# Session 3: Optimum Assessment of the Small Renal Mass – Point Counterpoint

**Chair: Mr Grenville Oades (Glasgow)**

**1340: The case for biopsy in every SRM Mr Ben Challacombe (London)**

**1400: The case for selective biopsy of SRM Asst. Professor Alessandro Volpe (Novara, Italy)**

**1420: Case discussion – the jury decides**

**Mr Ben Challacombe (London)**

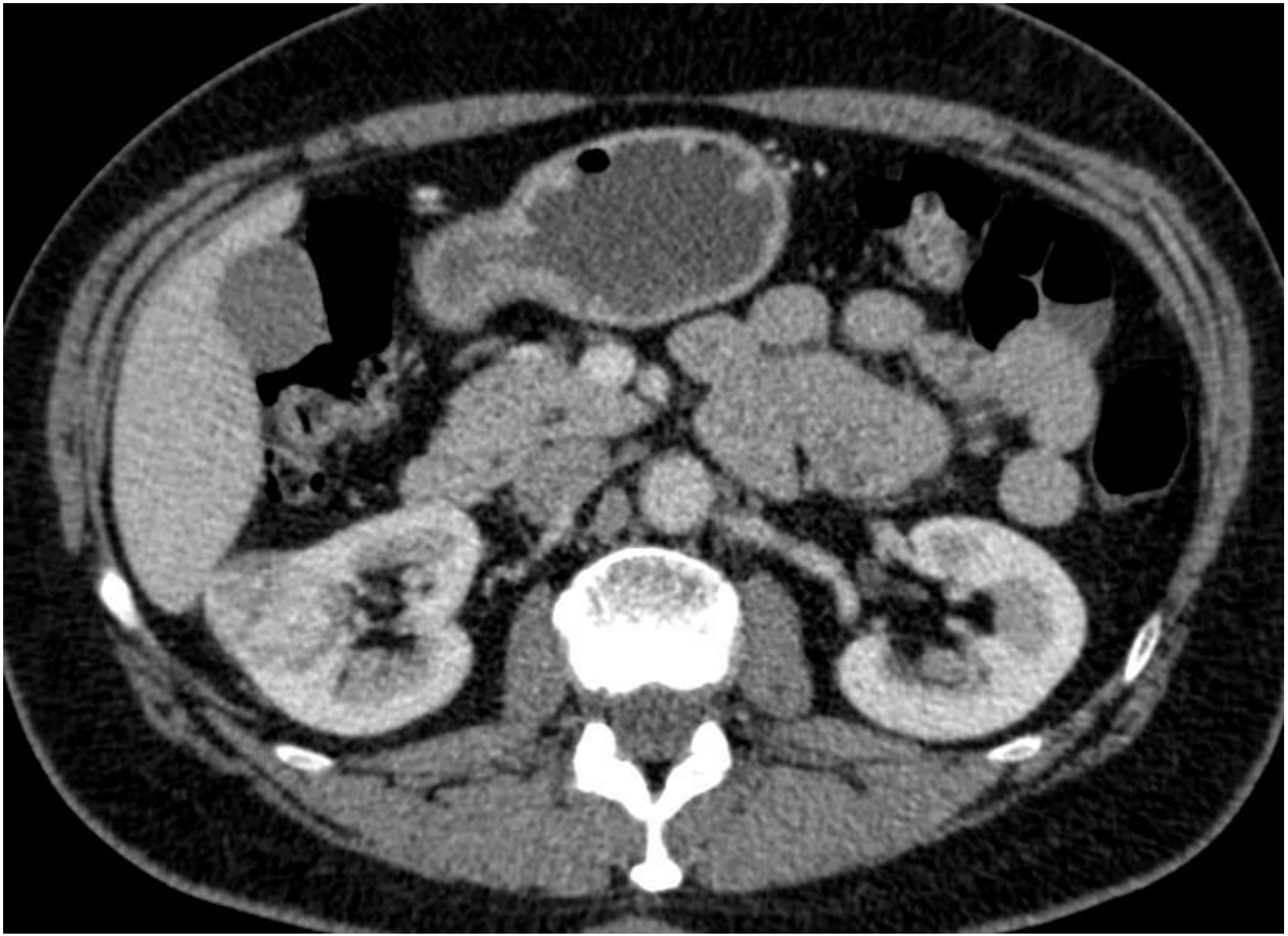
**Asst. Professor Alessandro Volpe (Novara, Italy)**

