10th BDIAP Seminar for Trainees in Histopathology
Approach to Cut-Up

Urology

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General points

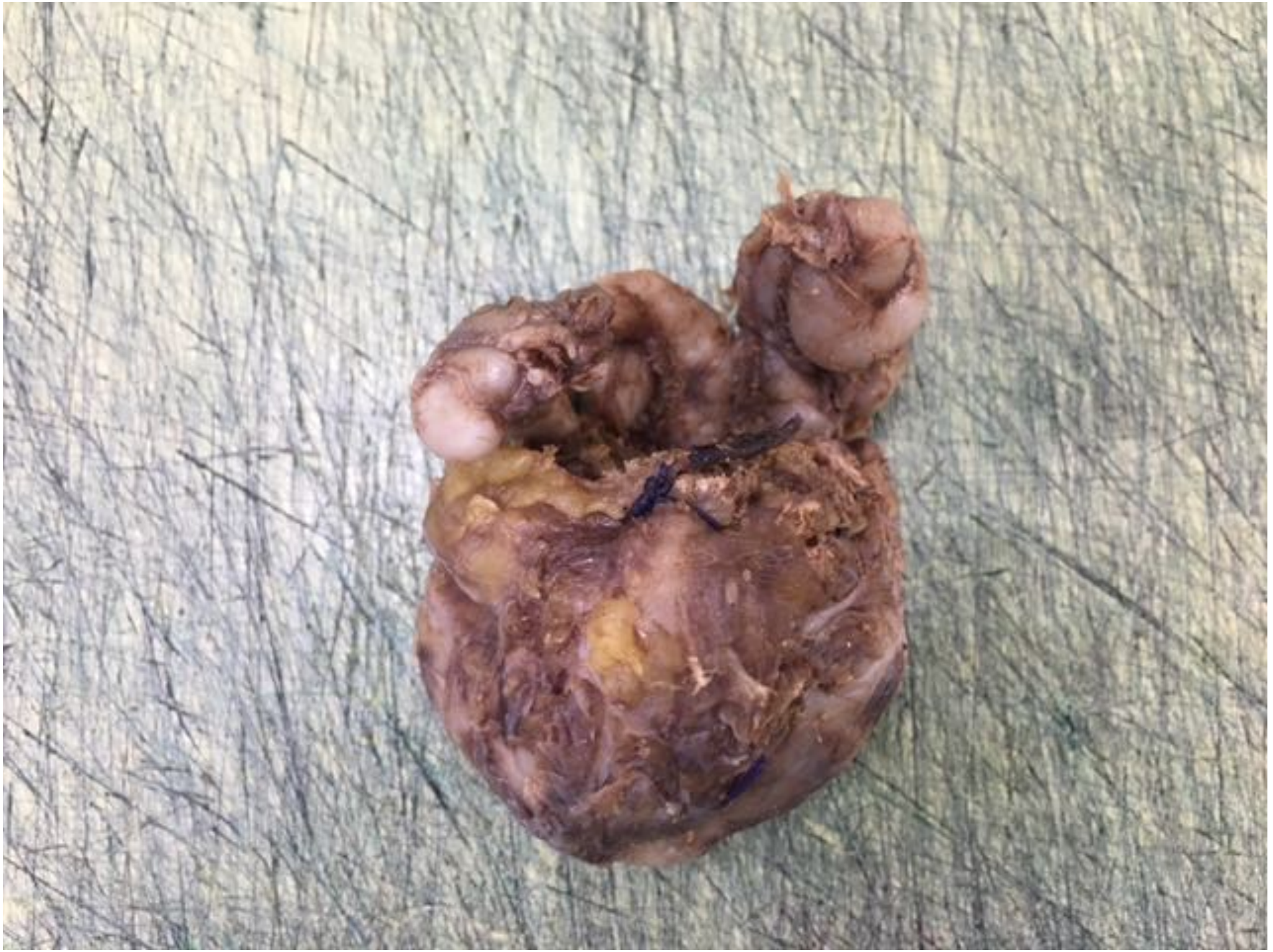
- Good cut up essential to signing out an accurate pathology report.
- Need to know the relevant macro data for each specimen type.
- Be able to accurately identify the informative areas of the specimen to sample.
- Every block you take should be justifiable.
- More blocks does not = better cut up!

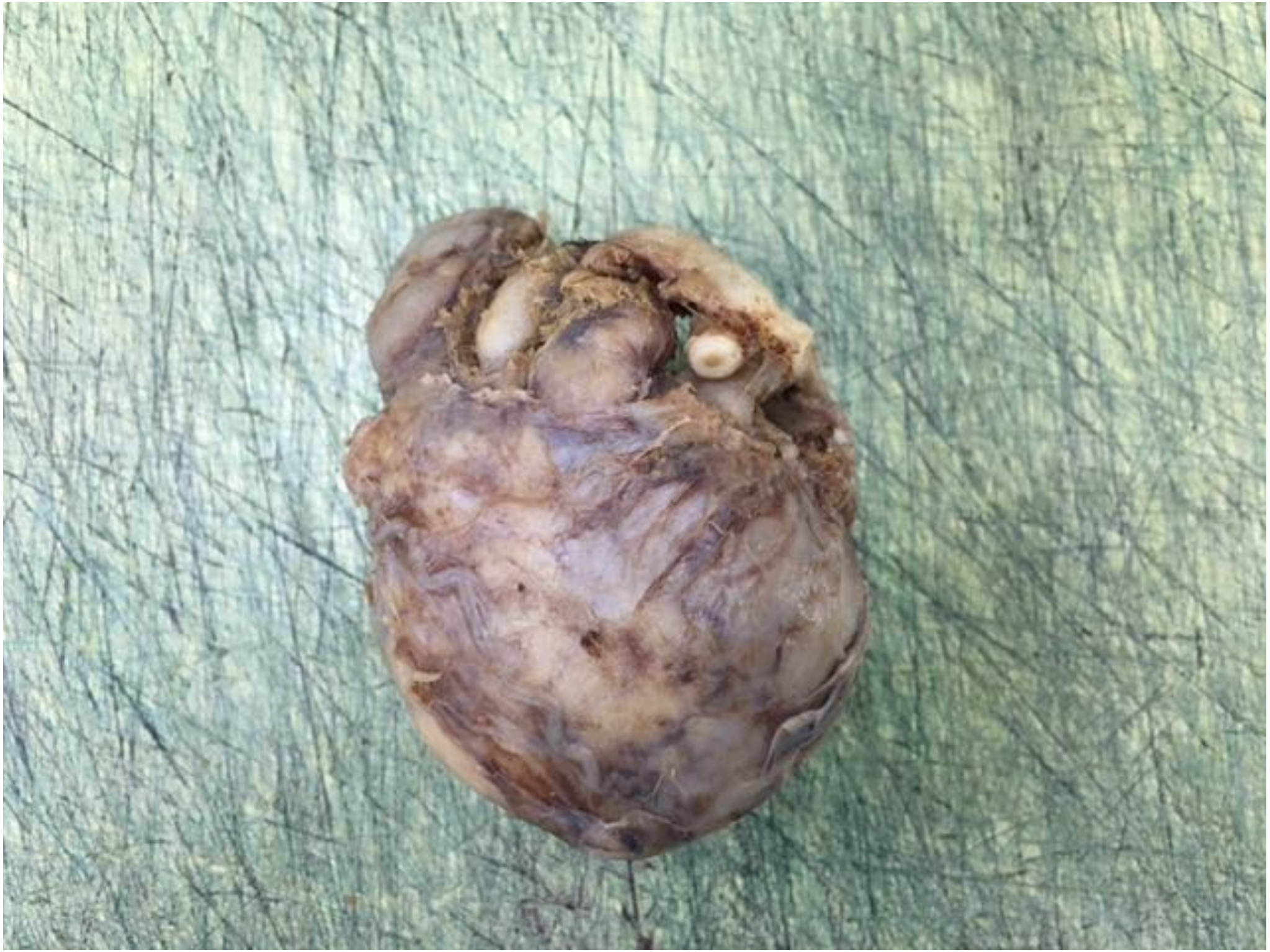
Lecture outline

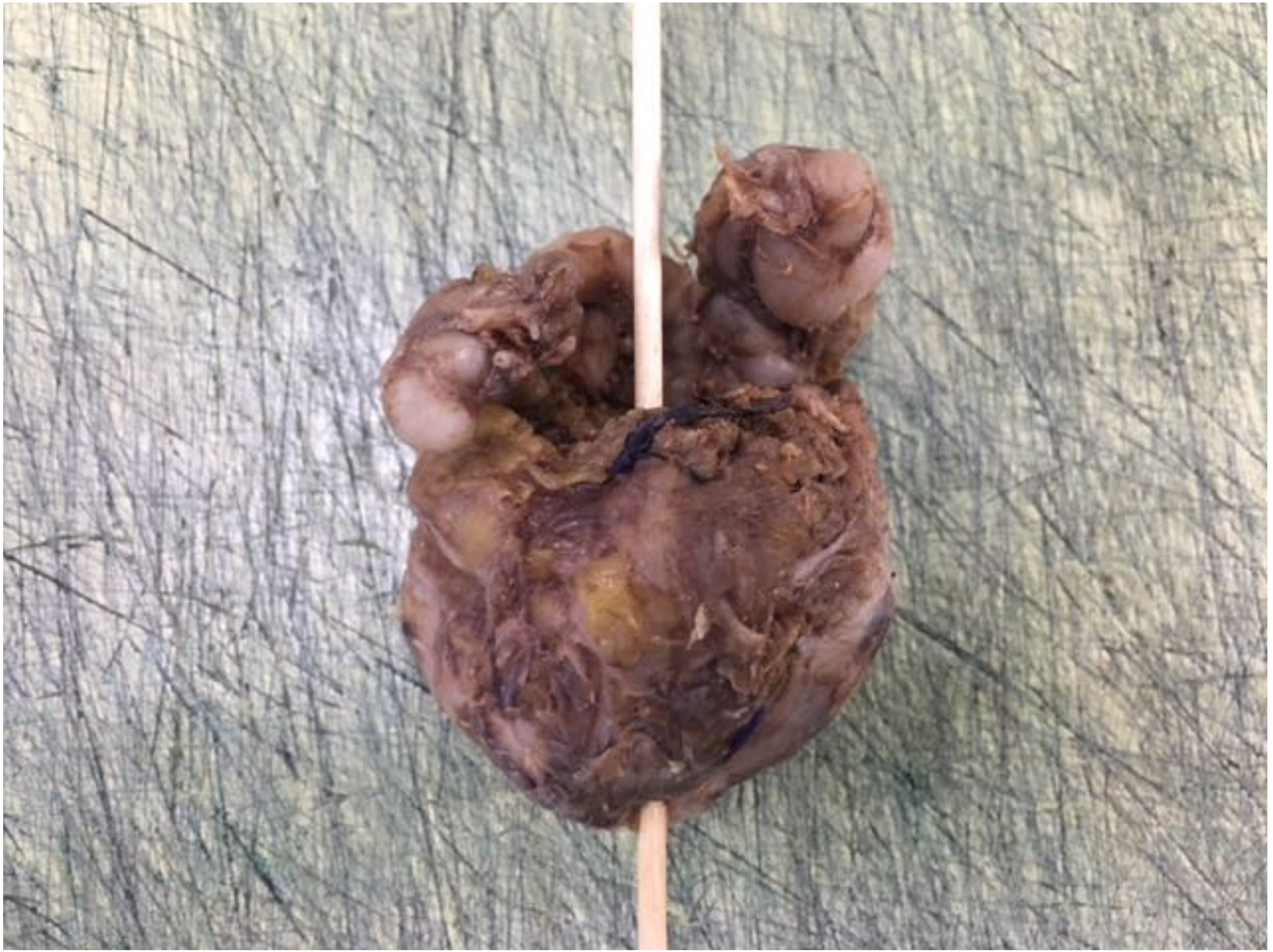
- We will cover the following cancer resections:
  - Prostatectomy
  - Nephrectomy
  - Nephroureterectomy
  - Cystectomy
  - Orchidectomy

