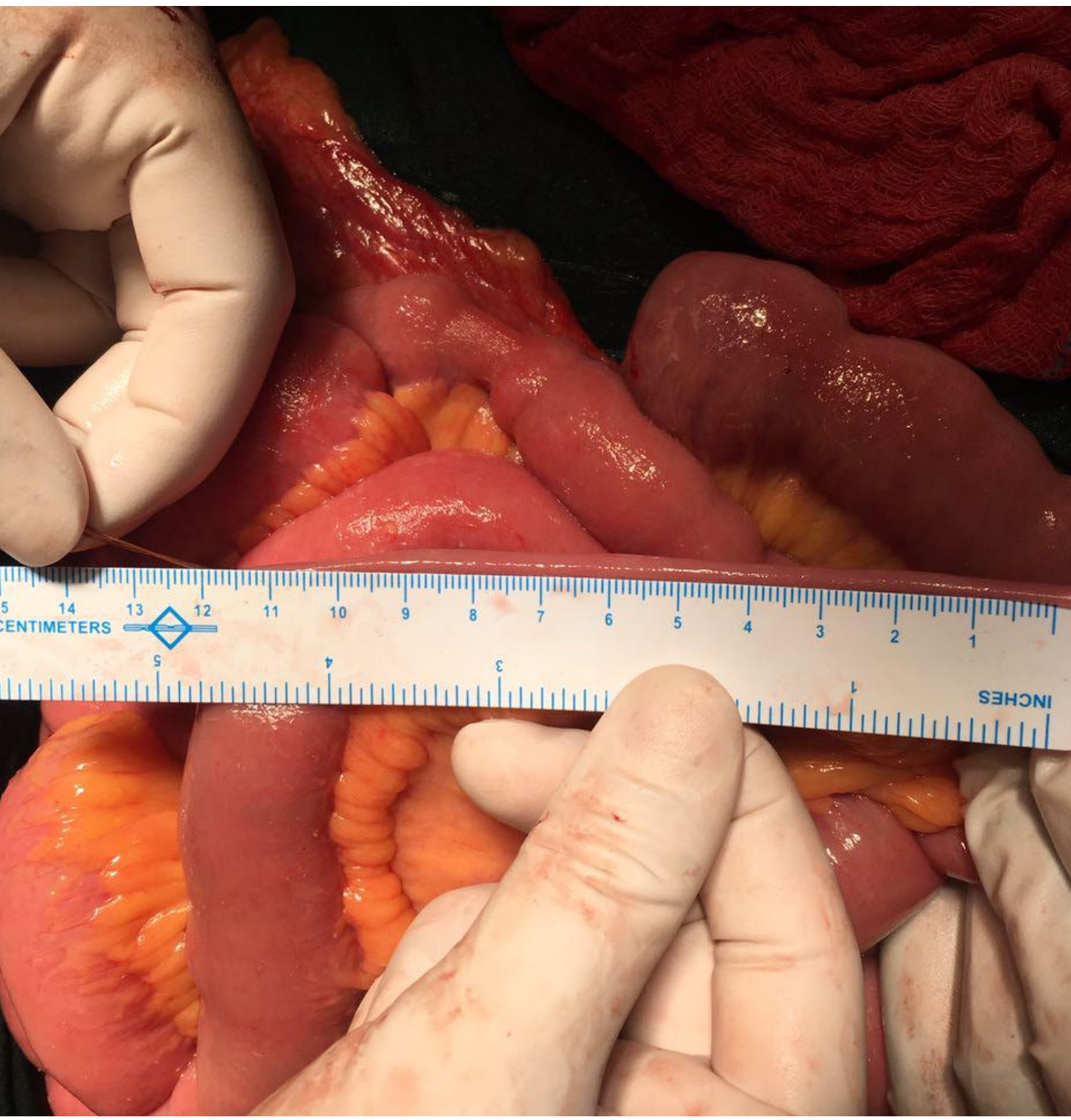
Good results

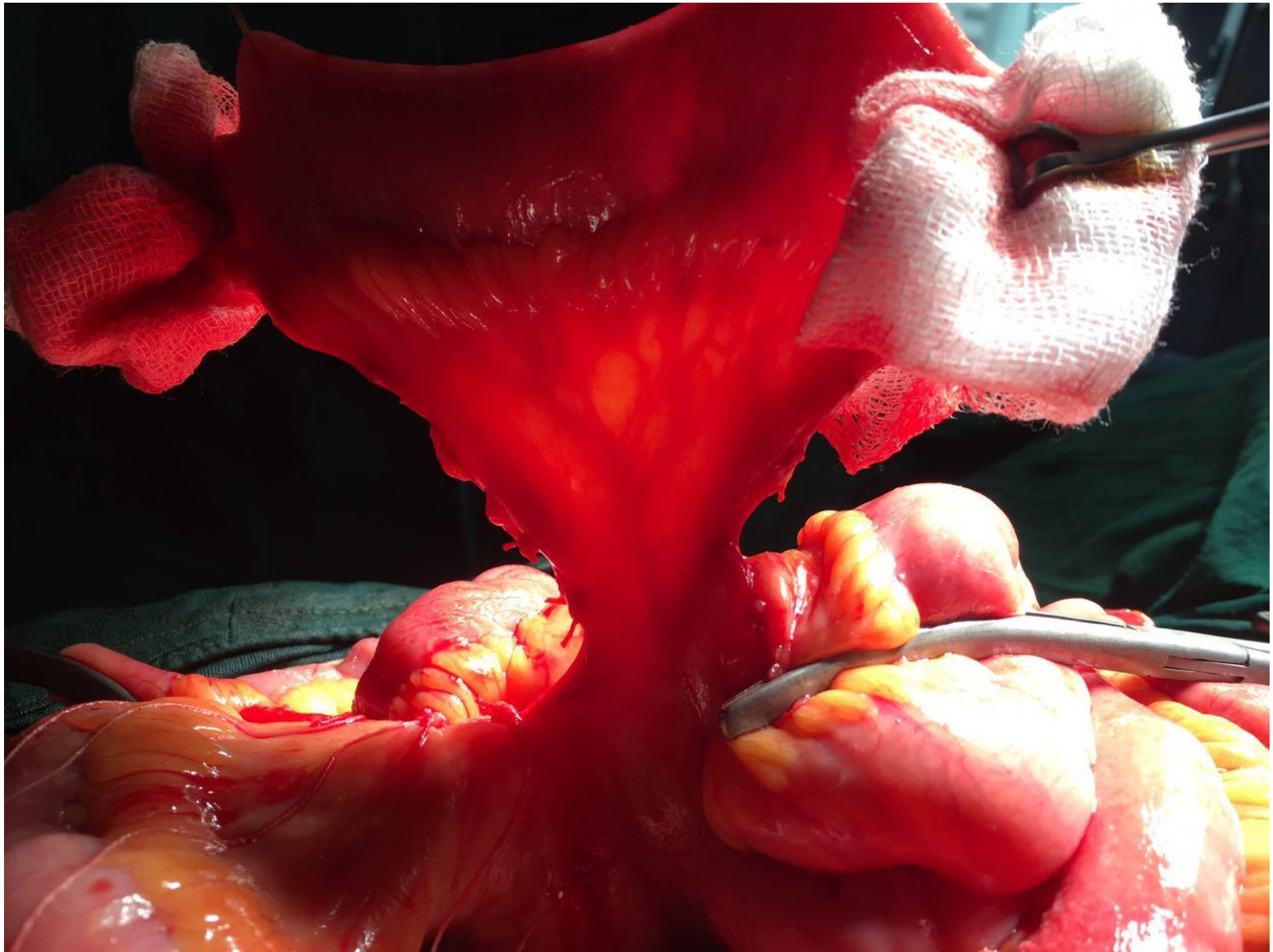
