

TOTAL TUMOUR NEPHRECTOMY

1. A left / right nephrectomy specimen weighing X g and measuring XXX cm in total is received, including perirenal adipose tissue // with a segment of ureter / renal vein / renal artery measuring X cm in length and X cm in diameter.
2. Externally, no remarkable features are identified // the specimen shows a nodular / globular external surface / a cystic / solid lesion measuring X cm in diameter, located at X.
3. The ureteric margin / capsule overlying the tumour / Gerota's fascia is inked.
4. On opening, the kidney measures XXX cm. A lesion measuring XXX cm is identified, located in the upper / lower / middle third / renal pelvis, lying X cm from the renal sinus and not appearing to involve / involving the perirenal adipose tissue / pelvicalyceal system / renal vein / Gerota's fascia.
5. The lesion is homogeneous / heterogeneous, with well / poorly defined borders, encapsulated / non-encapsulated, yellowish / whitish in colour, solid / papillary / friable, and with areas of necrosis / haemorrhage / central fibrous scar accounting for X% of the tumour volume.
6. The remaining cortex is preserved / atrophic, with a thickness of X cm / showing X subcapsular cysts measuring X cm in diameter. The pelvicalyceal system is unremarkable / dilated / distorted / etc.
7. On opening, the ureter shows no remarkable features // shows a lesion measuring XXX cm in the proximal / middle / distal ureter, with X morphology and appearing on cut section to infiltrate up to the X layer.
8. On palpation, no hilar nodules or adrenal gland are identified // an adrenal gland measuring X cm in diameter is identified // X nodular lesions measuring between X and X cm in diameter are identified.
9. Representative sections are submitted.

1st Example (Nephrectomy for clear cell renal cell carcinoma)

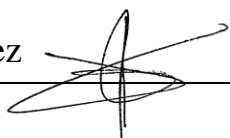
- A1: vascular margin / renal hilum.
- A2: ureteric margin.
- A3: renal sinus section / in relation to lesion.
- A4: upper pole section / section with simple cyst in upper pole.
- A5: middle third section.
- A6: lower pole section.
- A7 to A10: one complete section of the lesion.
- A11 and A12: additional tumour sections in relation to capsule.
- A13: representative section of adrenal gland.
- A14: nodular hilar adipose tissue lesion.

2nd Example (Nephrectomy for renal oncocytoma)

- A1: vascular margin / renal hilum.
- A2: ureteric margin.
- A3: renal sinus section / in relation to lesion.
- A4: upper pole section / section with simple cyst in upper pole.
- A5: middle third section.
- A6: lower pole section.
- A7 to A10: one complete section of the lesion.

3rd Example (Nephrectomy for clear cell renal cell carcinoma)

- A1: vascular margin / renal hilum.
- A2: ureteric margin.
- A3: renal sinus section / in relation to lesion.
- A4 - A15: one complete section of the specimen (A4 including upper renal third and A7 middle renal third).
- A18 - A20: tumour sections in relation to capsule.



4th Example (Nephrectomy for papillary renal cell carcinoma)

- A1: vascular margin / renal hilum.
- A2: ureteric margin.
- A3: renal sinus section / in relation to lesion.
- A4: upper pole section / section with simple cyst in upper pole.
- A5: middle third section.
- A6: lower pole section.
- A7 - A9: one complete section of the lesion.
- A10 - A12: additional tumour sections.
- A13: representative section of adrenal gland.

5th Example (Nephrectomy for clear cell renal cell carcinoma)

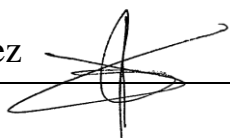
- A1: vascular margin / renal hilum.
- A2: ureteric margin.
- A3: renal sinus section / in relation to lesion.
- A4: upper pole section / section with simple cyst in upper pole.
- A5: middle third section.
- A6: lower pole section.
- A7 - A8: sections in relation to renal vein.
- A9 - A13: representative sections of the lesion.
- A14 - A16: additional sections in relation to adipose tissue.