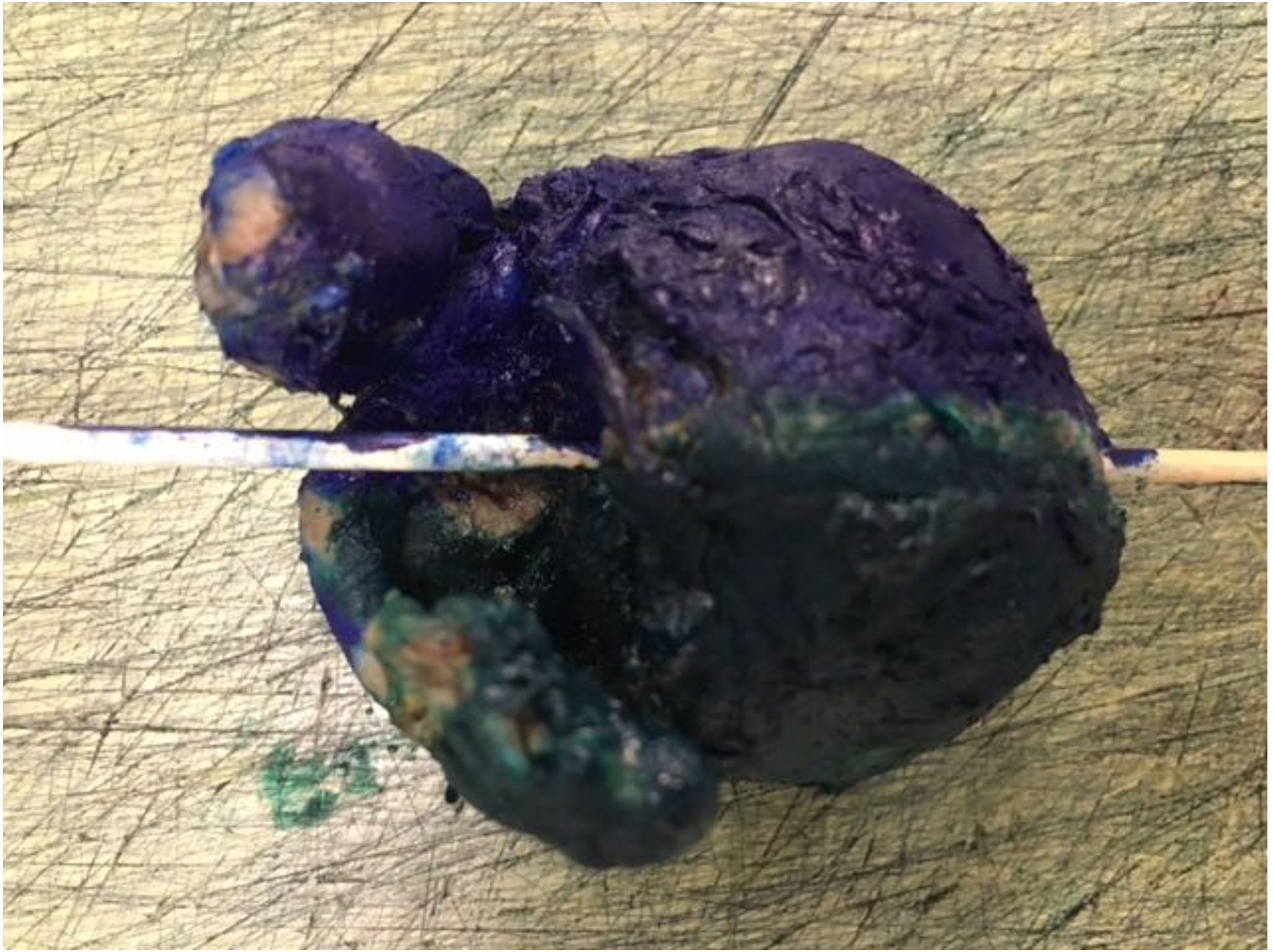
PROSTATECTOMY

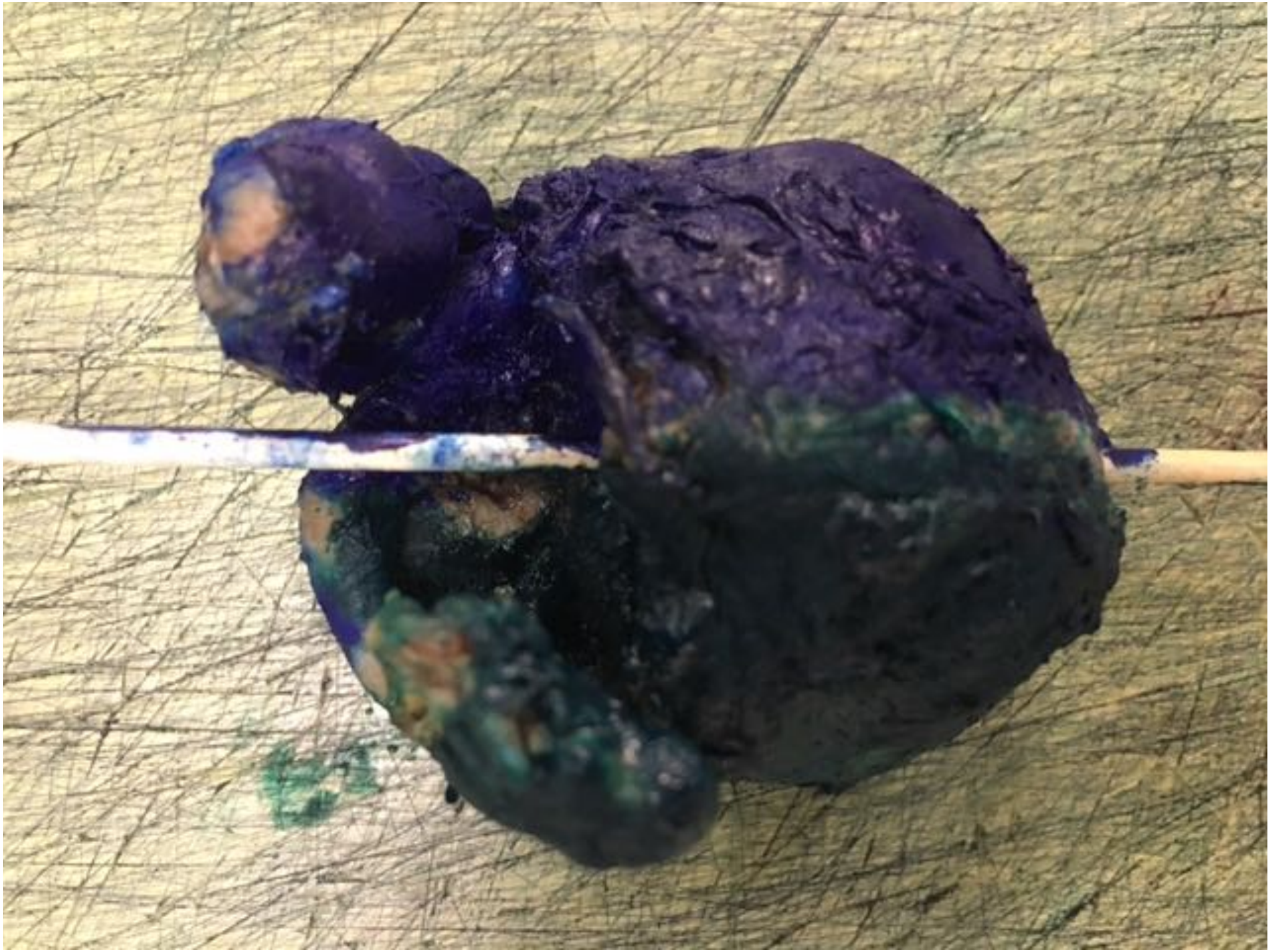
- Correctly orientate the specimen.
- Weigh & measure.
- Ink.
- Remove apex & cruciate.
- Remove seminal vesicles and submit.
- Deep shave the base & cruciate.
- Megablock the whole prostate.