Fluid absorption is less

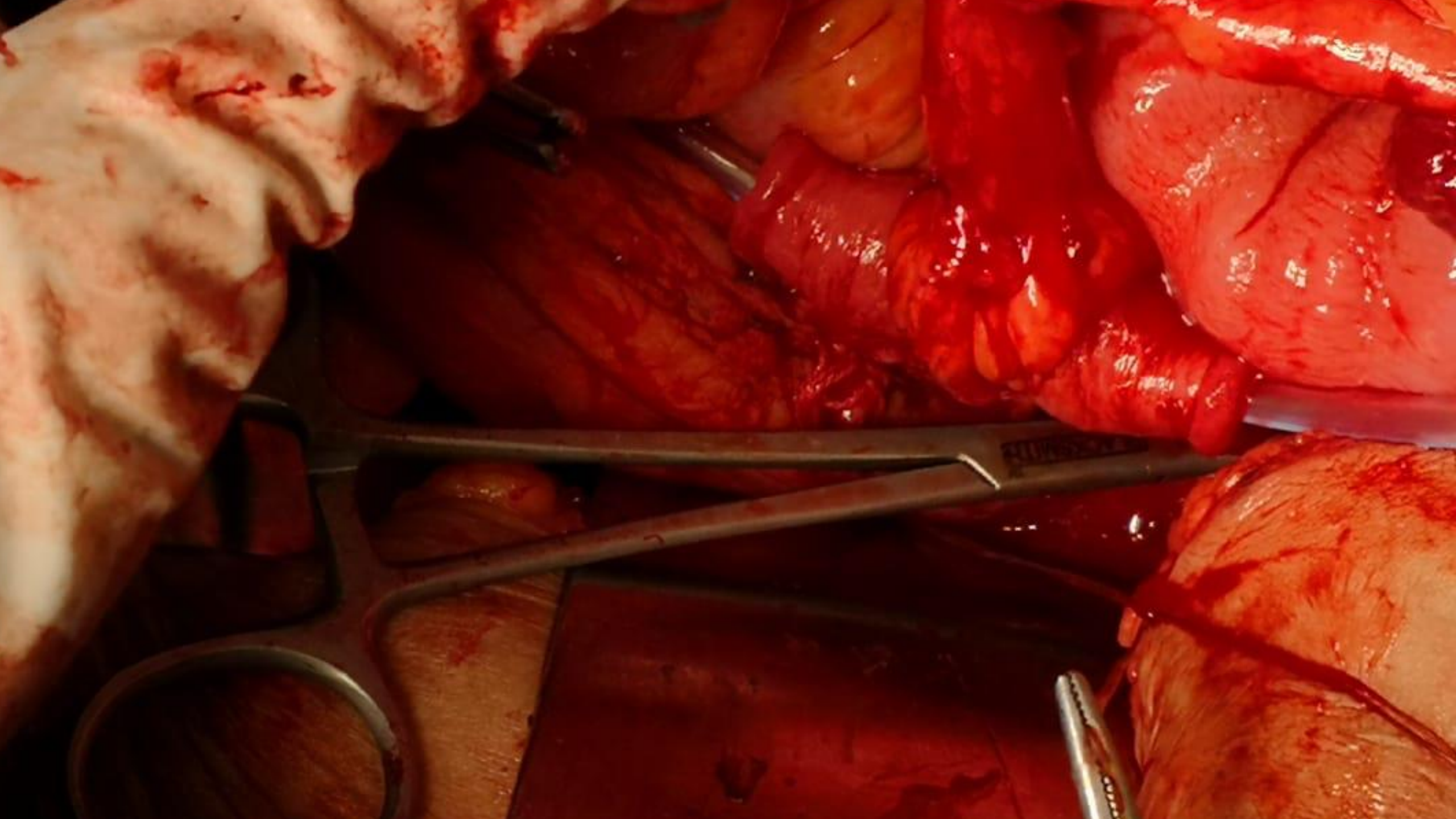