**Professor Bradley Leibovich (Minnesota, USA)**

**Professor Peter Mulders (Nijmegen, The Netherlands)**

# Case 1a

- Mr AS
- 57yo male
- Incidental finding on USS to investigate RUQ pain
- obese



# Case 1a

- Would you recommend a biopsy?
- How would you biopsy?
  - CT/MR/USS
  - Needle?
  - No of cores
- How would you counsel this patient?

# Case 1a

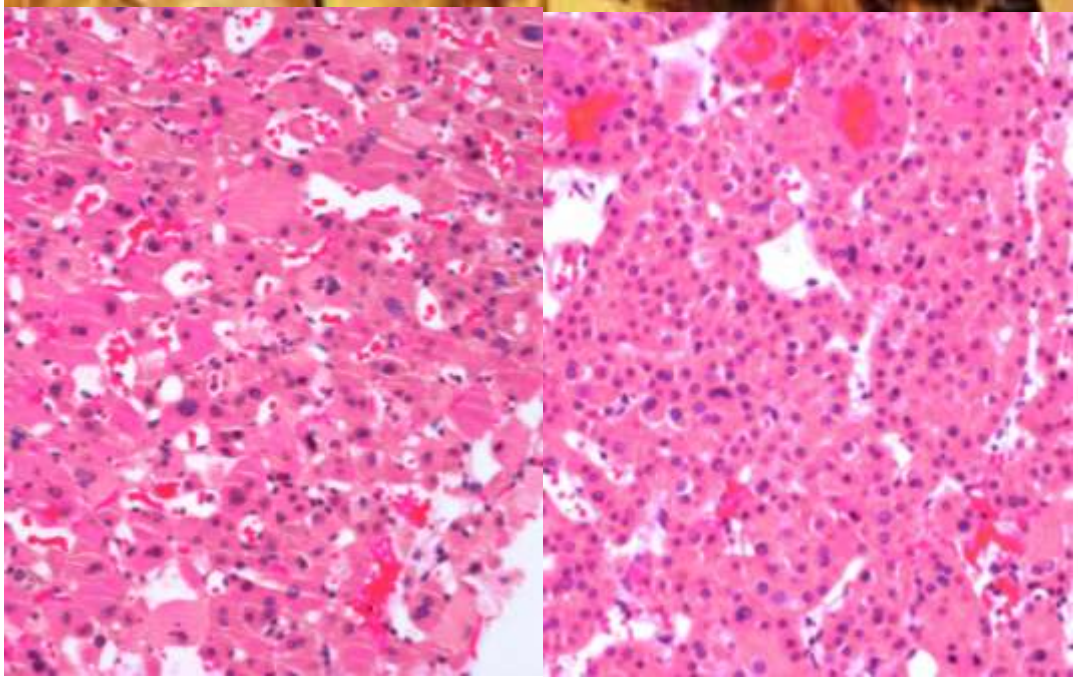
- RIGHT KIDNEY

  CLINICAL HISTORY:
  Likely renal carcinoma.

  MACRO:
  Two cores, the longest measuring 13mm.