6th Example (Nephrectomy for multilocular cystic nephroma)

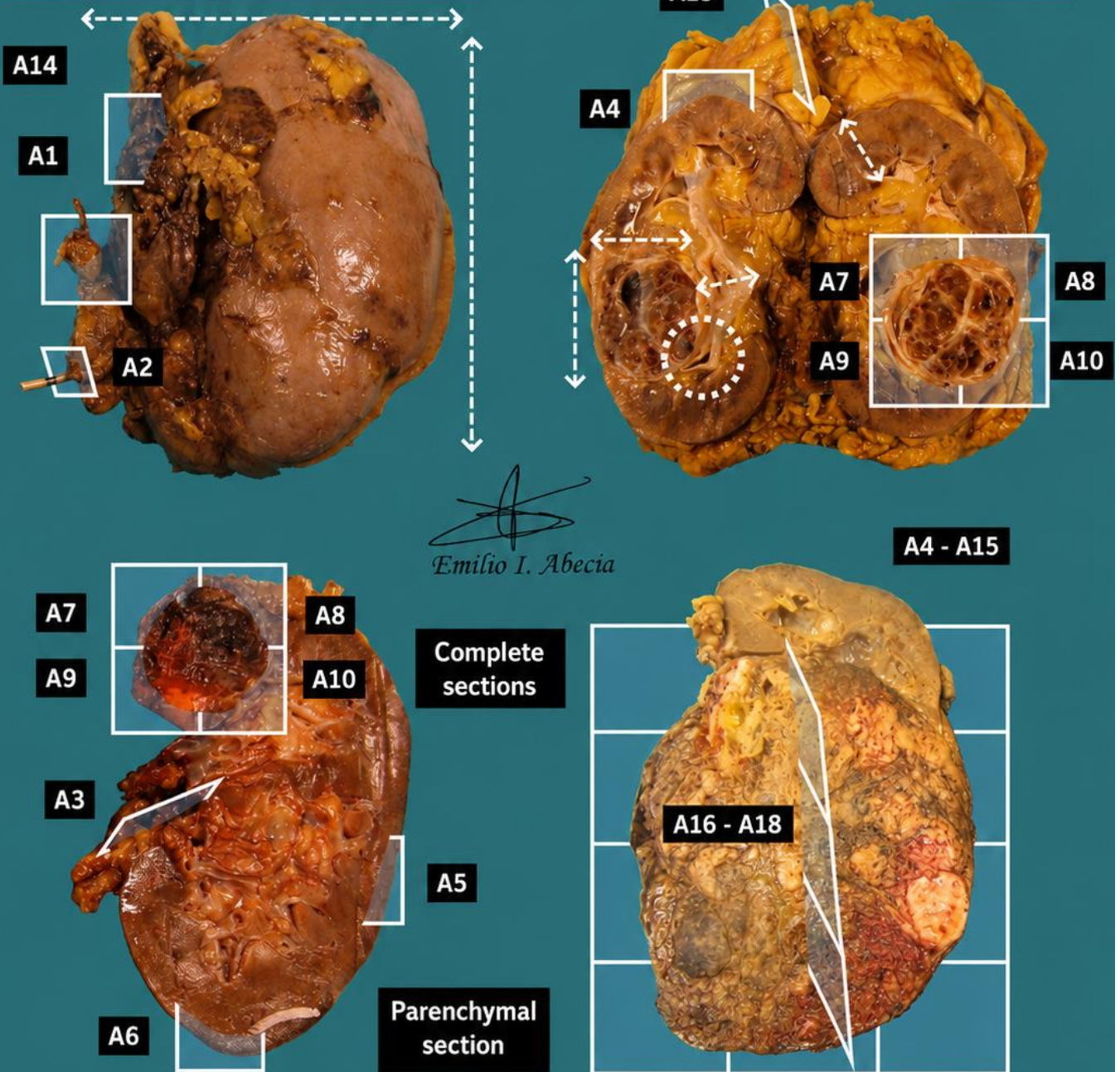
- A1: vascular margin / renal hilum.
- A2: ureteric margin.
- A3: renal sinus section / in relation to lesion.
- A4: upper pole section / section with simple cyst in upper pole.
- A5: middle third section.
- A6: lower pole section.
- A7 - A12: one complete section of the lesion.