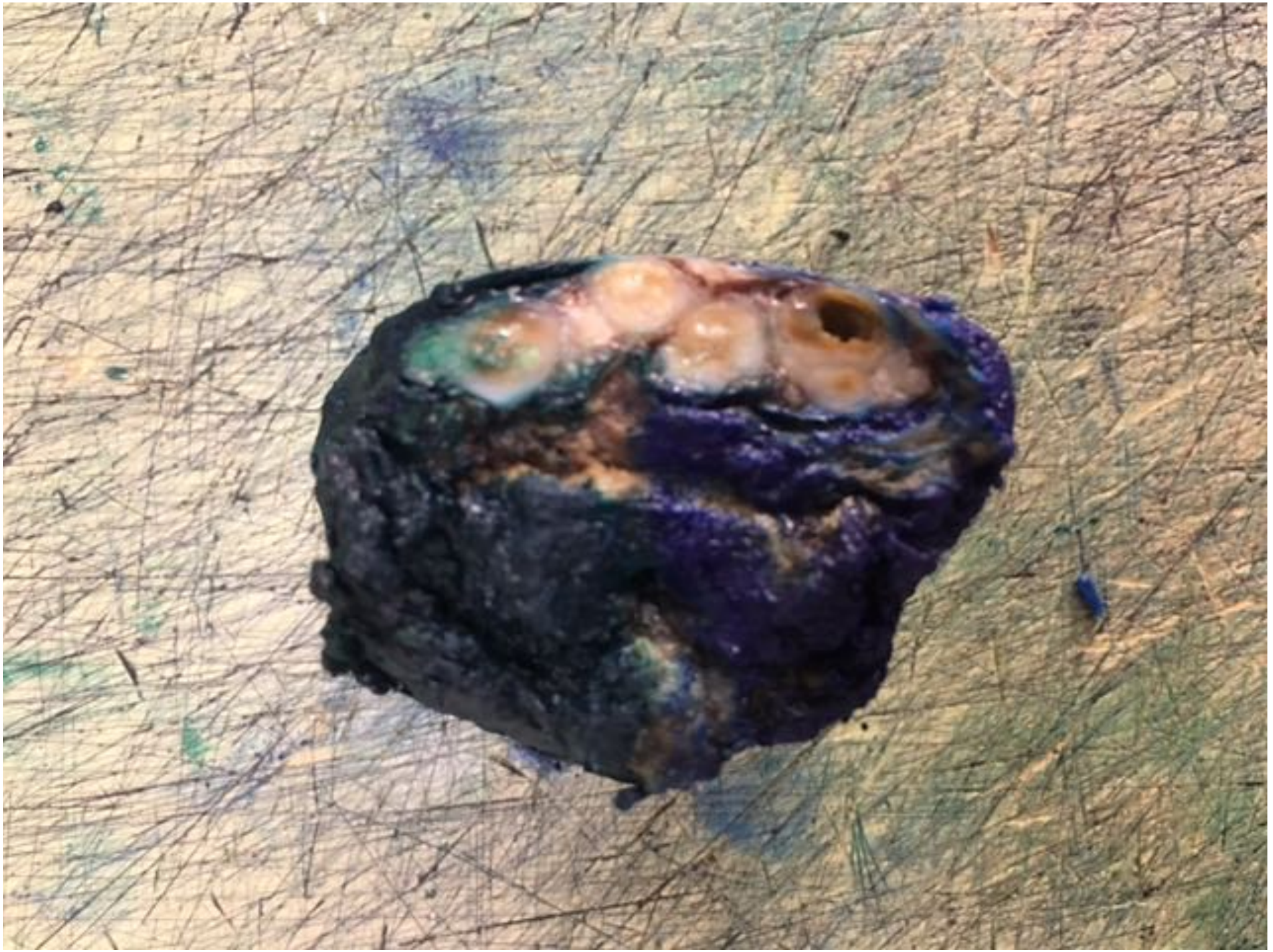


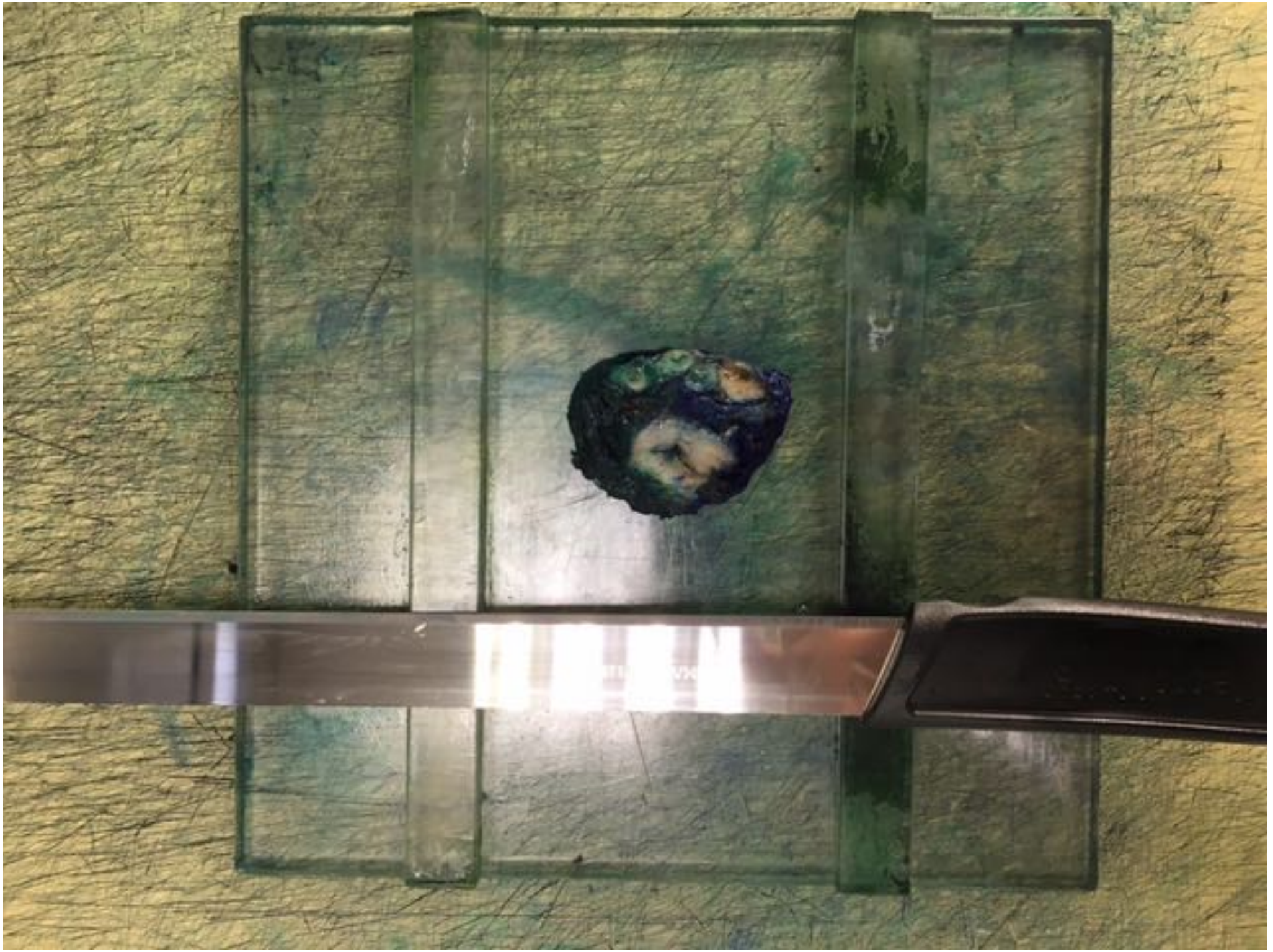


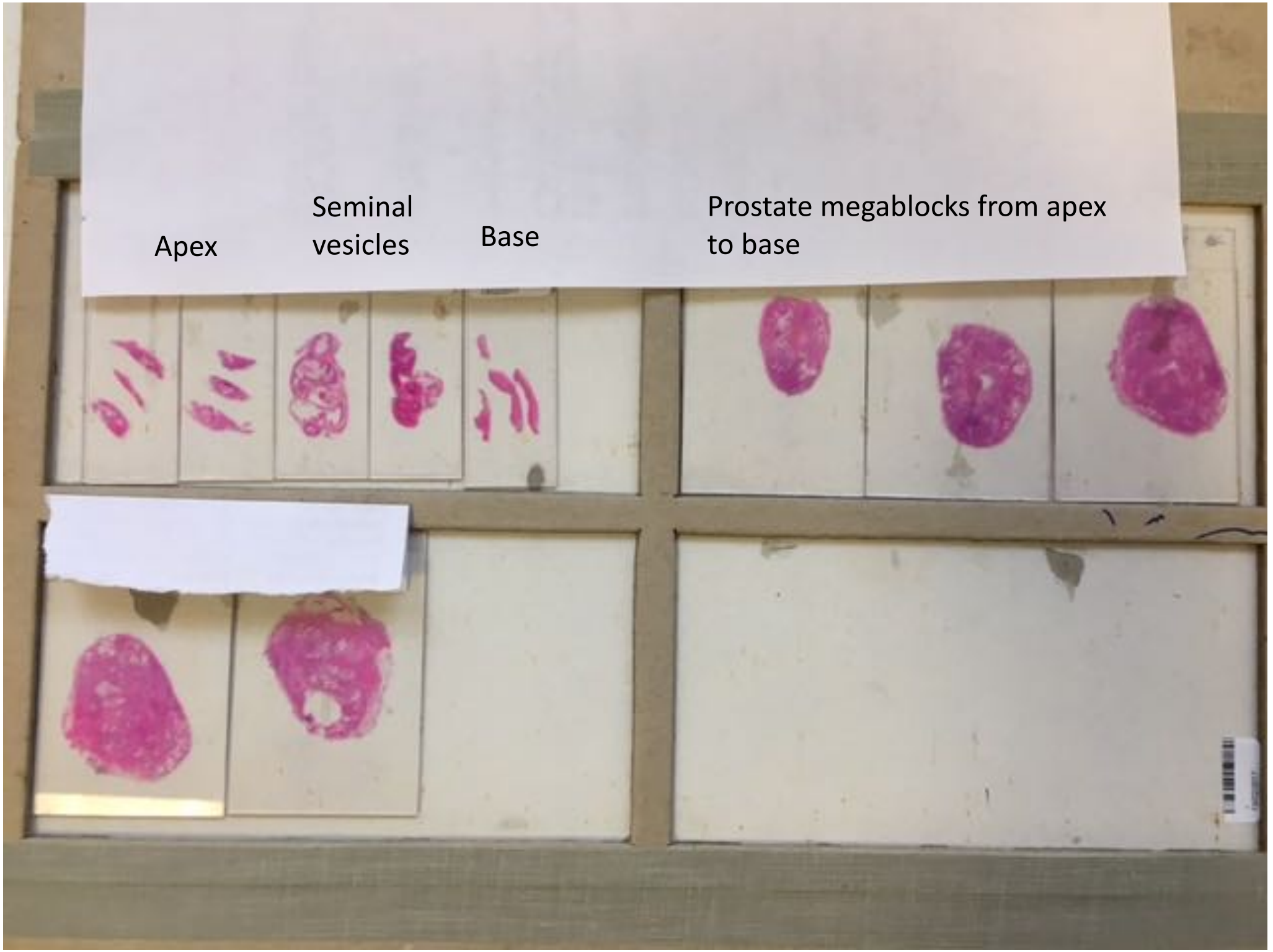






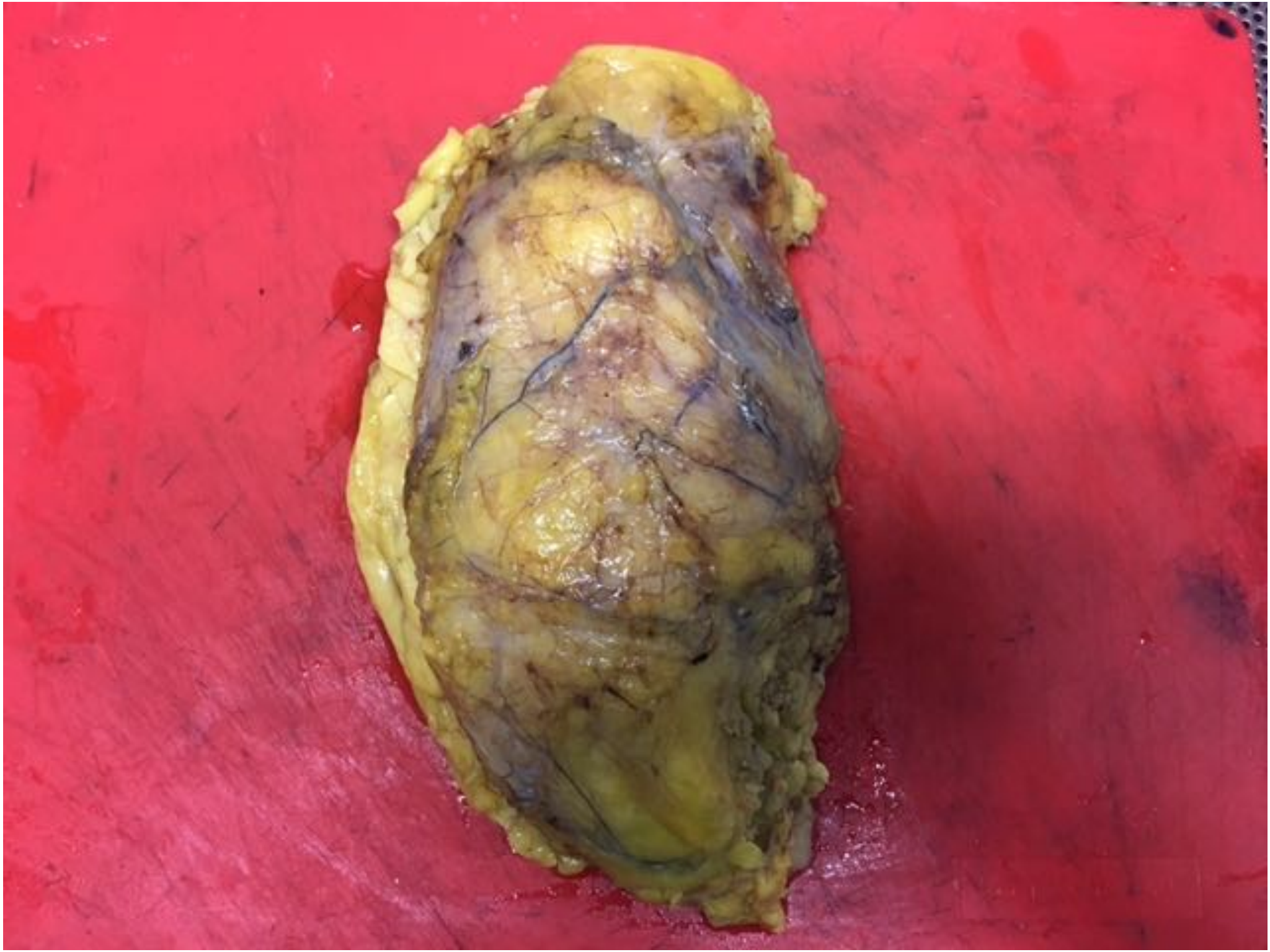


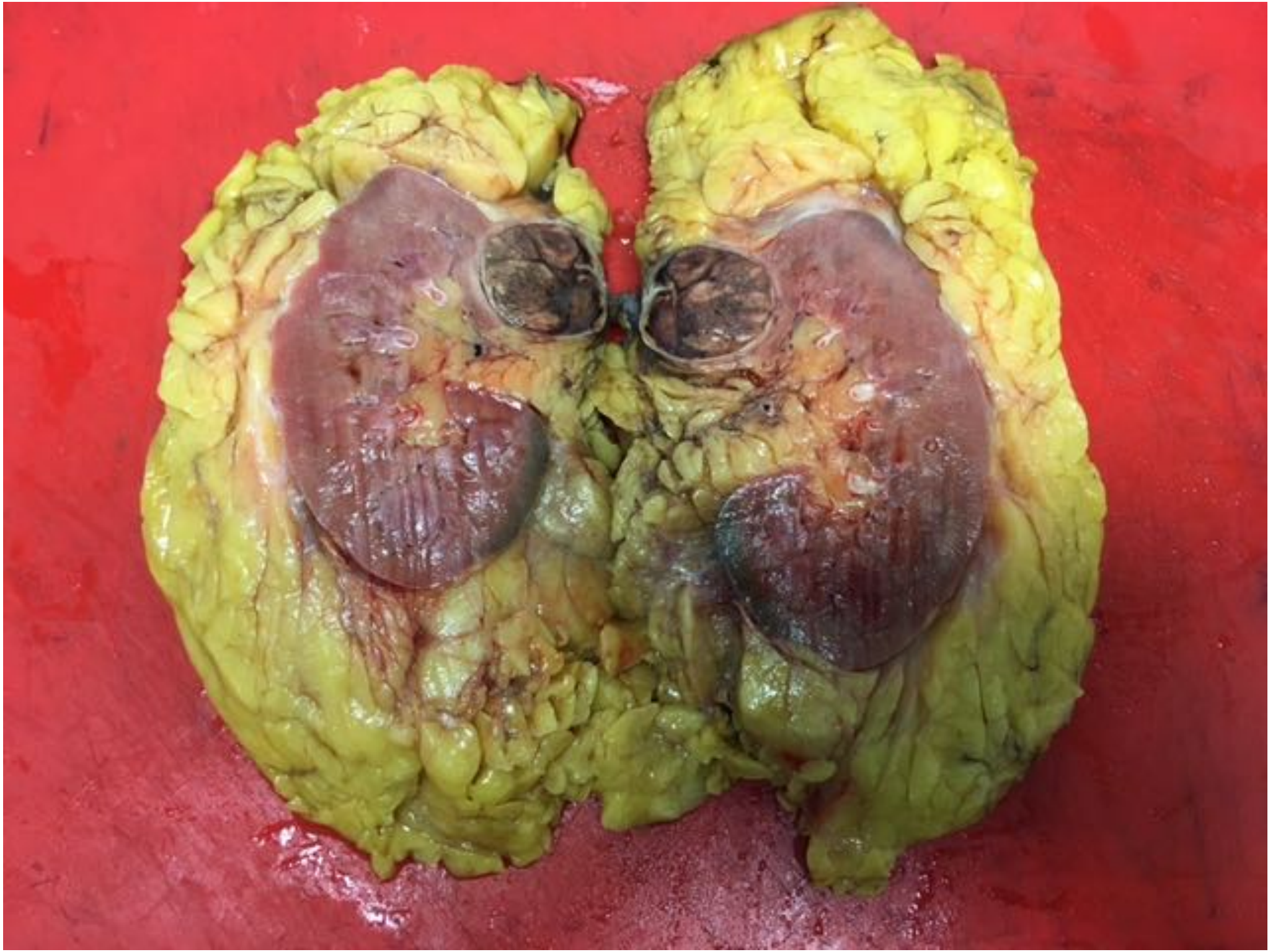


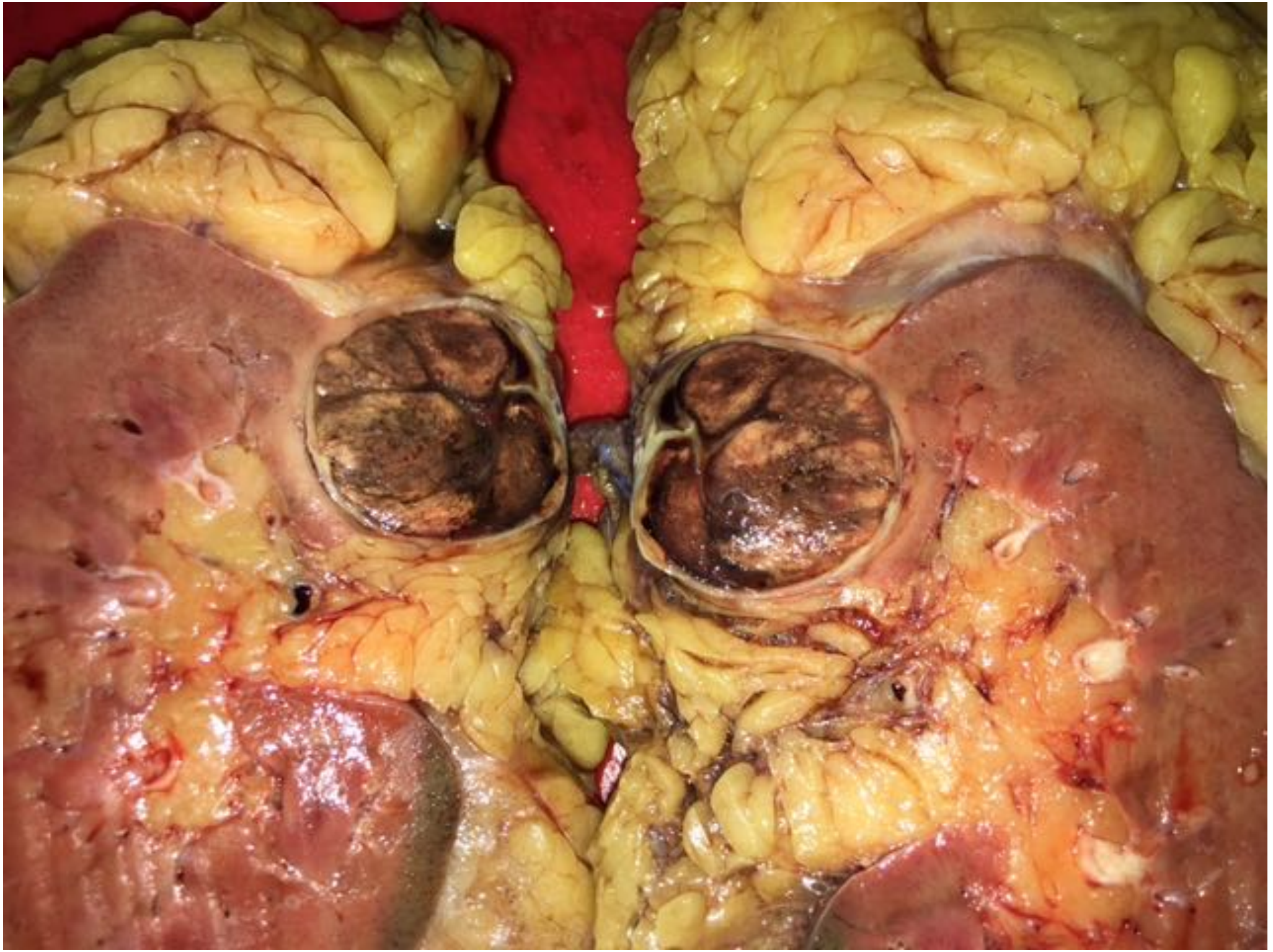

Apex
Seminal vesicles
Base
Prostate megablocks from apex to base

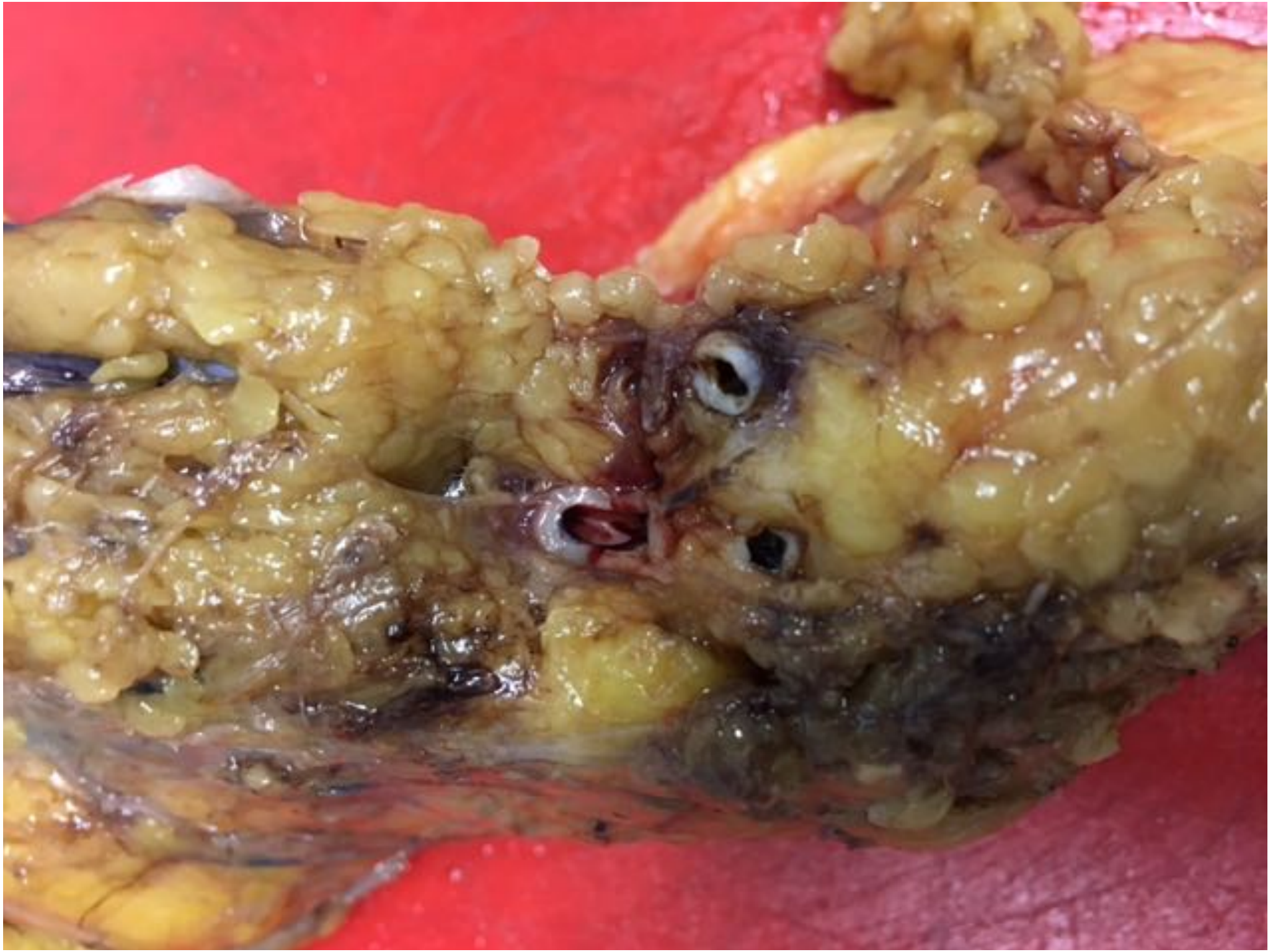
NEPHRECTOMY

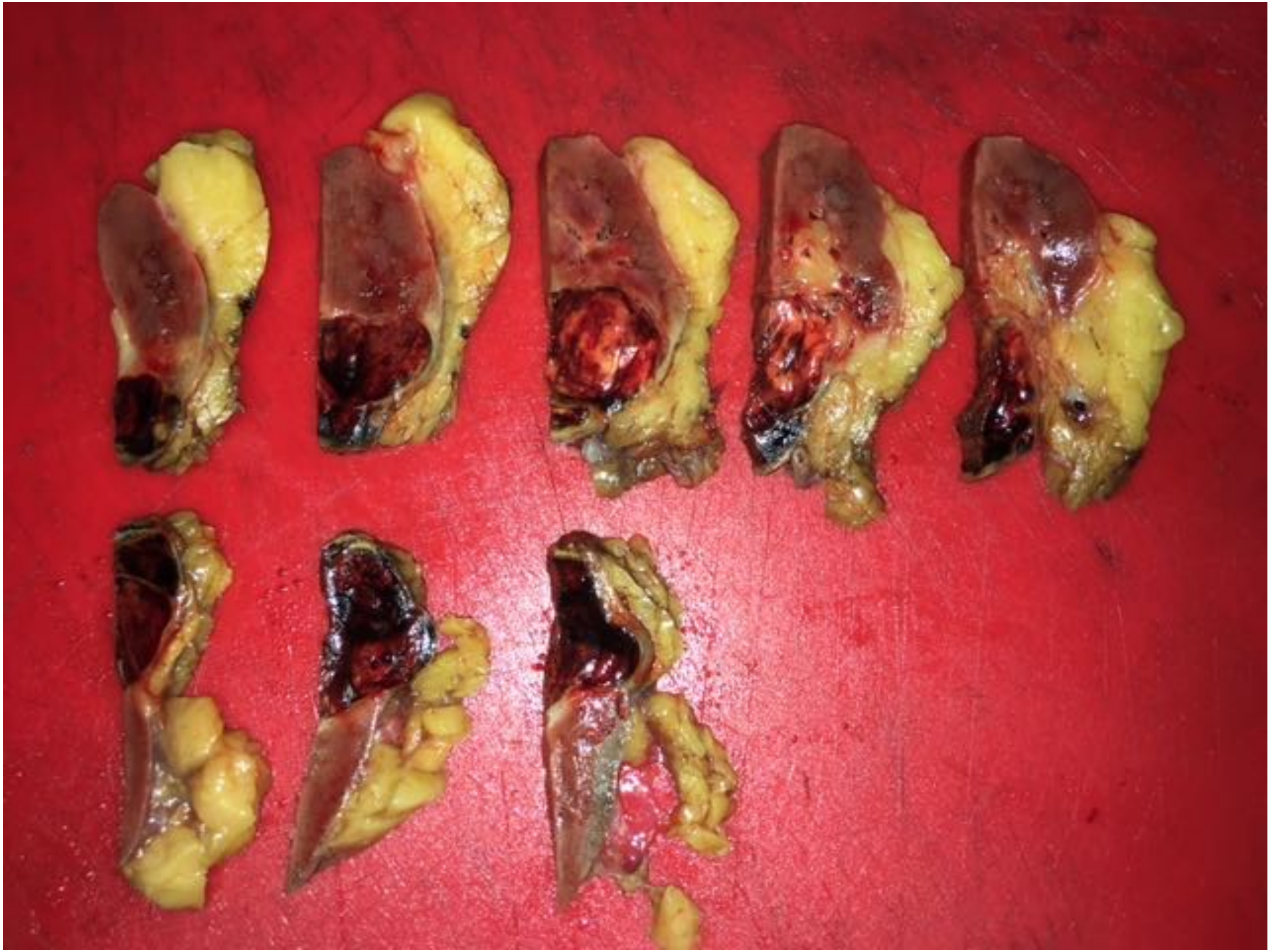
- Bivalve on receipt. Usually not necessary to ink.
- Take a hilar block to include ureter, vessels & nodes if seen.
- Sample adrenal if present (if tumour is present important to state if contiguous with the renal tumour or a separate deposit)
- Serially slice each half of the kidney.
- Take a block of background kidney.
- Now tackle the tumour.
- Tumour size.
- Tumour appearance:
  - Solid or cystic?
  - Colour (golden yellow, brown, friable, white areas)
- Tumour spread:
  - Capsular invasion?
  - Renal sinus invasion?
  - Renal vein invasion?