No reservoir formation

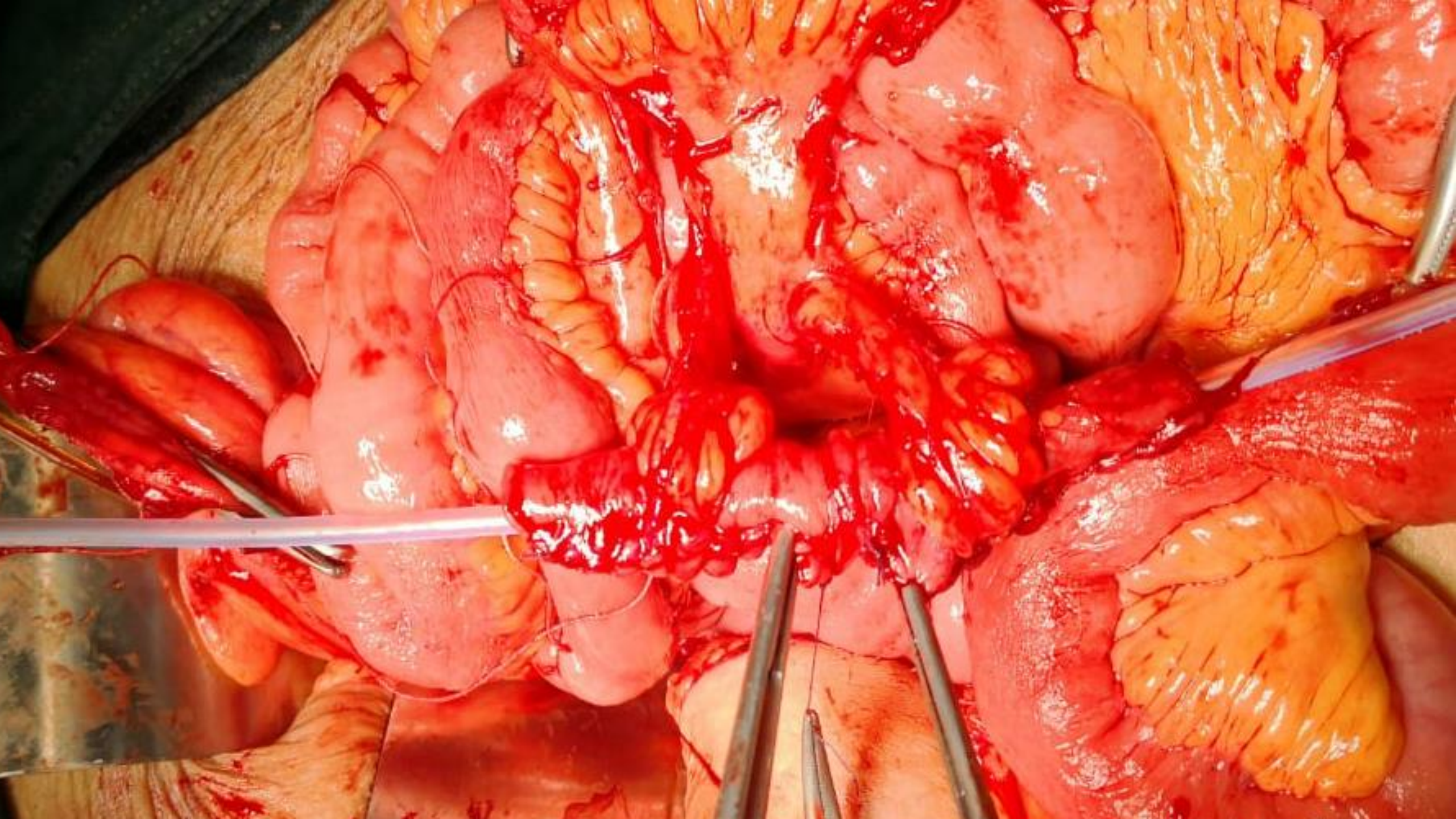
Less after-surgery complications