POINTS TO CONSIDER

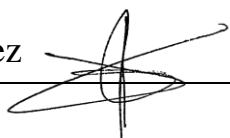
- Renal resection for neoplastic disease, with a broad range of histological subtypes.
- Clinical history should be reviewed to assess lesion location, multifocality, neoadjuvant therapy, clinical impression, etc.
- Weigh, measure, and describe the specimen. If the lesion is externally visible, some pathologists recommend inking Gerota's fascia / perirenal adipose tissue.
- Open longitudinally; localise, measure, and describe the lesion. Allow adequate fixation in formalin, as some tumours may be extremely friable.
- Inspect anatomical structures for involvement by tumour, including ureter, vessels, tumour thrombi, invasion of perirenal adipose tissue, etc.
- It is important to emphasise that staging of renal neoplasms is based on tumour size (accurate measurement is essential) and involvement of the renal vein / Gerota's fascia.
- Submission of representative sections:
 - Include margins (vascular and ureteric / renal sinus).
 - Include sections of non-neoplastic parenchyma (cortex and pelvicalyceal system).
 - At least one section per centimetre along the greatest dimension of the specimen. Some lesions are very large, therefore section submission should be optimised.
 - Include sections of incidental benign lesions (if present).
- Palpate adipose tissue to identify adrenal gland / possible hilar nodular lesions.



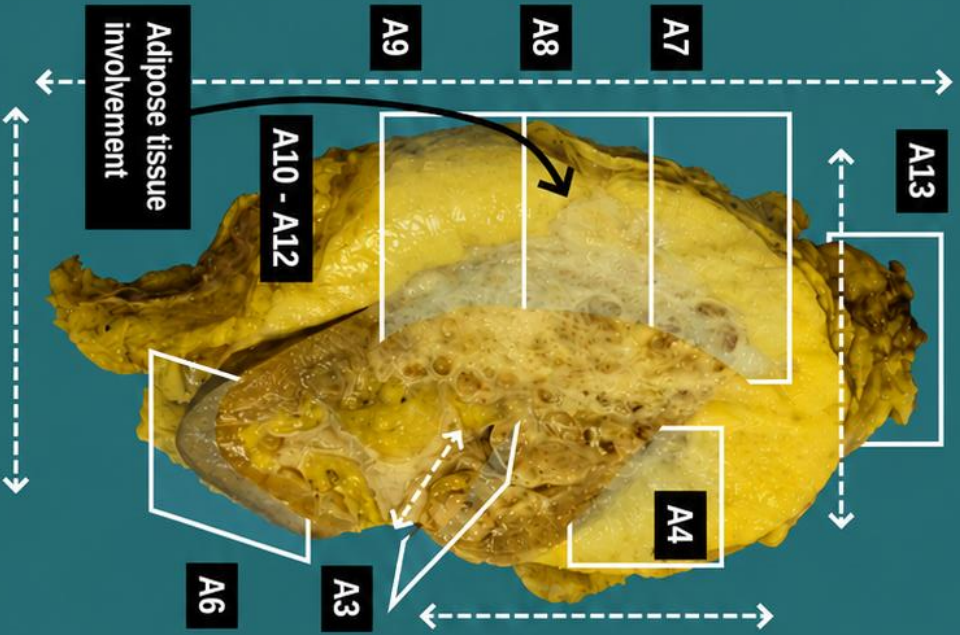
Radical Nephrectomy for Clear Cell Carcinoma



1. Weigh, orient and measure the specimen and its anatomical components
2. Describe the external surface
3. Comment on external margins (ureter, soft tissue margins, etc.)
4. Serially section; identify and measure the lesion, and its distance to margins and infiltration of structures
5. Describe the cut surface appearance of the lesion
6. Comment on the remaining parenchyma and pelvicalyceal system, and any secondary lesions
7. Open the ureter and describe any alterations (if present)
8. Palpate the perinephric fat in search of hilar lymph nodes and the suprarenal gland
9. Representative sections