  MICROSCOPY:
  Microscopy shows 2 cores of normal renal cortex

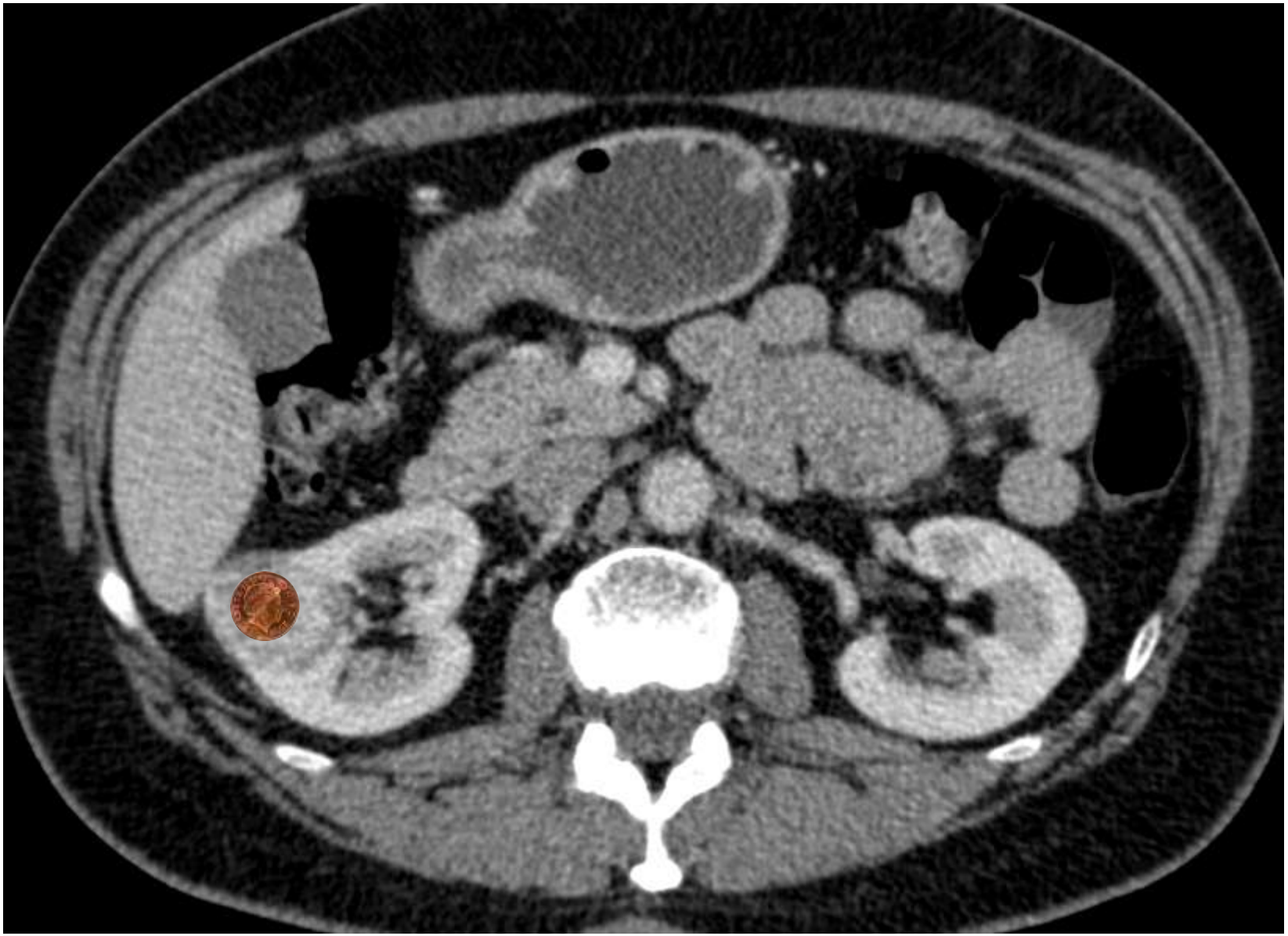
- What do you do?



MACRO:
Three cores, the longest measuring 17mm.