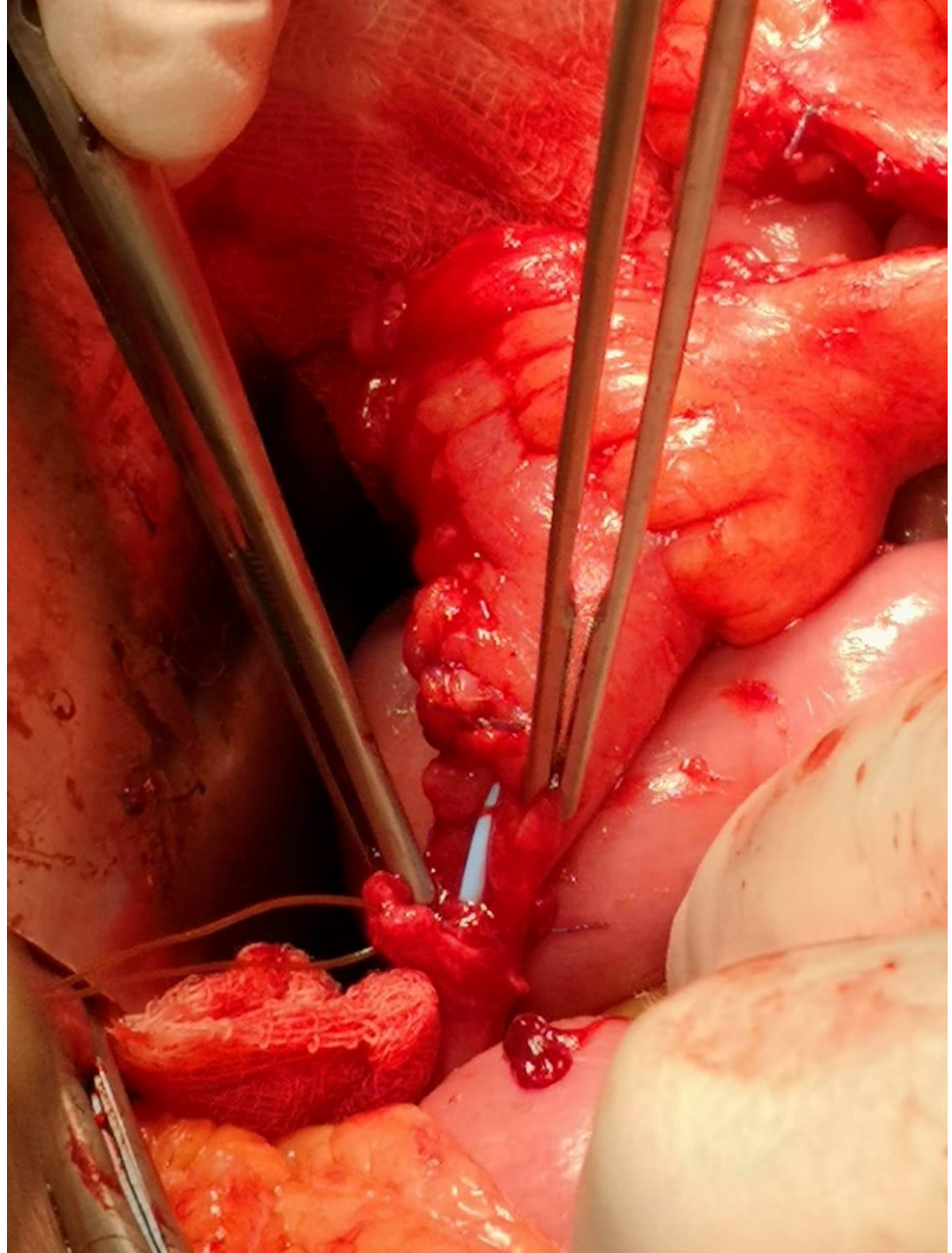
Easier to manage – for patient