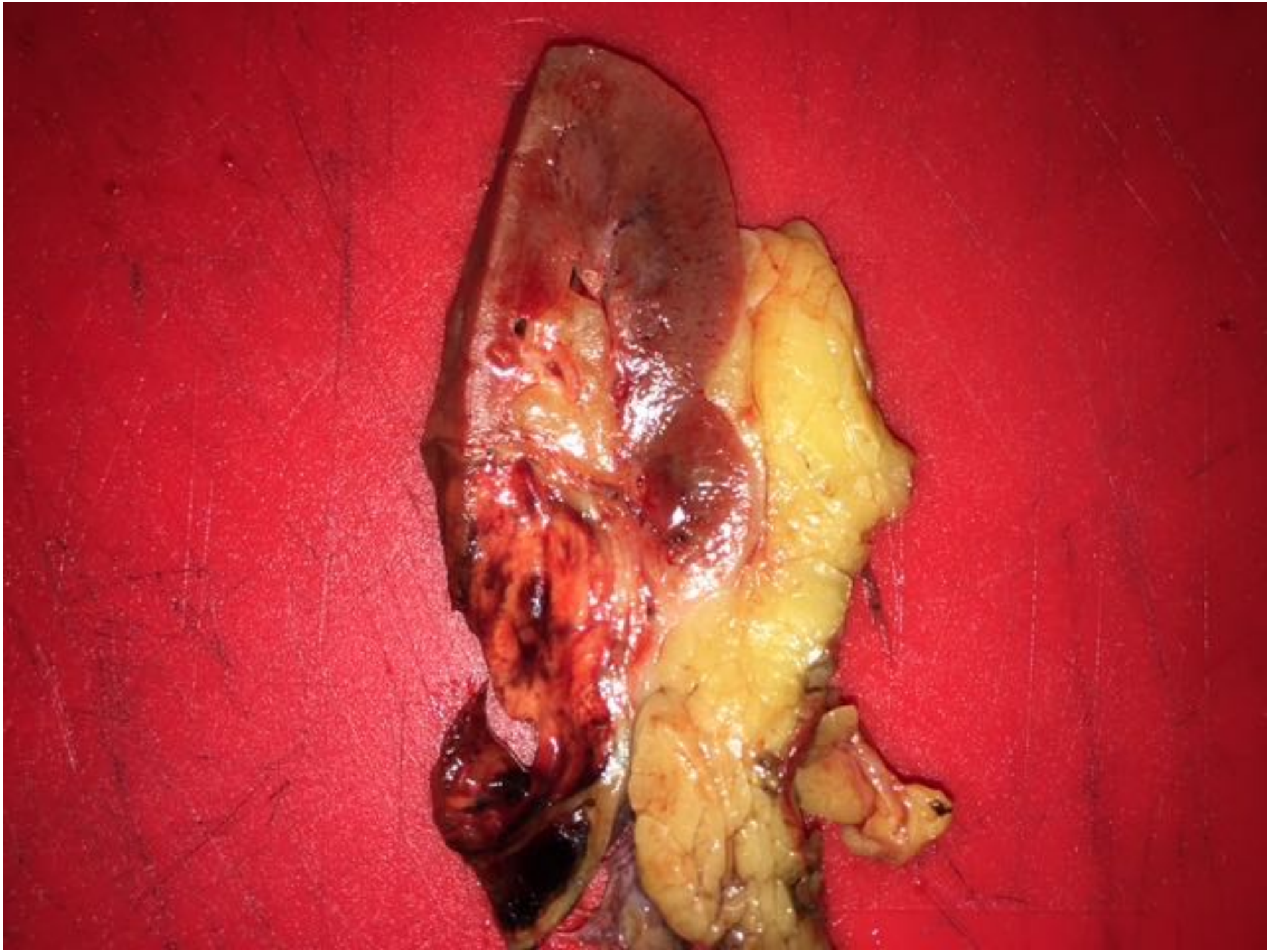


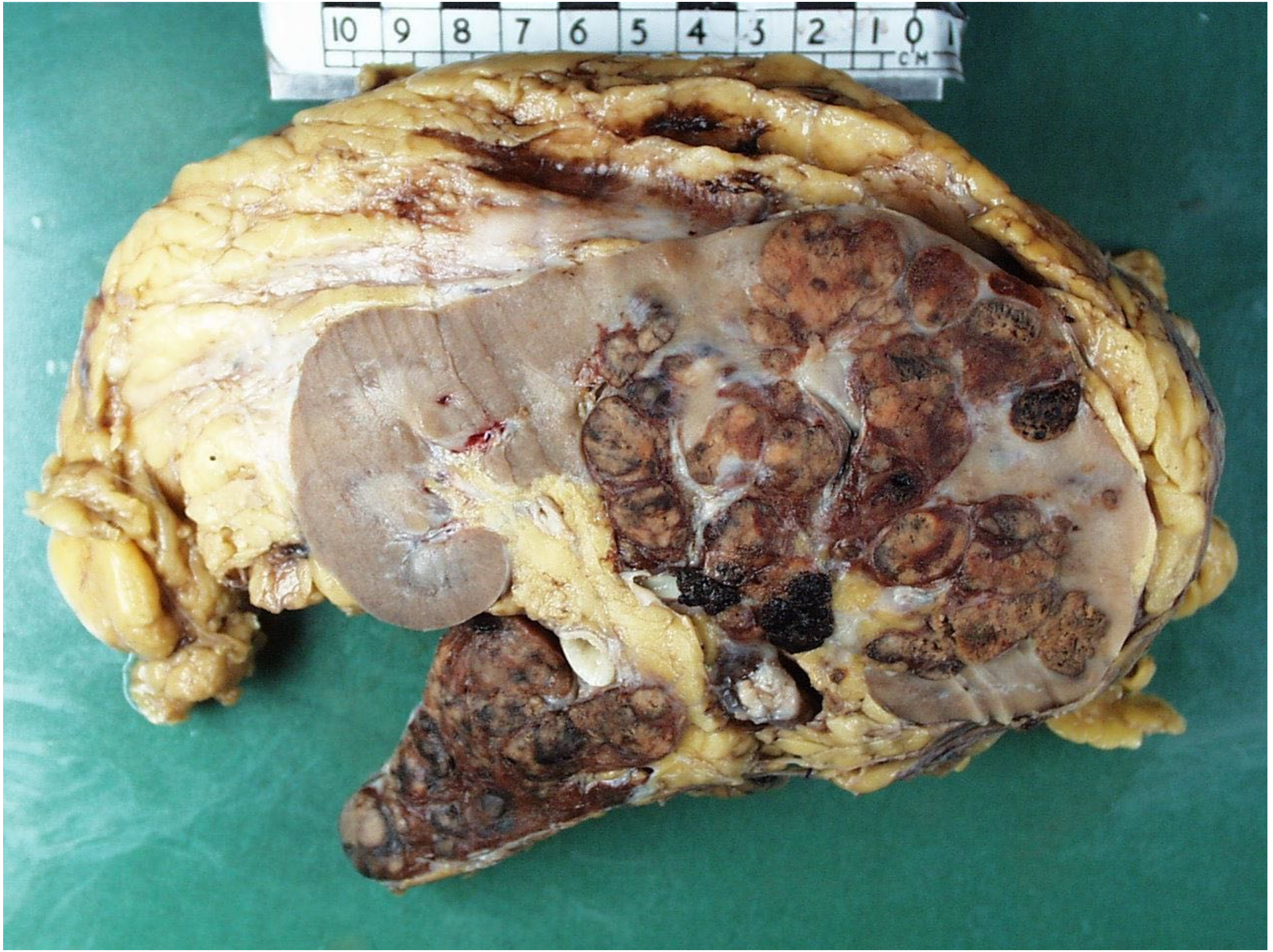








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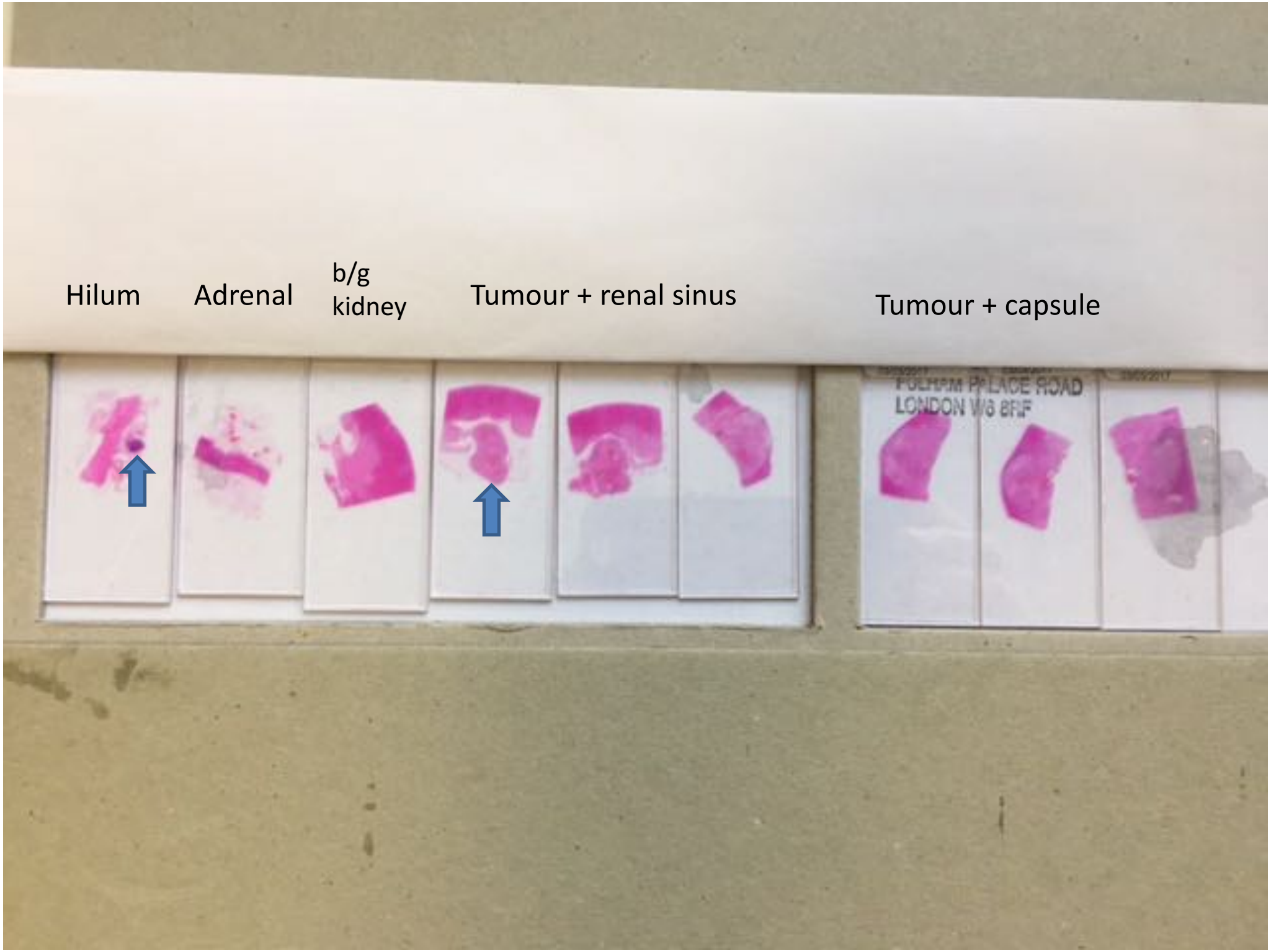
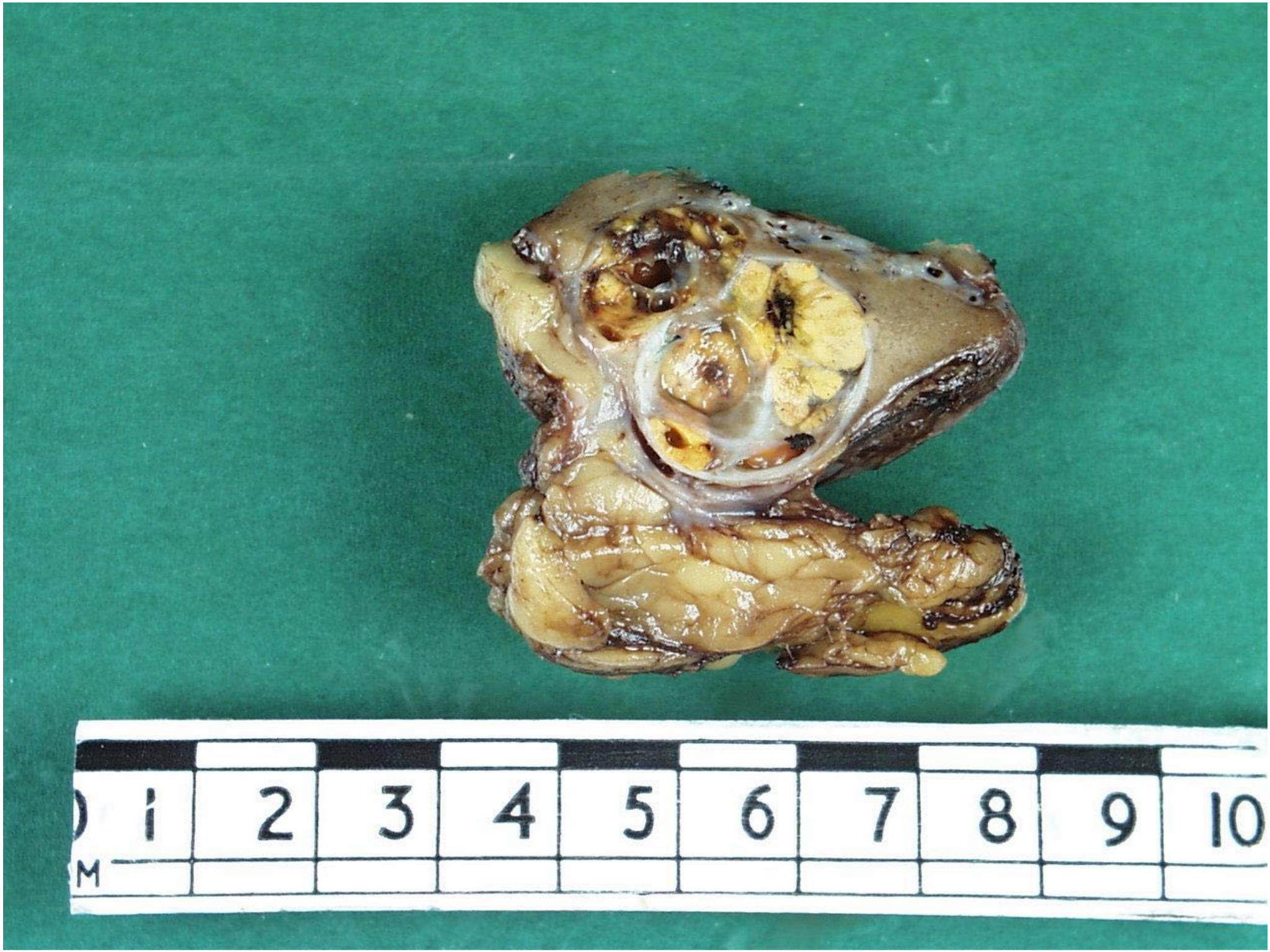