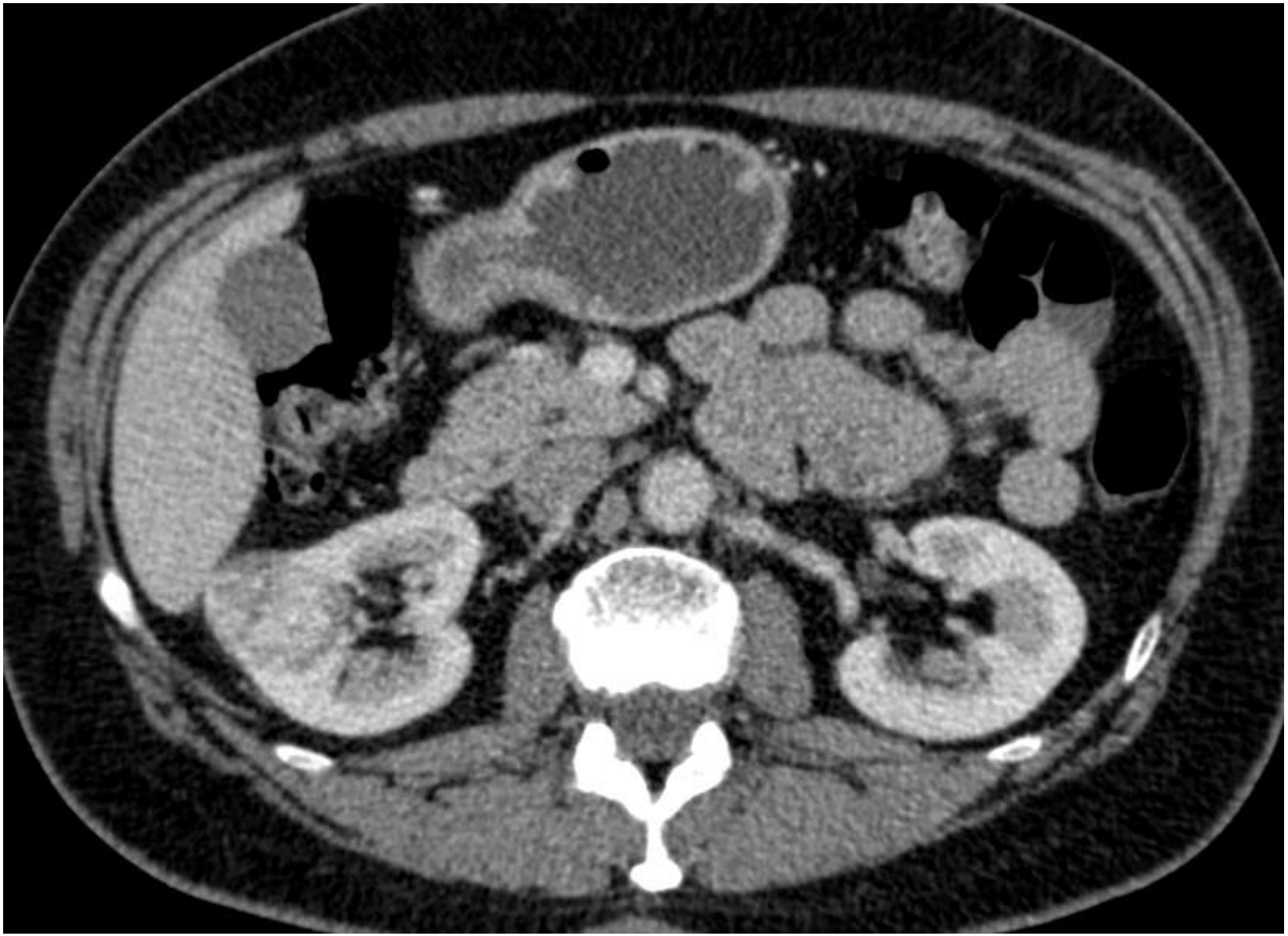
MICROSCOPY:
Microscopy shows a core of renal co rtex and 2 cores of an oncocytic lesion. The cells have granular eosin ophilic cytoplasm. The nuclei show mild variation in size. Nucleoli are not readily identified. There is no evidence of atypical mitoses or necrosis.
Immunocytochemistry shows the tu mour to be positive for CD117, E- Cadherin and CD15. The tumour is negative for CK7, CK20, CD10, RCC and Vimentin.

The appearances are those of an eosinophilioc renal tumour.
The overall morphology and immun oprofile would favour an Oncocytoma ore than a chromophobe RCC.