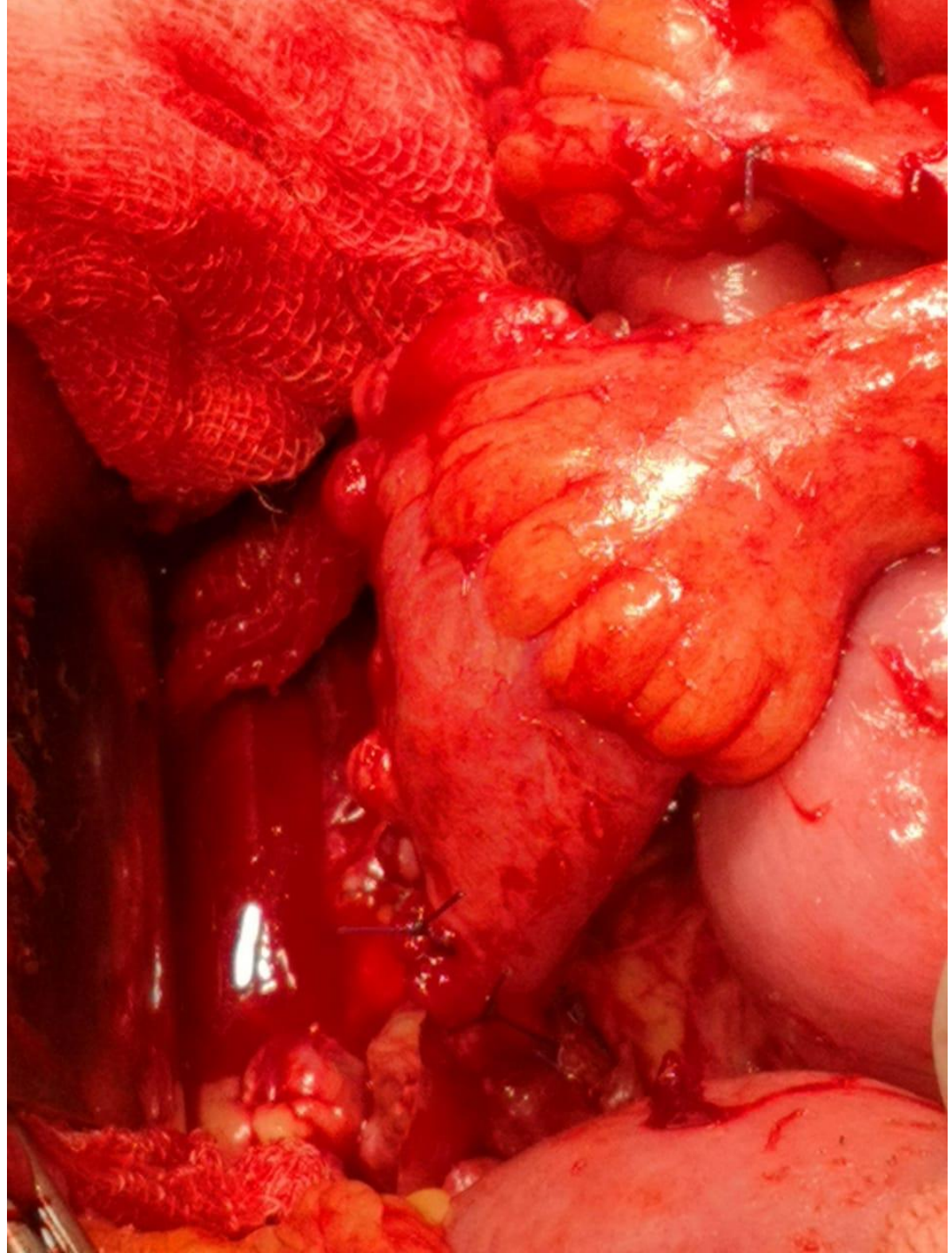

CENTIMETERS
INCHES

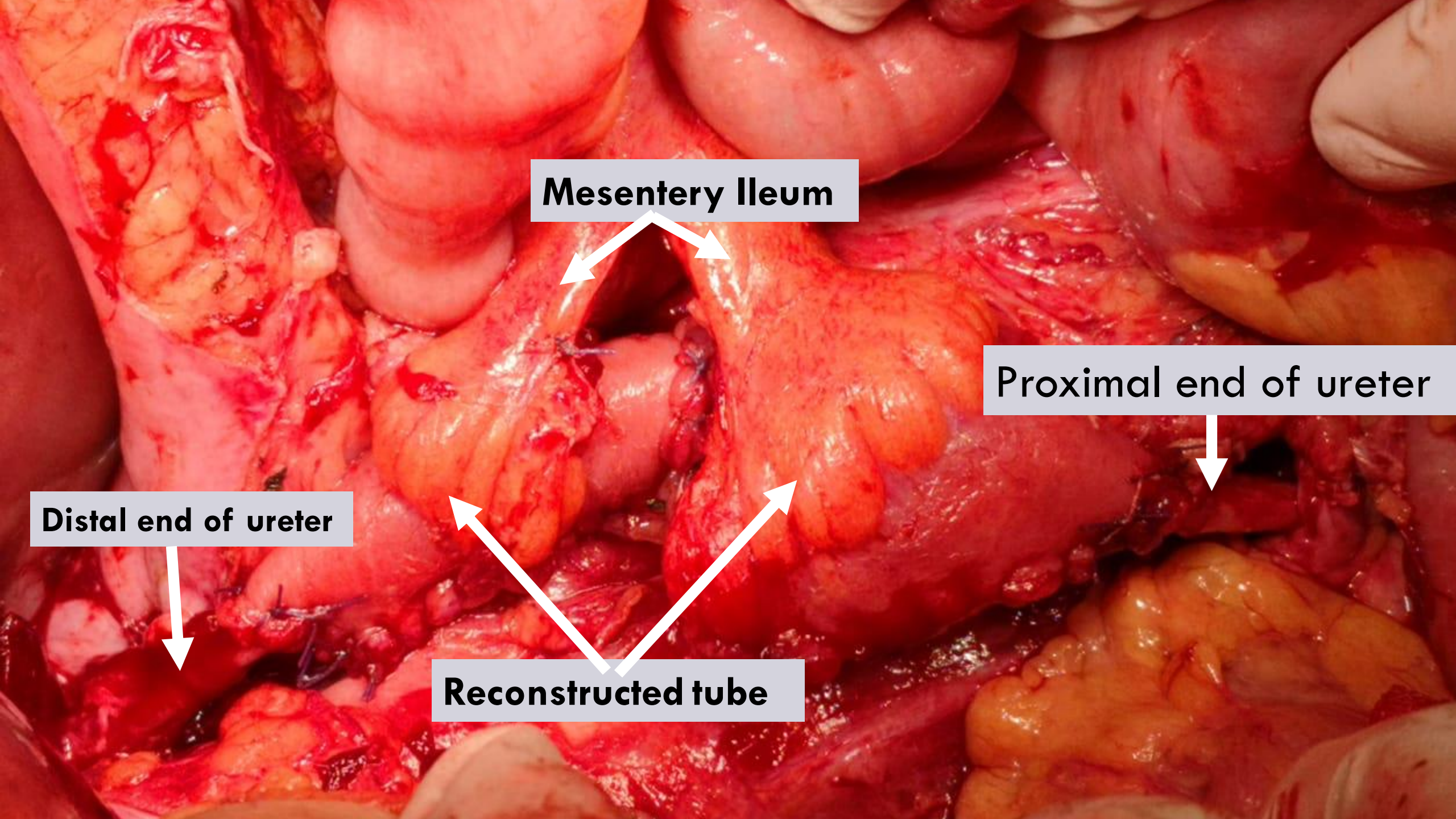