Hilum
Adrenal
b/g kidney
Tumour + renal sinus
Tumour + capsule

PARTIAL NEPHRECTOMY

- Ink the renal resection margin.
- Serially sliced.
- Describe & measure the tumour.
- Note macroscopic distance to renal resection margin.
- Smaller tumours can be embedded in toto.
- Larger tumour can be sampled focusing on the interface between tumour & margin and tumour & capsule.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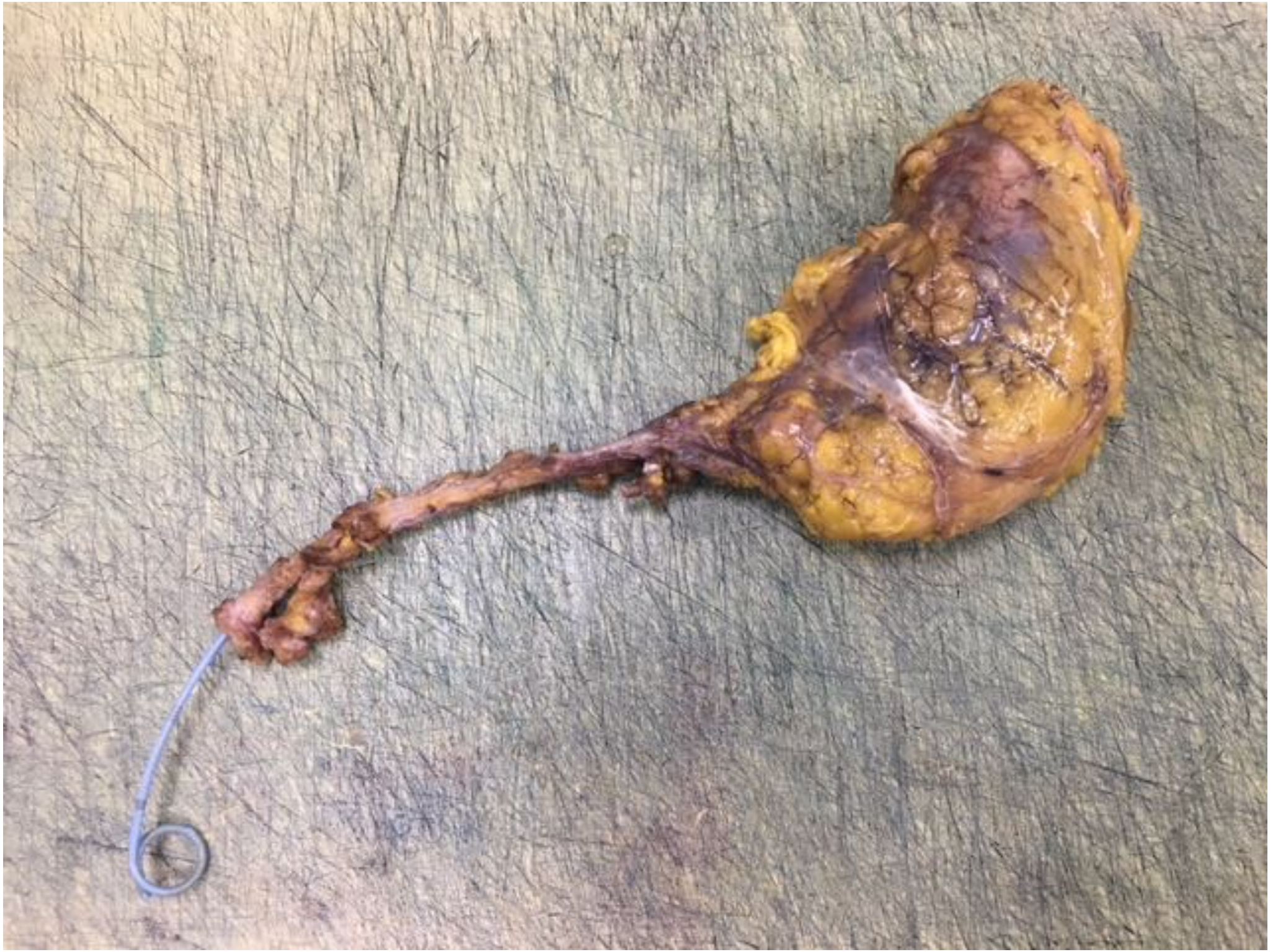
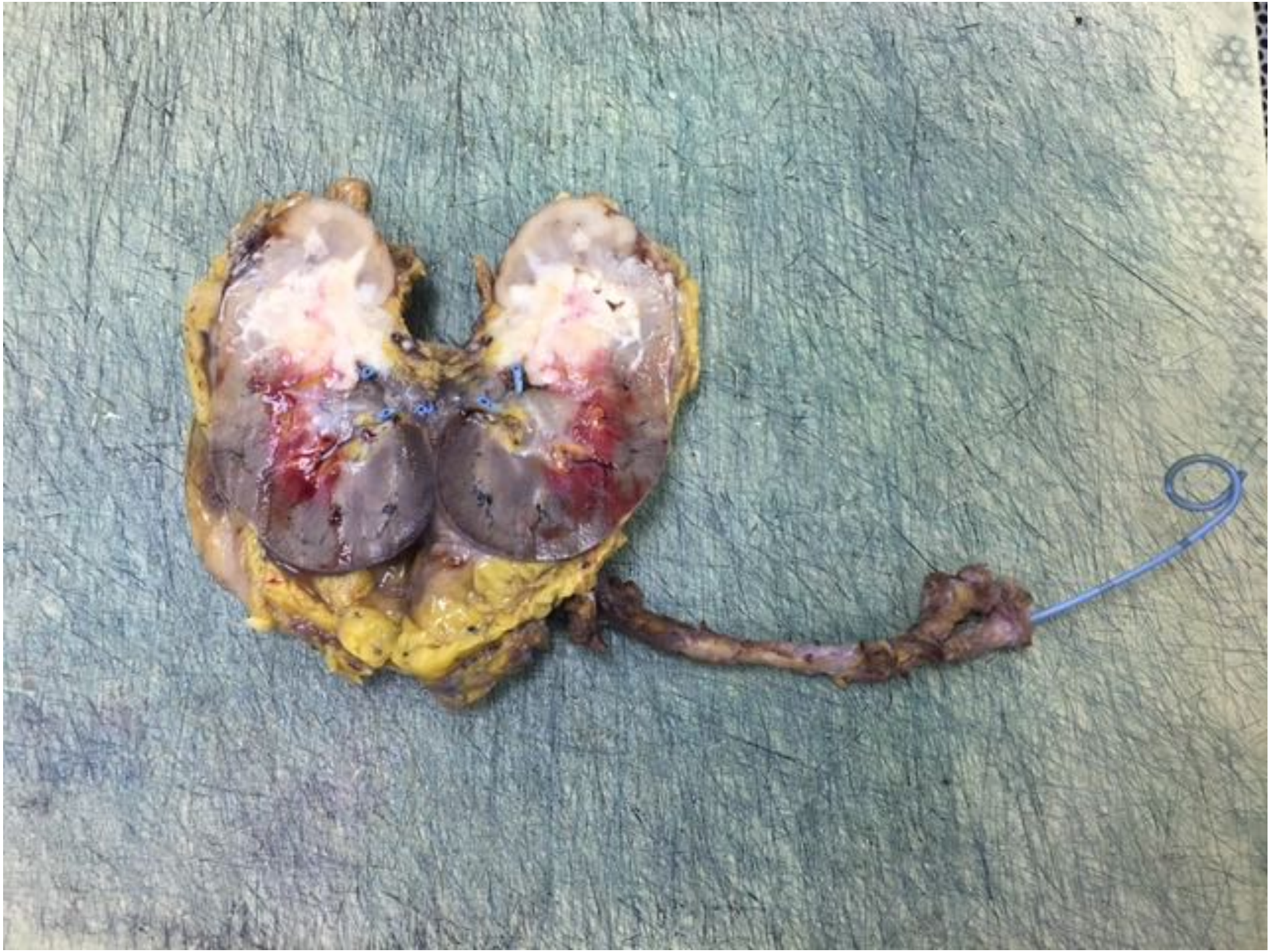
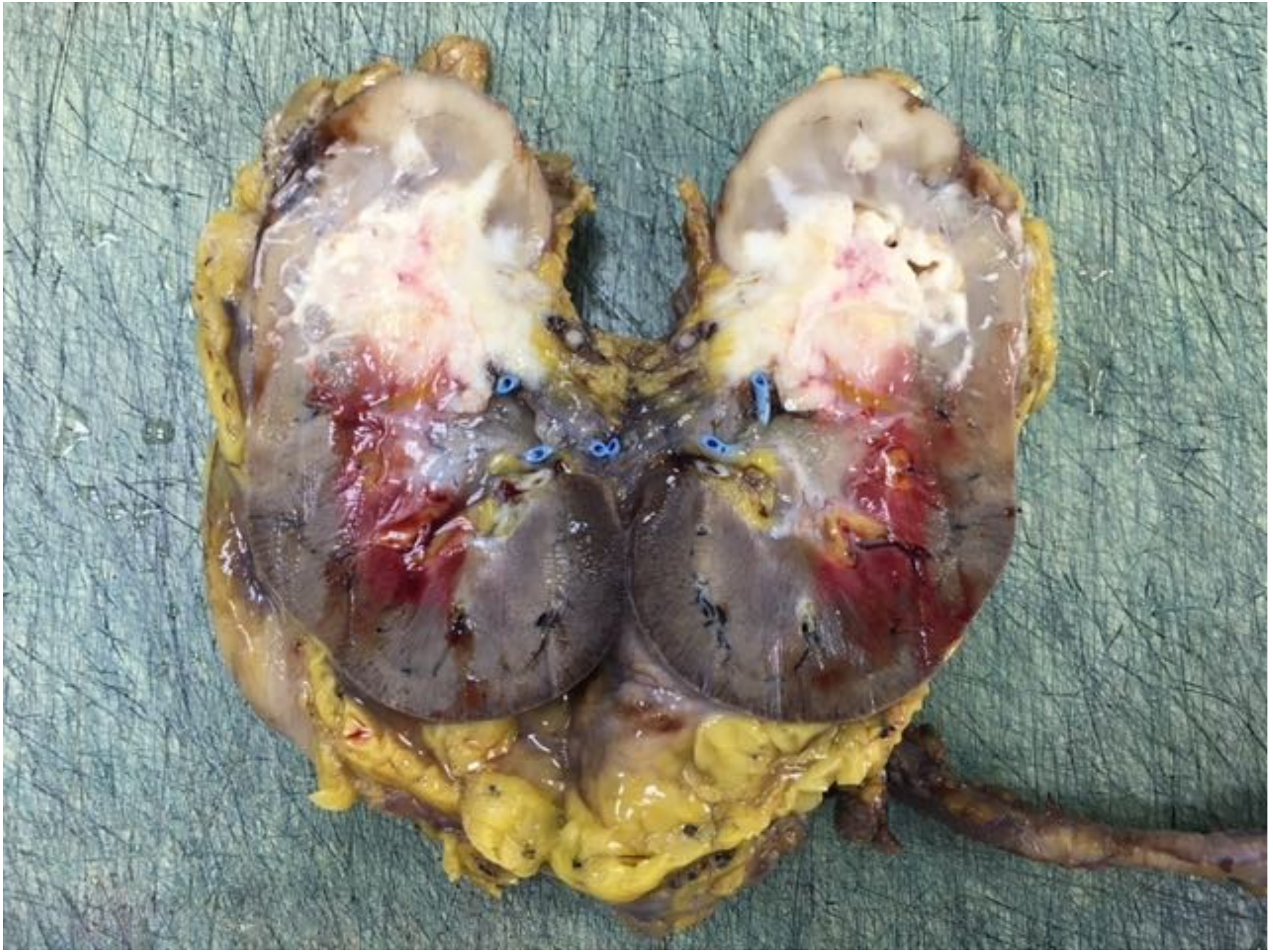
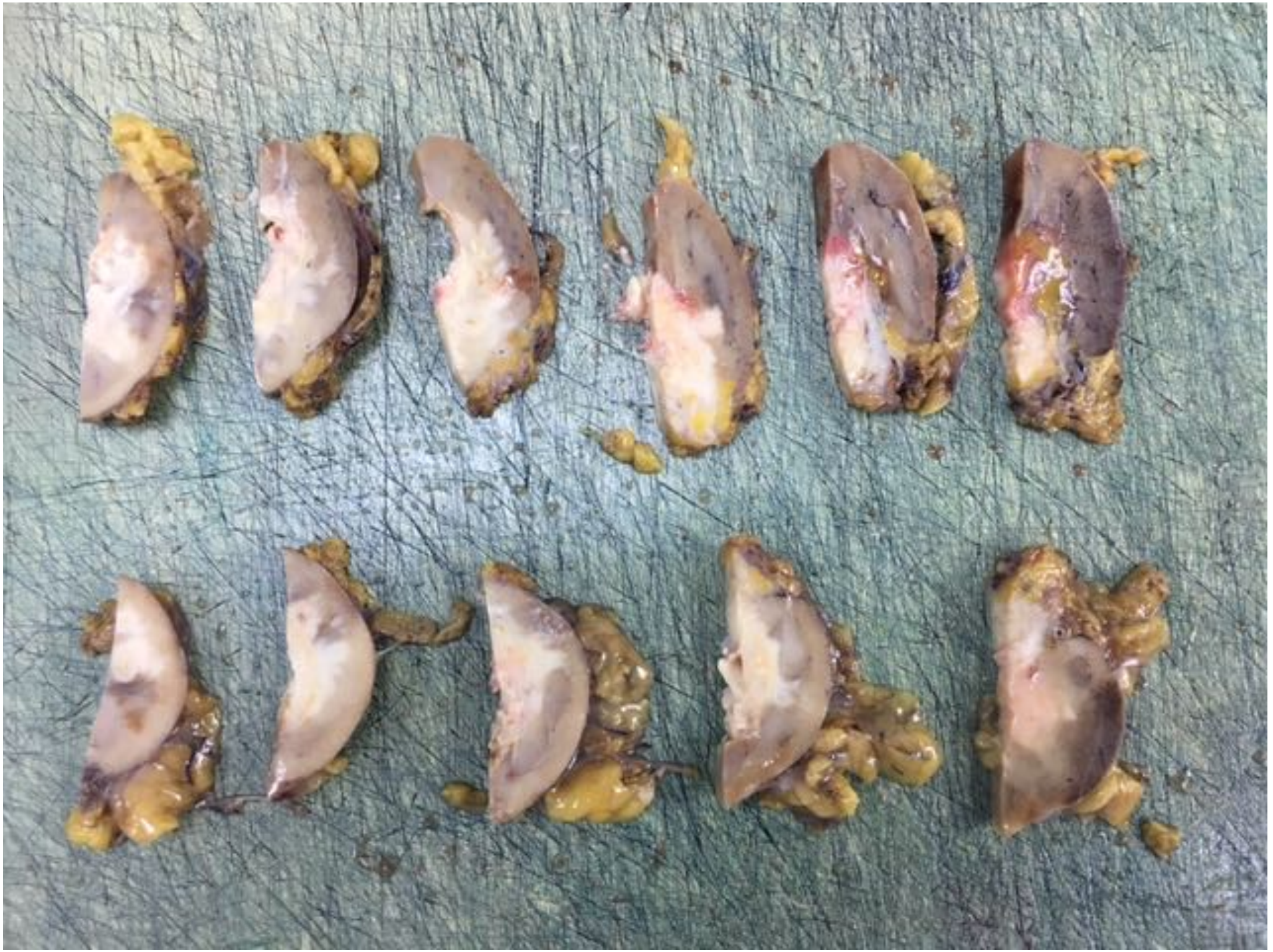
NEPHROURETERECTOMY