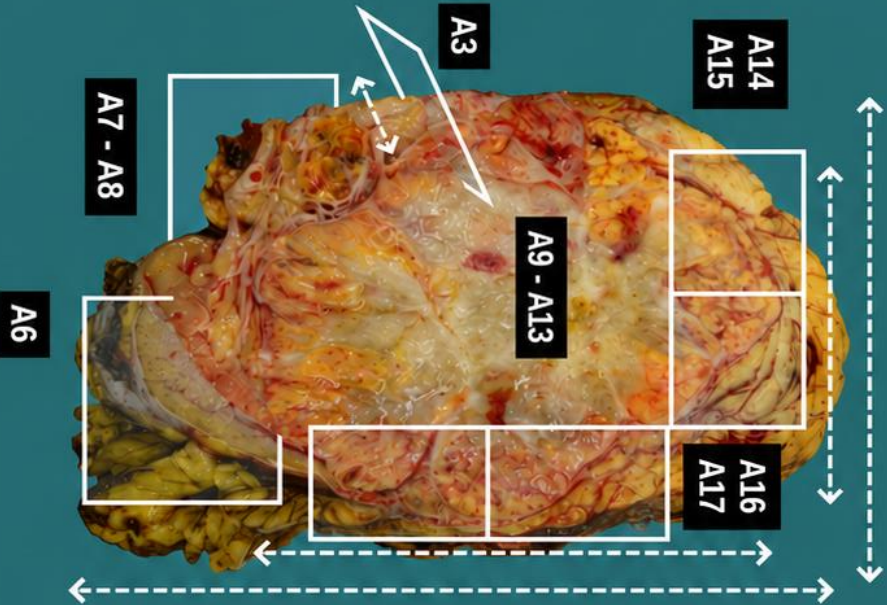


Left suprarenal gland



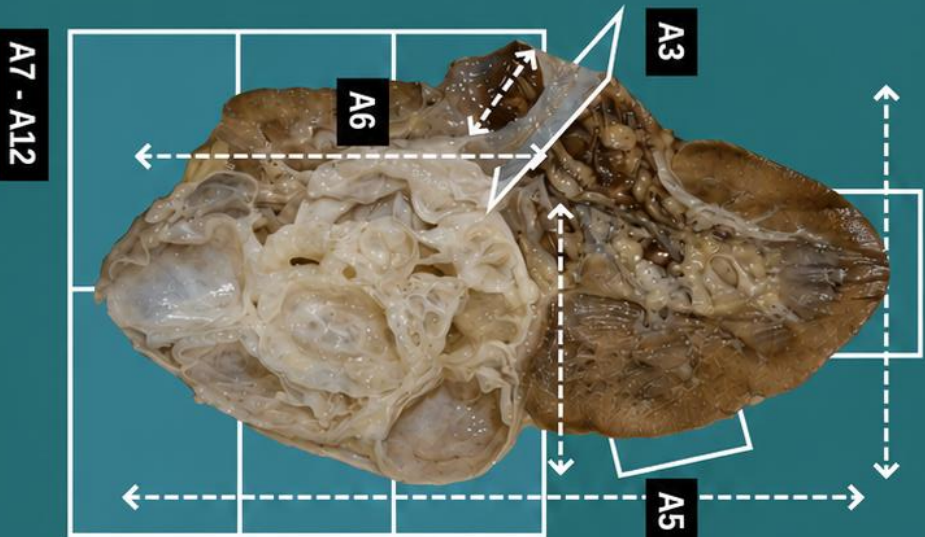
Nephrectomy for Renal Cell Carcinoma (Papillary Type)

A4



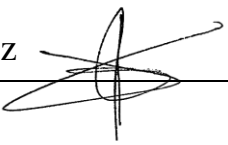
Nephrectomy for Renal Cell Carcinoma (Clear Cell Type)

A4



Nephrectomy for Multilocular Cystic Nephroma


Emilio I. Abecia



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DISCLAIMER

The image and text are provided for illustrative purposes only. The tissue sections submitted and the description provided will depend on the individual specimen characteristics, the clinical diagnostic suspicion, the experience of the dissector, and the institutional guidelines of the laboratory.

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