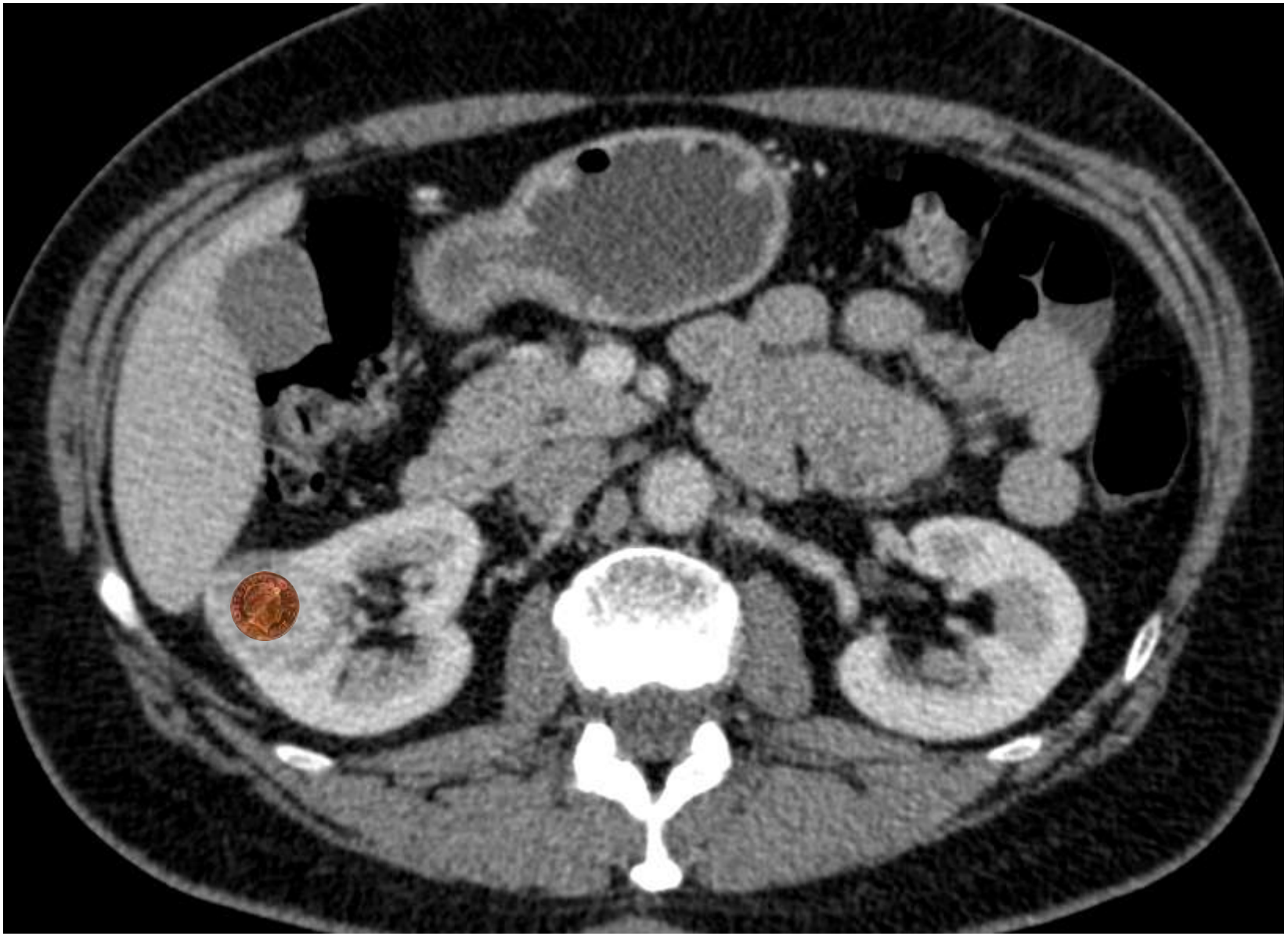
# Case 1b

- MR AS senior
- 78yo
- IHD
- DXT for throat cancer 10 yrs ago
- Cataracts recently