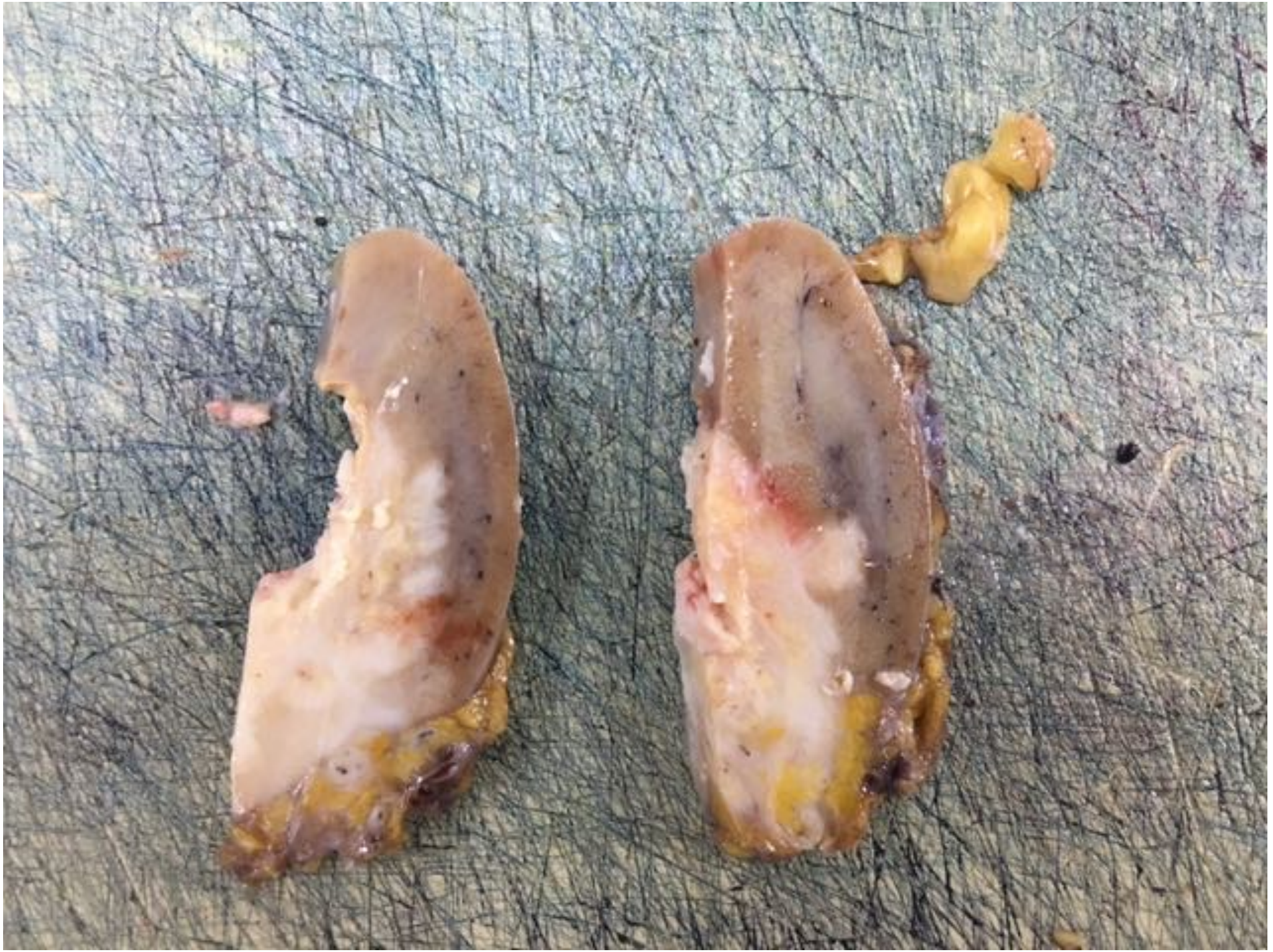
- Bivalve kidney on receipt.
- If tumour in ureter can ink around the area of palpable tumour.
- Take ureteric margin.
- Serially slice ureter.
- If tumour in ureter, note spread into ureteric wall or beyond. Usually embed entire tumour. Serially slice each half of the kidney. If no obvious tumour take one or two blocks from the kidney.
- If tumour in kidney, sample the lower and upper ureter, then serially slice each half of the kidney. Note tumour size and spread. Sample tumour with deepest spread.