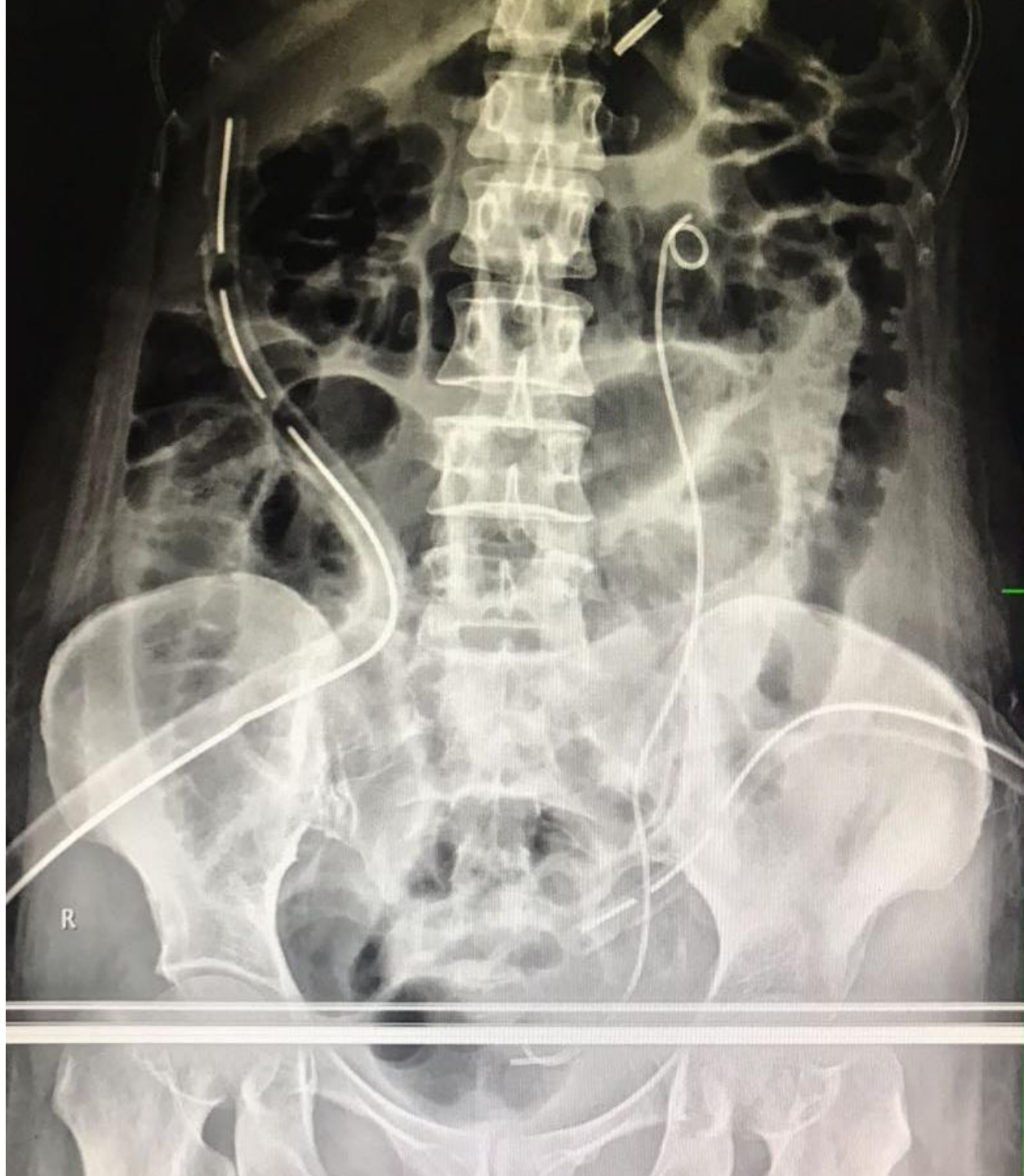


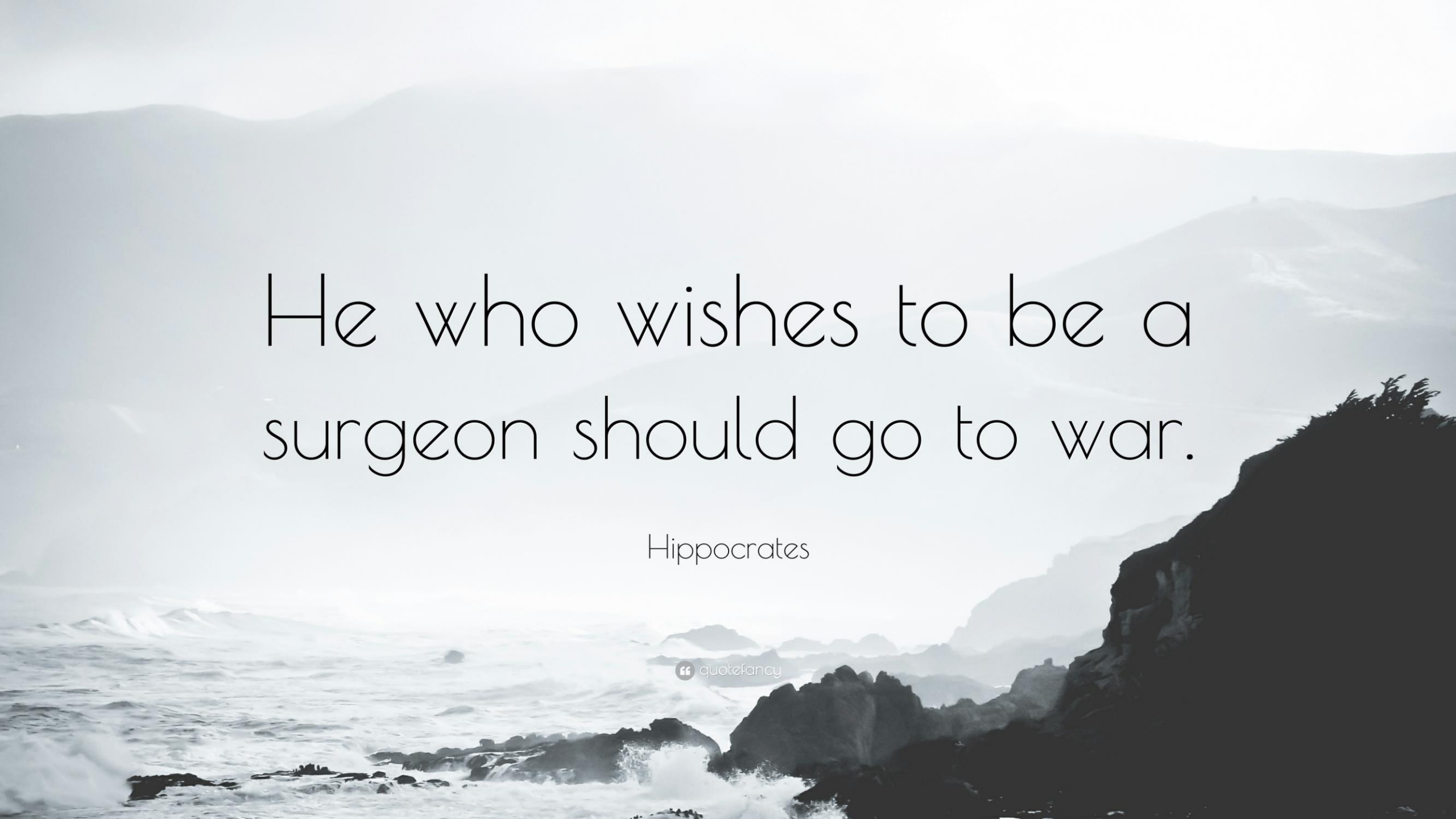







Mesentery Ileum
Proximal end of ureter
Distal end of ureter
Reconstructed tube


R


He who wishes to be a surgeon should go to war.
Hippocrates
quotefancy