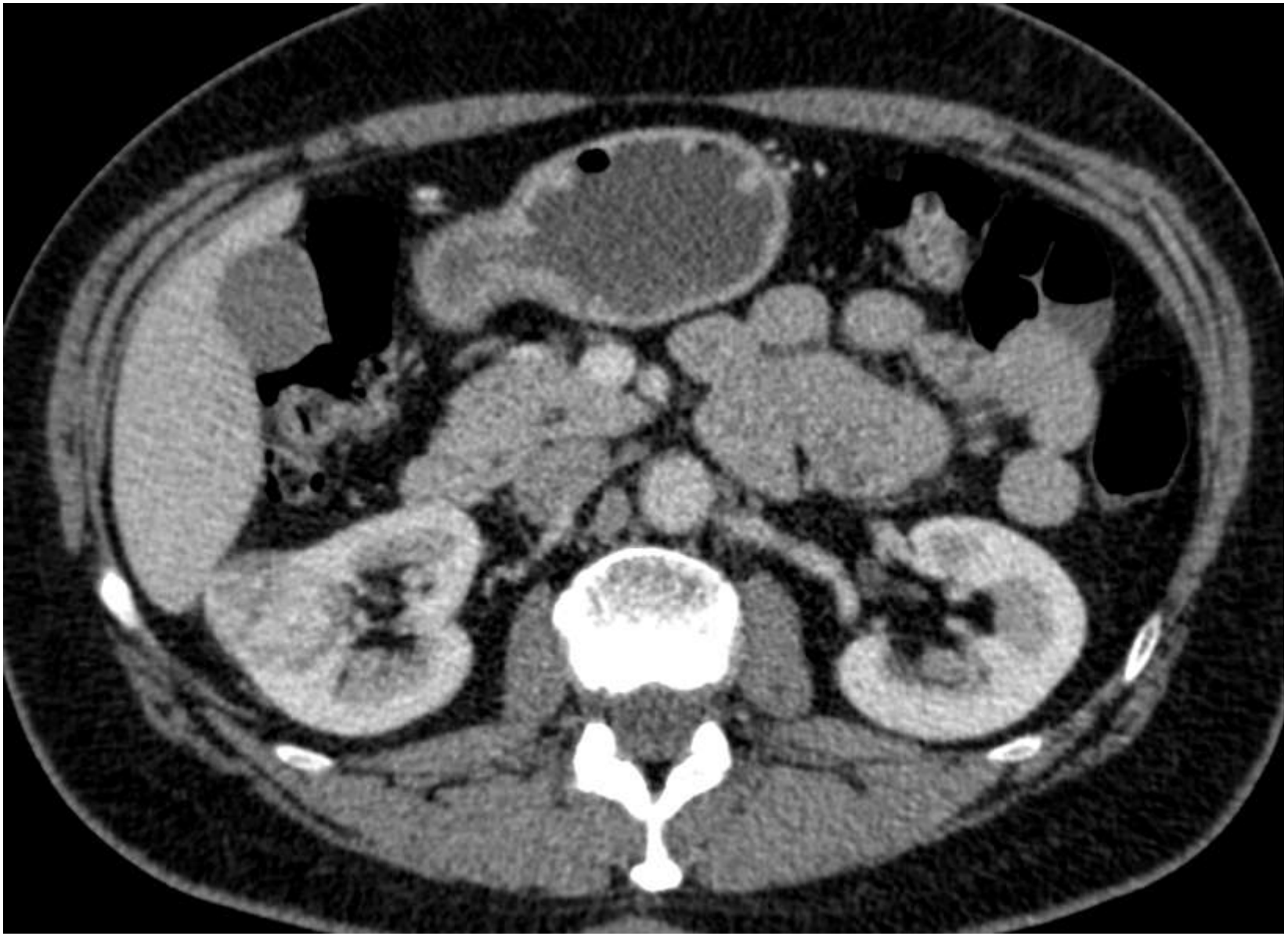
# Case 1b

- Would you recommend a biopsy?
- How would you counsel this patient?