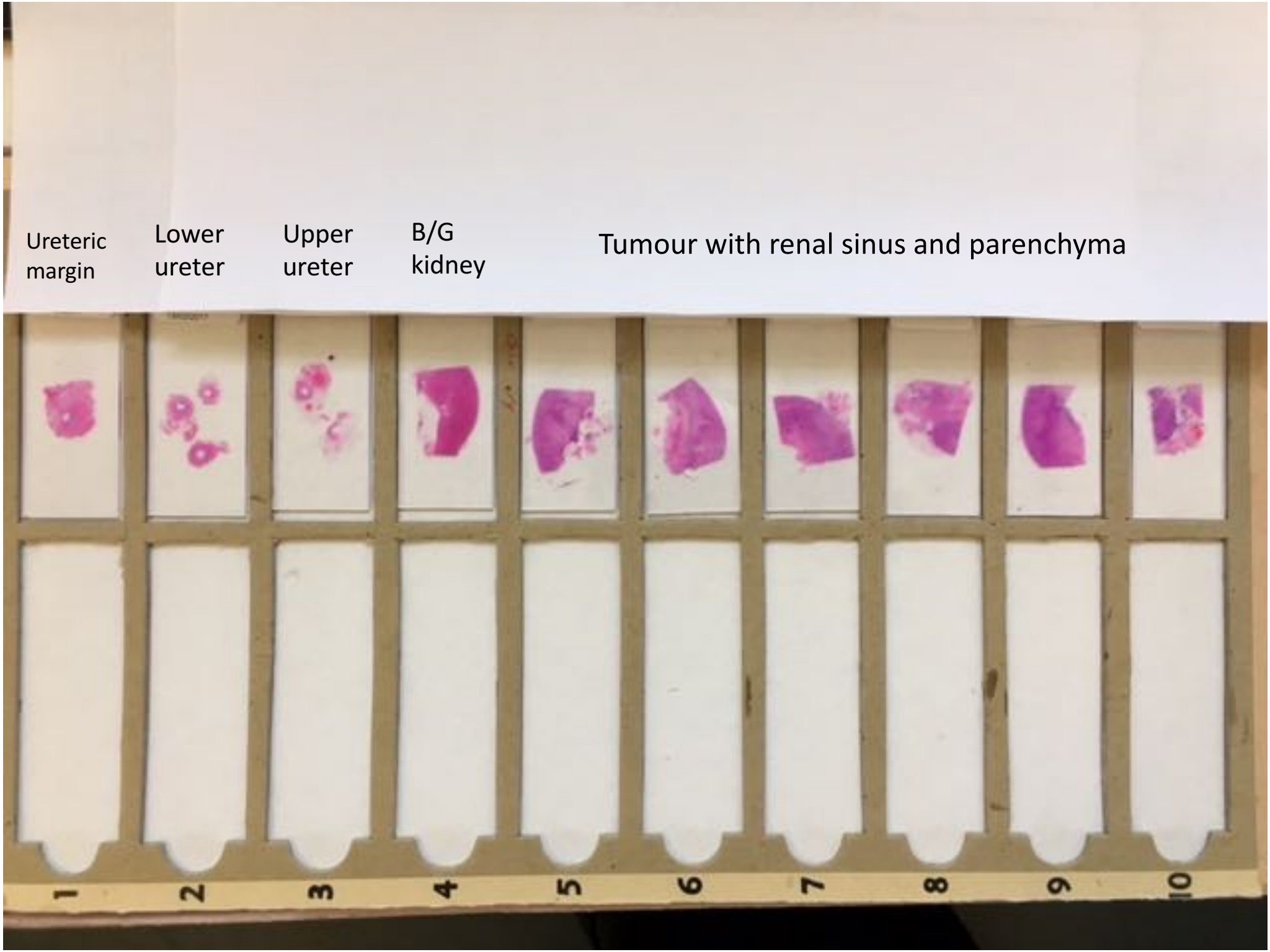











Ureteric margin
Lower ureter
Upper ureter
B/G kidney
Tumour with renal sinus and parenchyma
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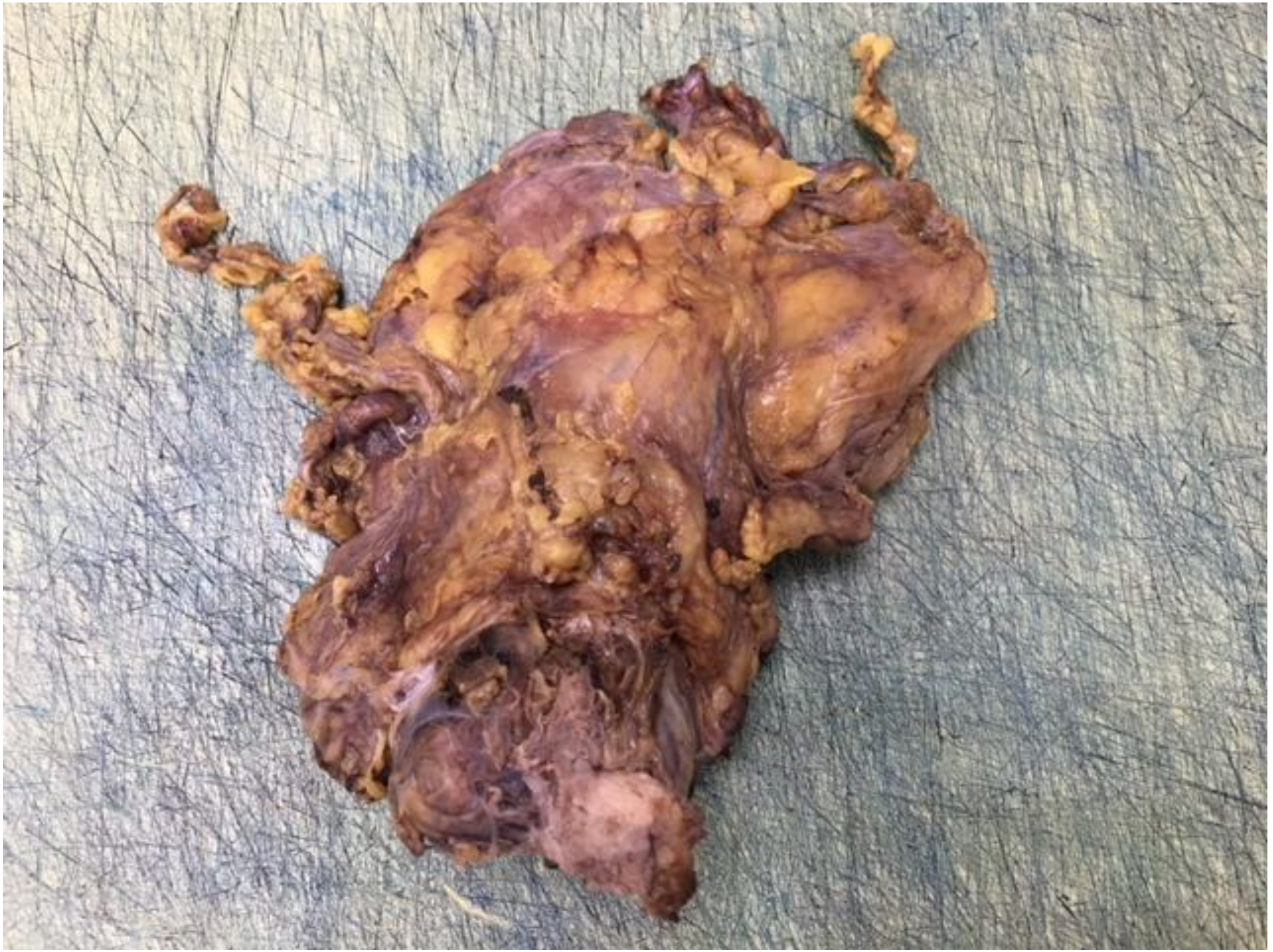
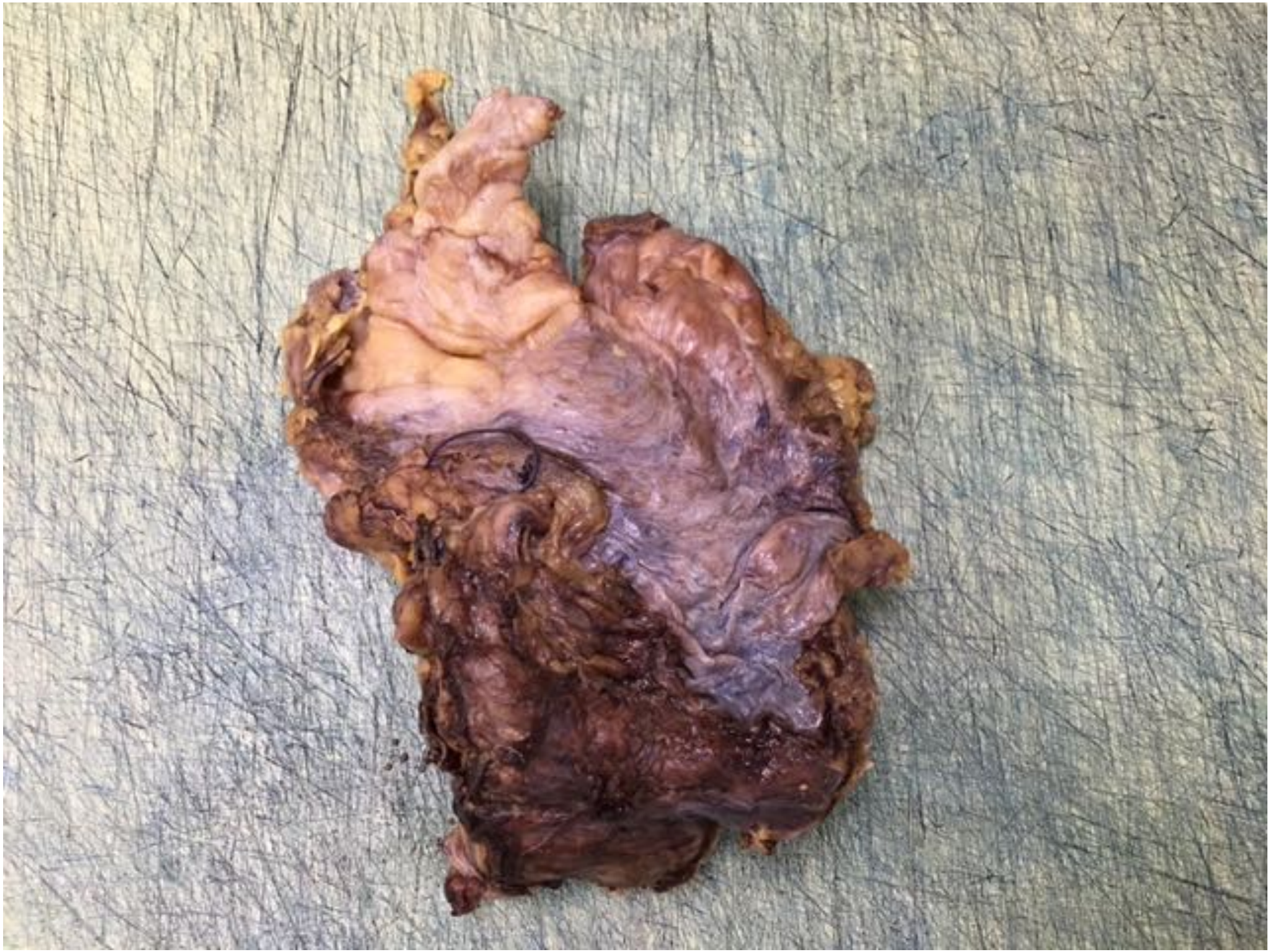
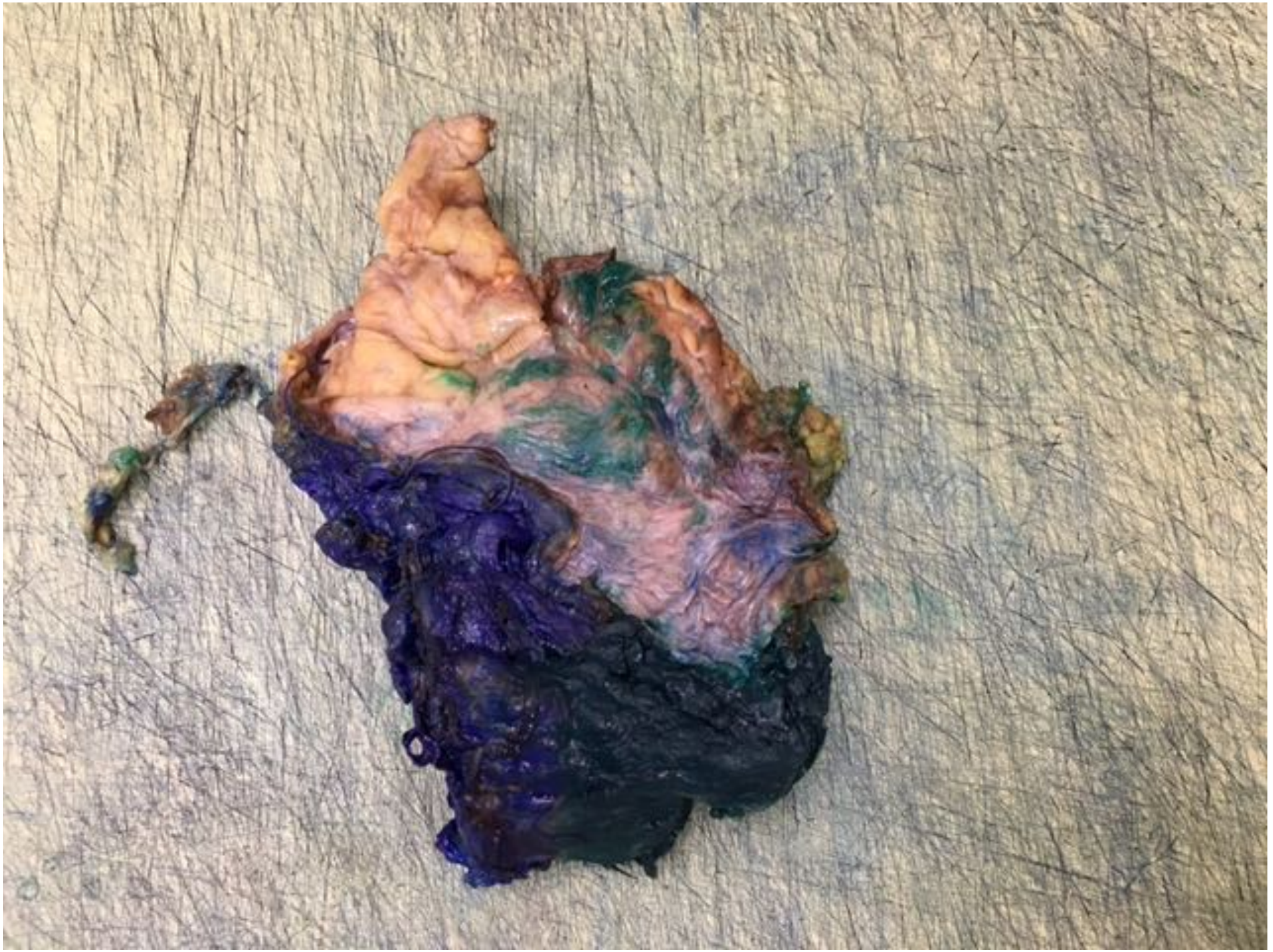
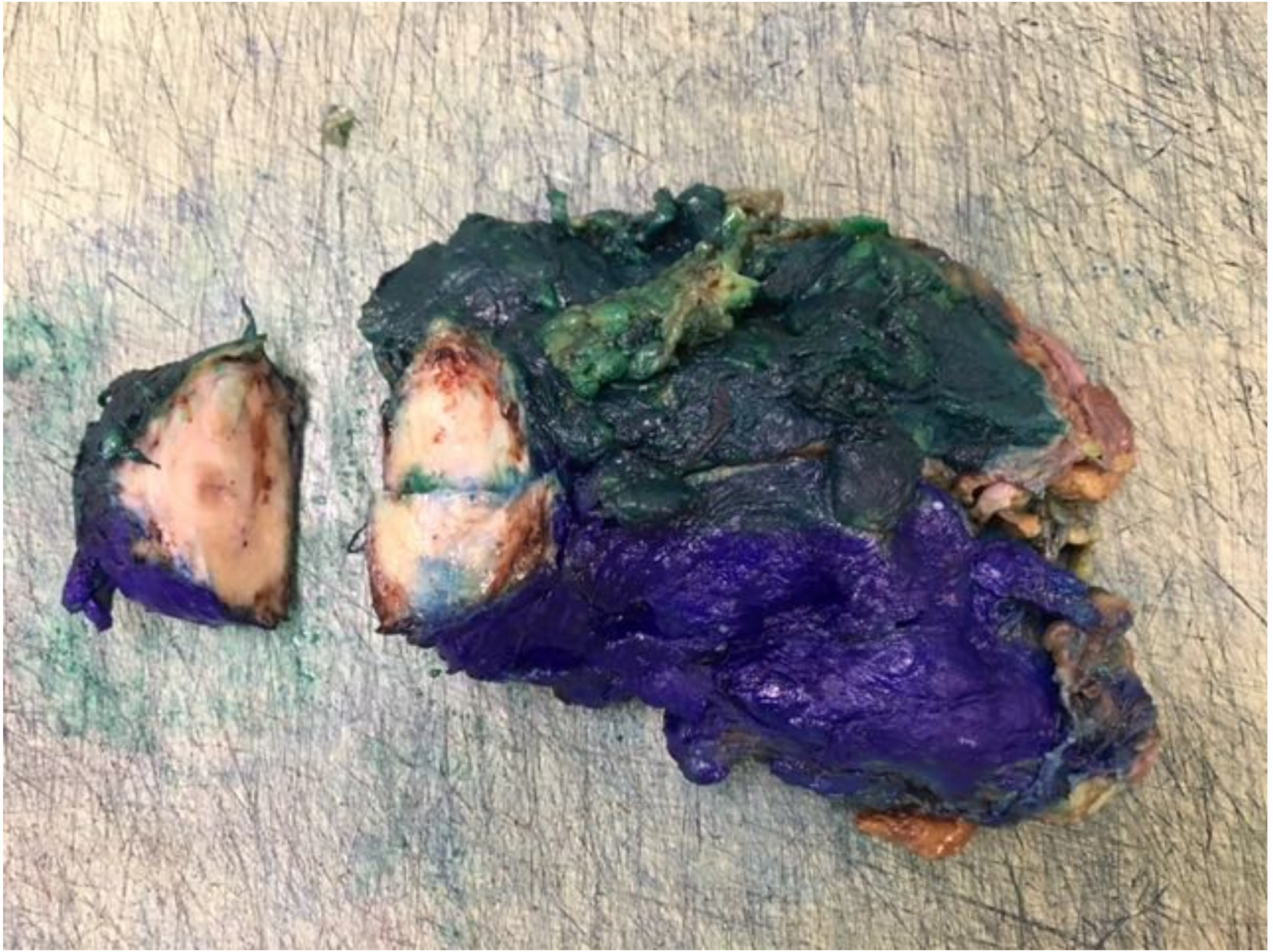
CYSTOPROSTATECTOMY

- Ink, remove prostate & divide bladder into left and right halves on receipt.
- Shave the urethral margin.
- All embed the prostate.
- Take ureteric margins.
- Serially slice each half of the bladder.
- If obvious tumour note size and extent of spread, especially if extravesical visible macroscopically (pT3b).
- If no obvious tumour but site of previous TURBT apparent, block the entire area.
- If nothing apparent at all consider blocking entire **mucosa**.







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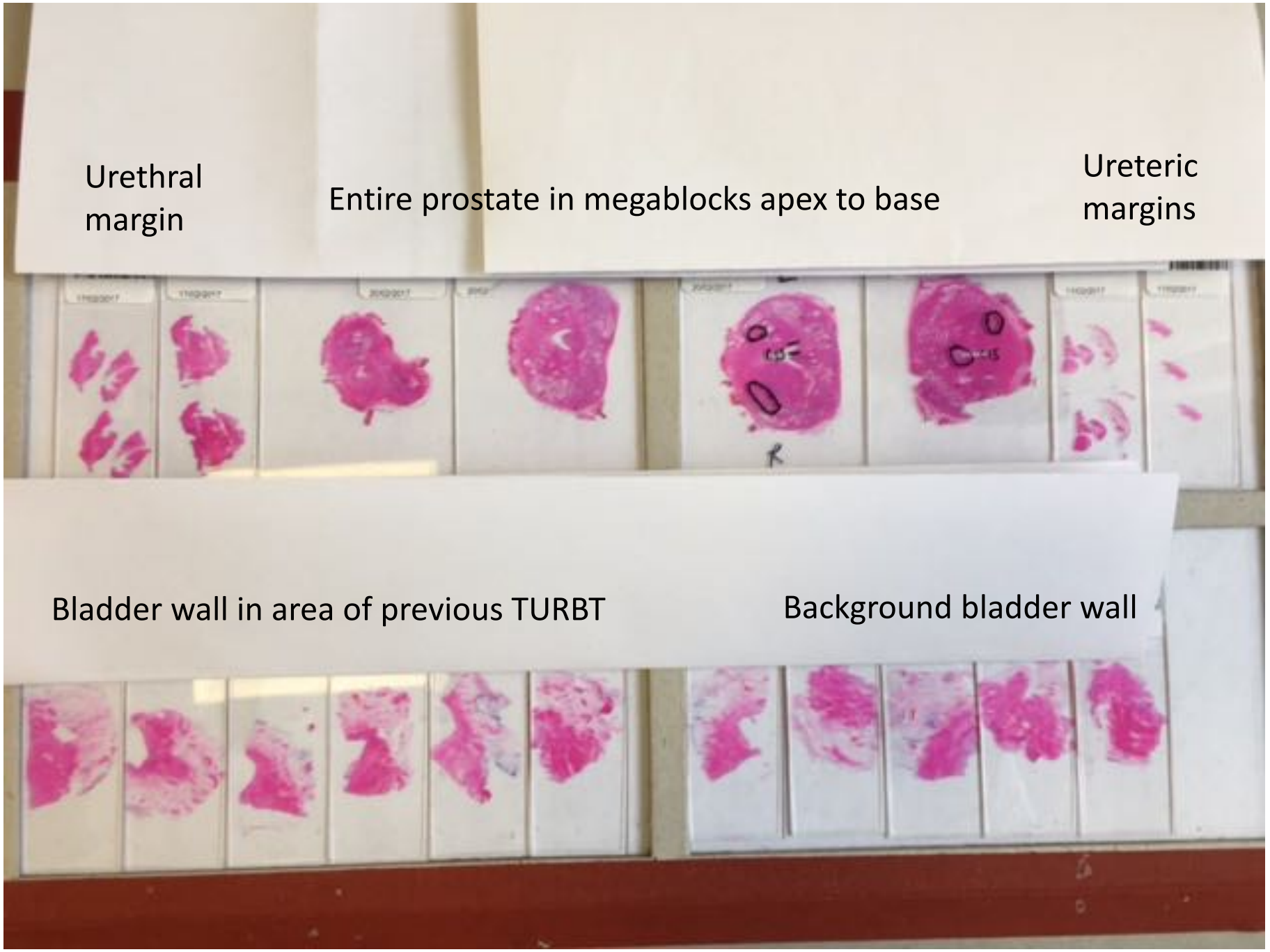
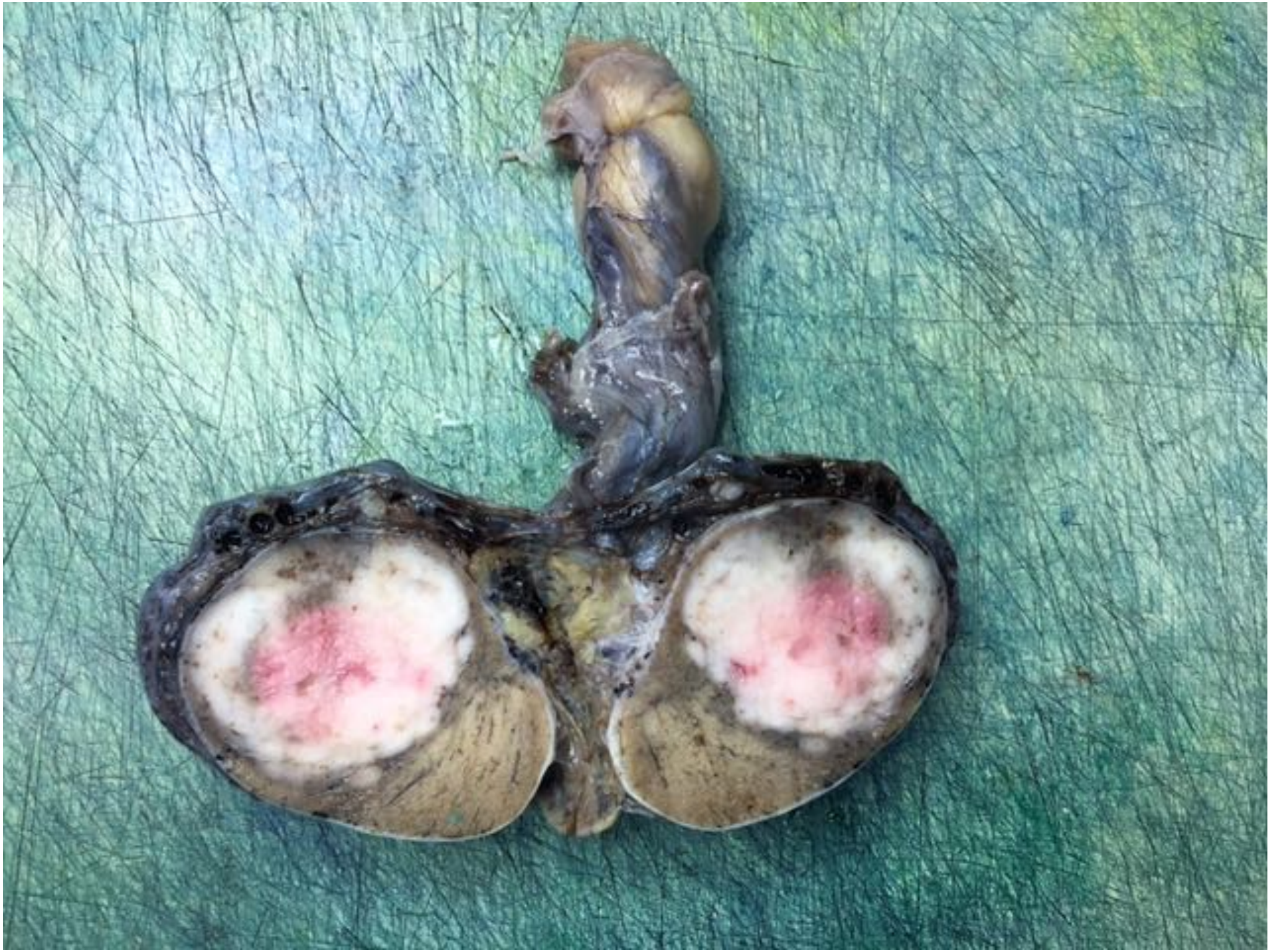

Urethral margin
Entire prostate in megablocks apex to base
Ureteric margins
Bladder wall in area of previous TURBT
Background bladder wall

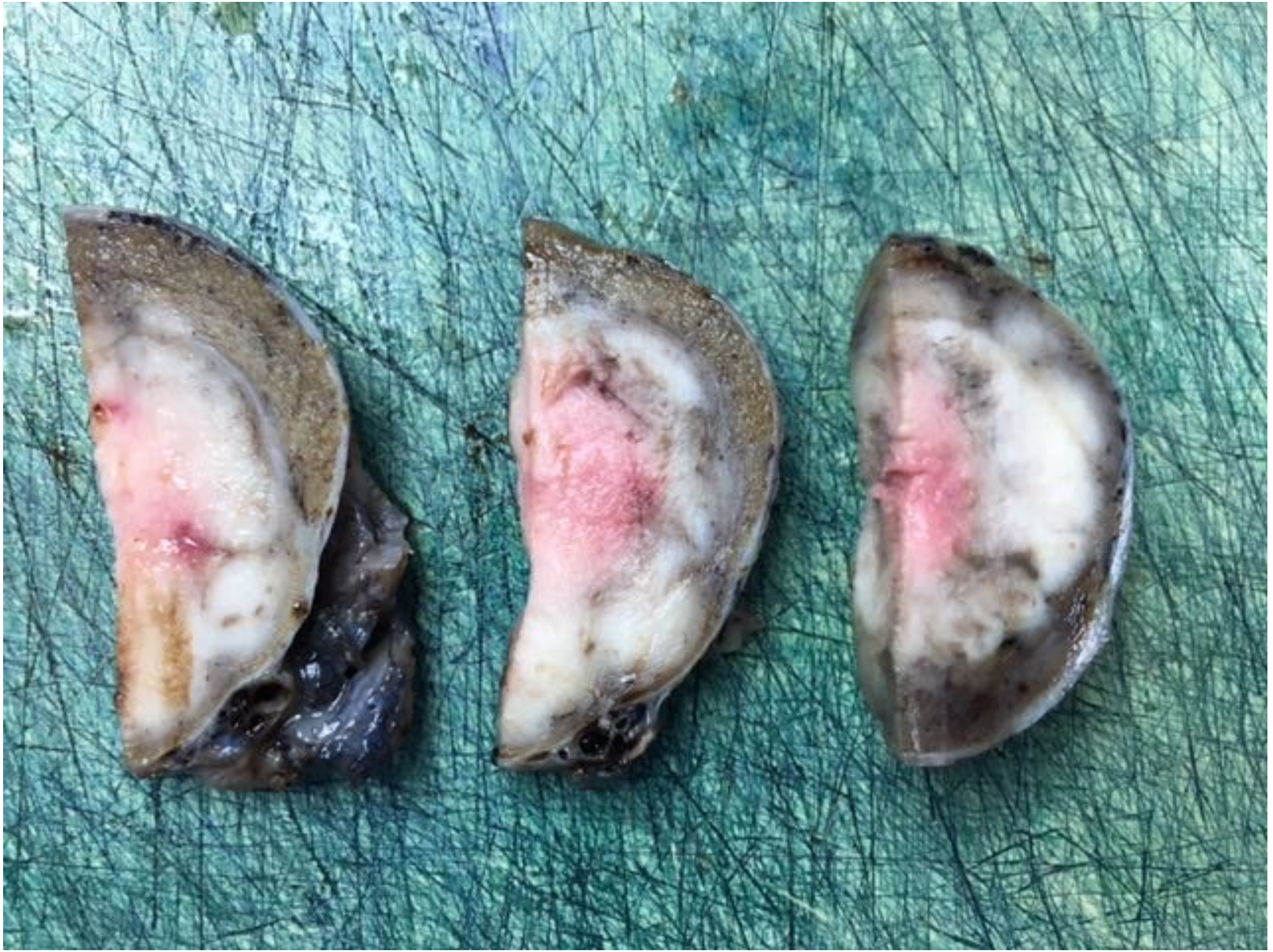
CYSTECTOMY IN WOMEN

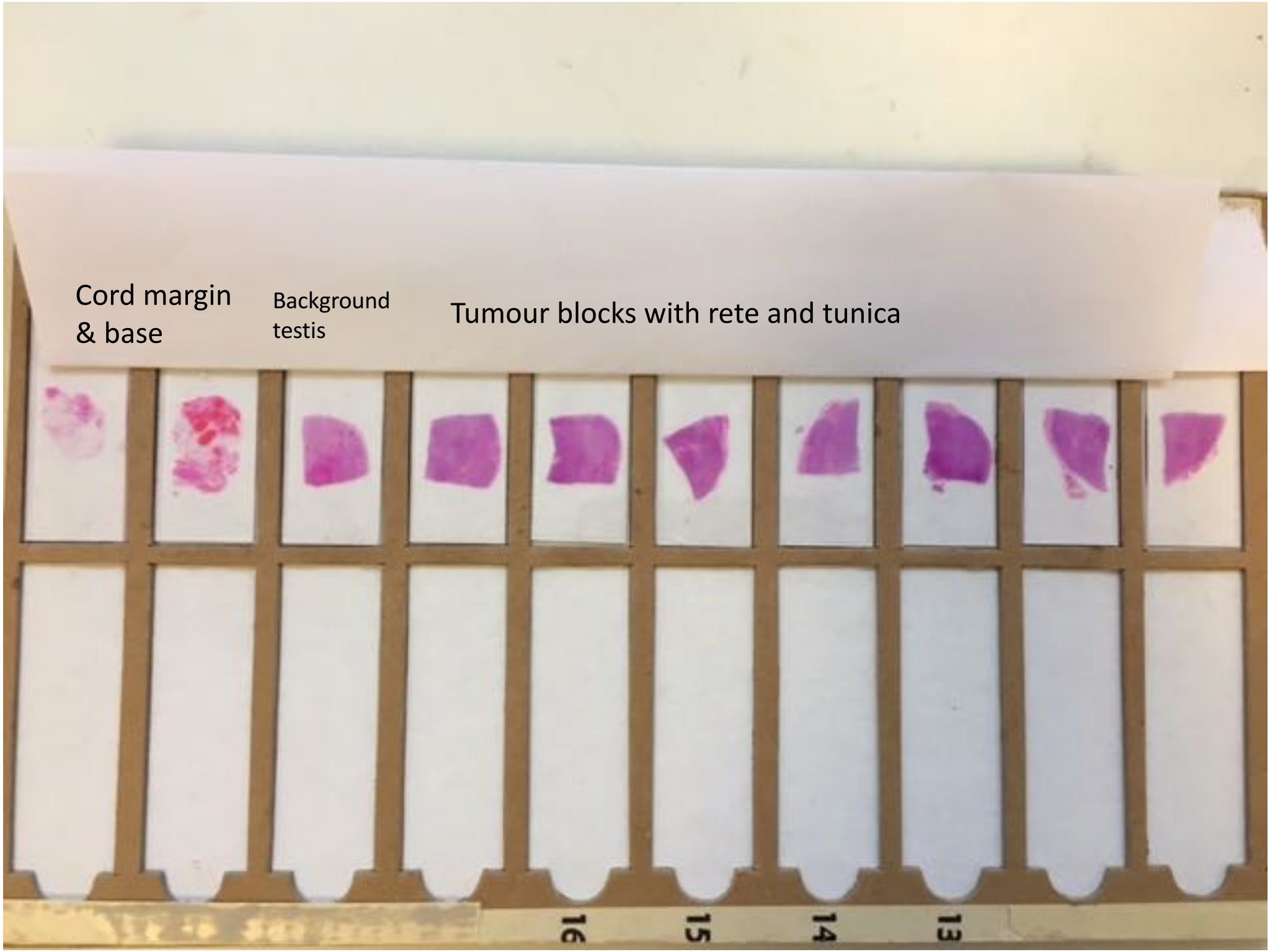
- Usually includes uterus, tubes, ovaries, urethra and anterior vaginal wall (anterior exenteration).
- Ink, remove uterus, tubes, ovaries.
- Leave urethra intact.
- Serially slice and all embed urethra.
- Take ureteric margins.
- Serially slice each half of bladder.
- Sample uterus, tubes, ovaries as per benign gynae protocol if no obvious tumour involvement.

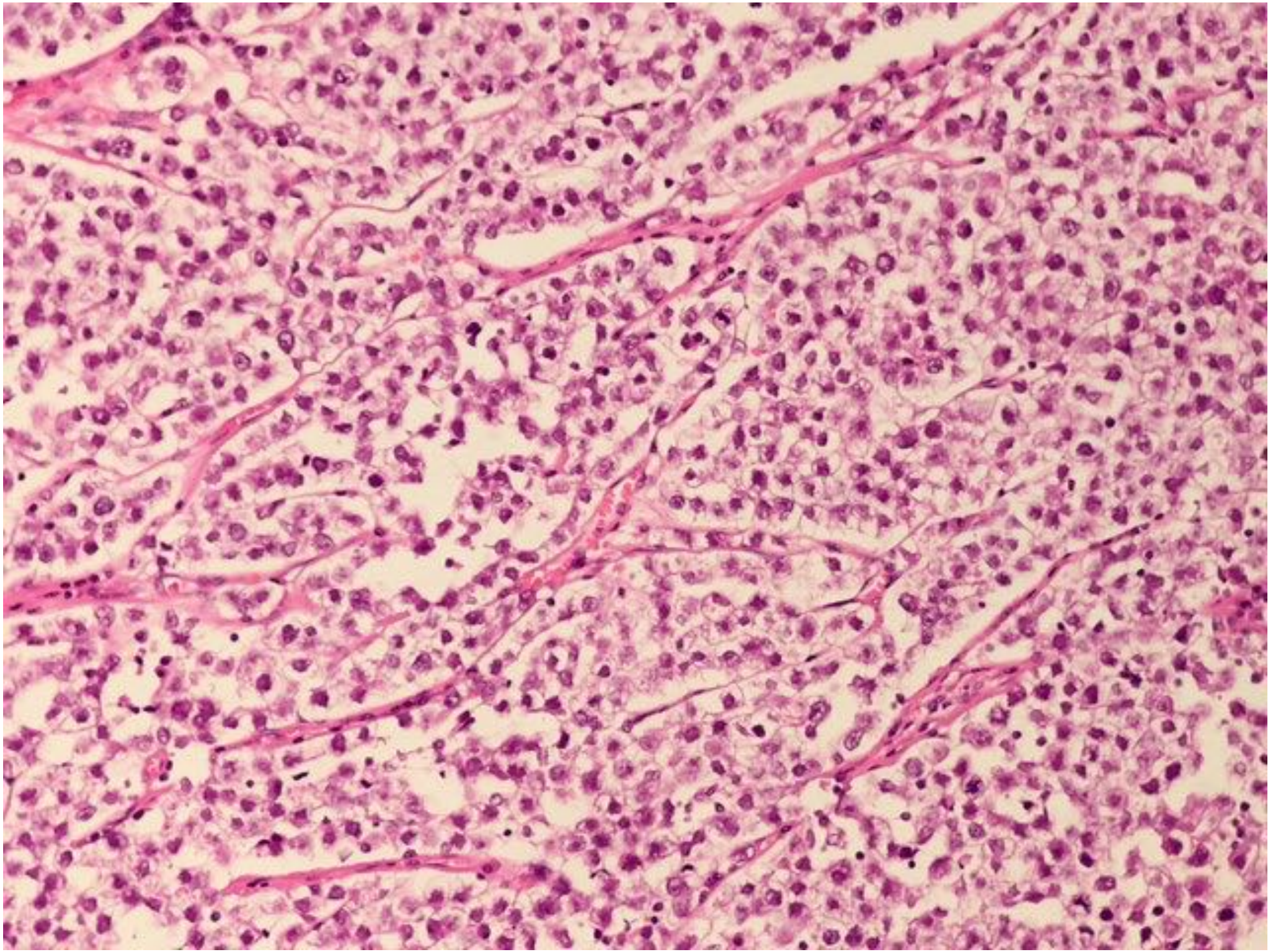
ORCHIDECTOMY

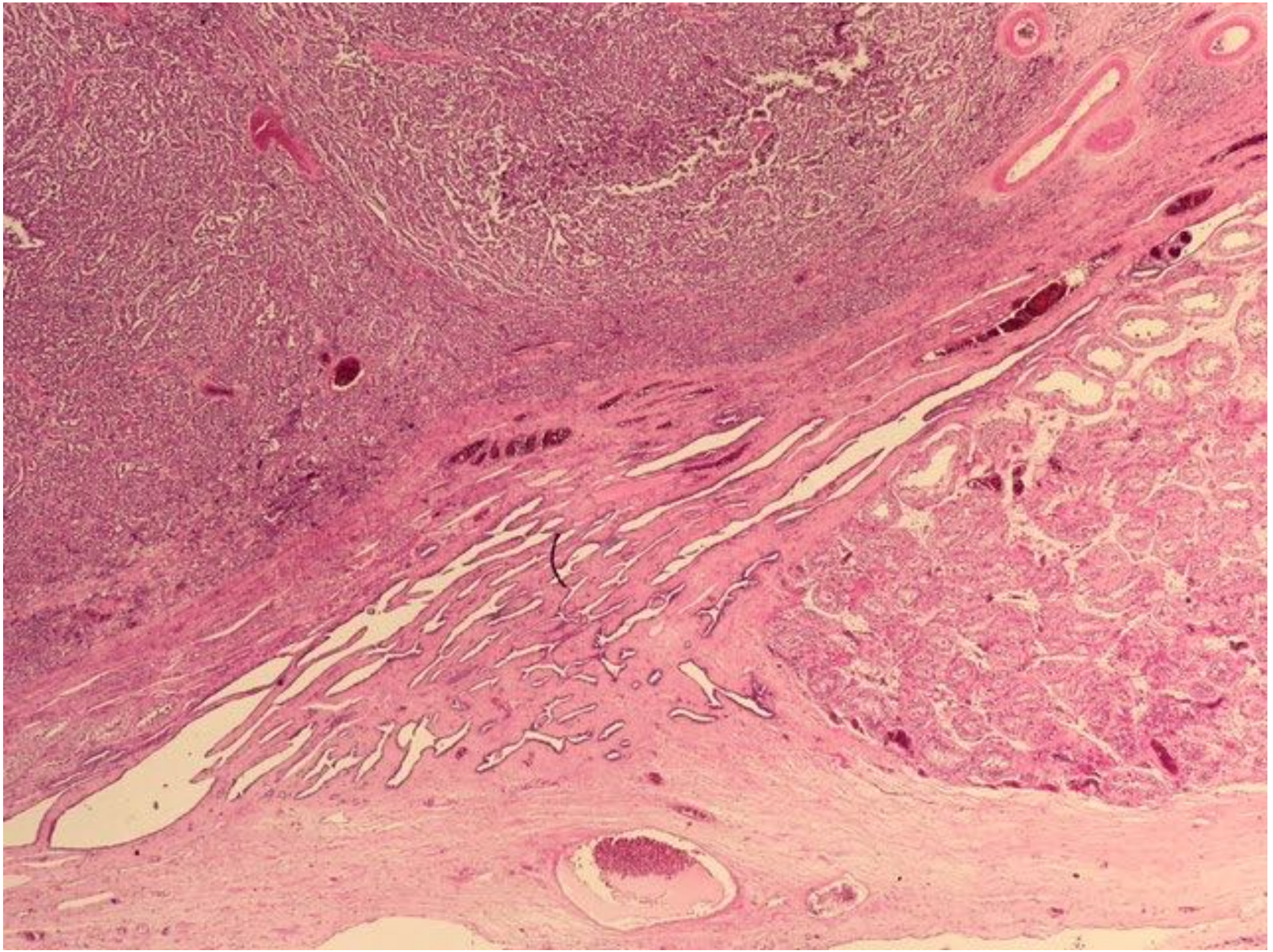
- Bivalve testis on receipt.
- Serially slice cord and each half of the testis.
- Tumour location.
- Tumour size.
- Tumour appearance:
  - Uniform / heterogenous
  - Solid / cystic
  - Soft & necrotic / haemorrhagic
- Tumour spread:
  - ? Into tunica, rete, hilar soft tissue or cord






Cord margin & base
Background testis
Tumour blocks with rete and tunica
16
15
14
13





The end

- Any questions?