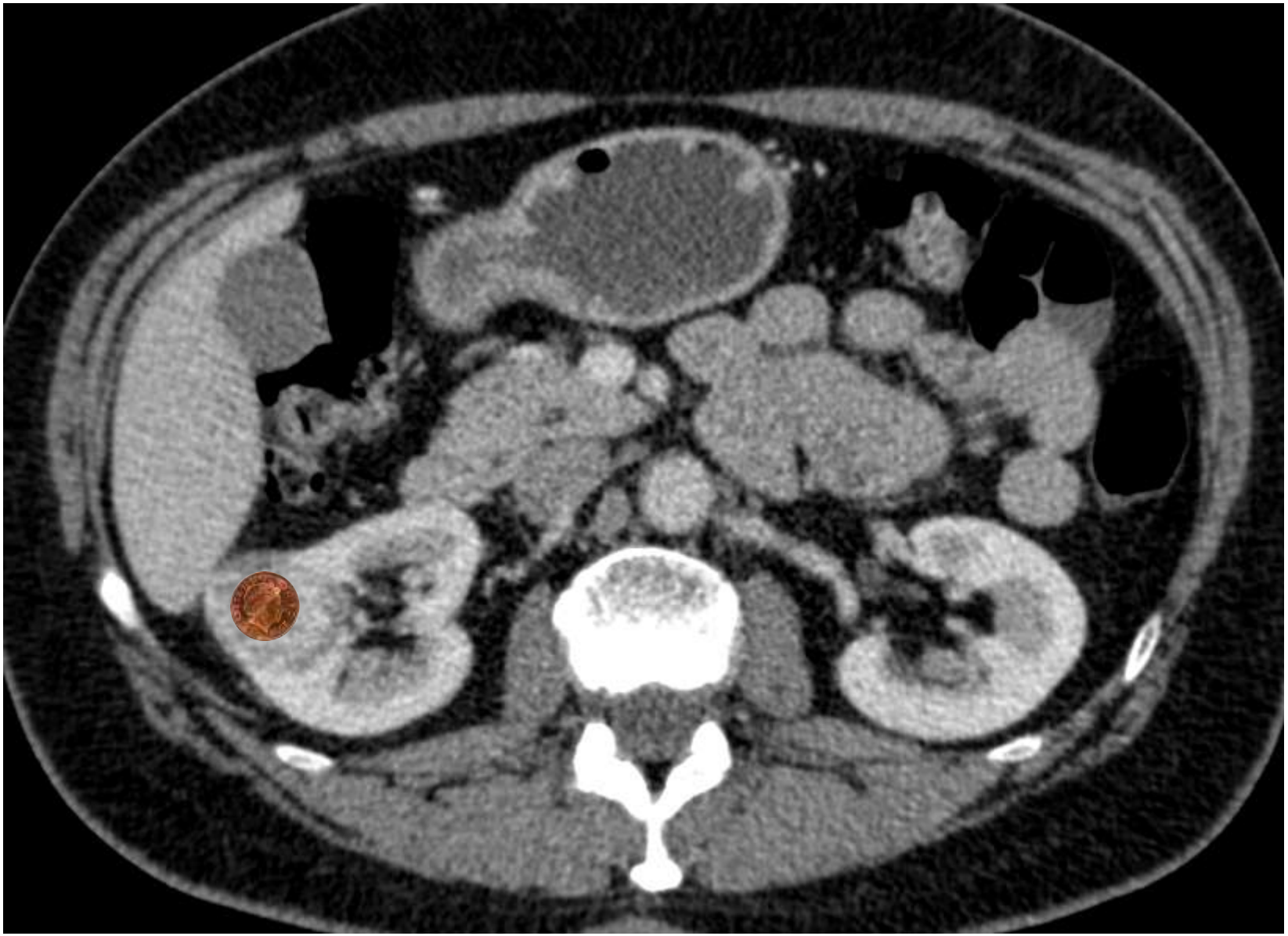
# Case 1c

- Ms KG
- 27yo
- Incidental finding on USS done to investigate UTI
- No significant past medical or surgical history



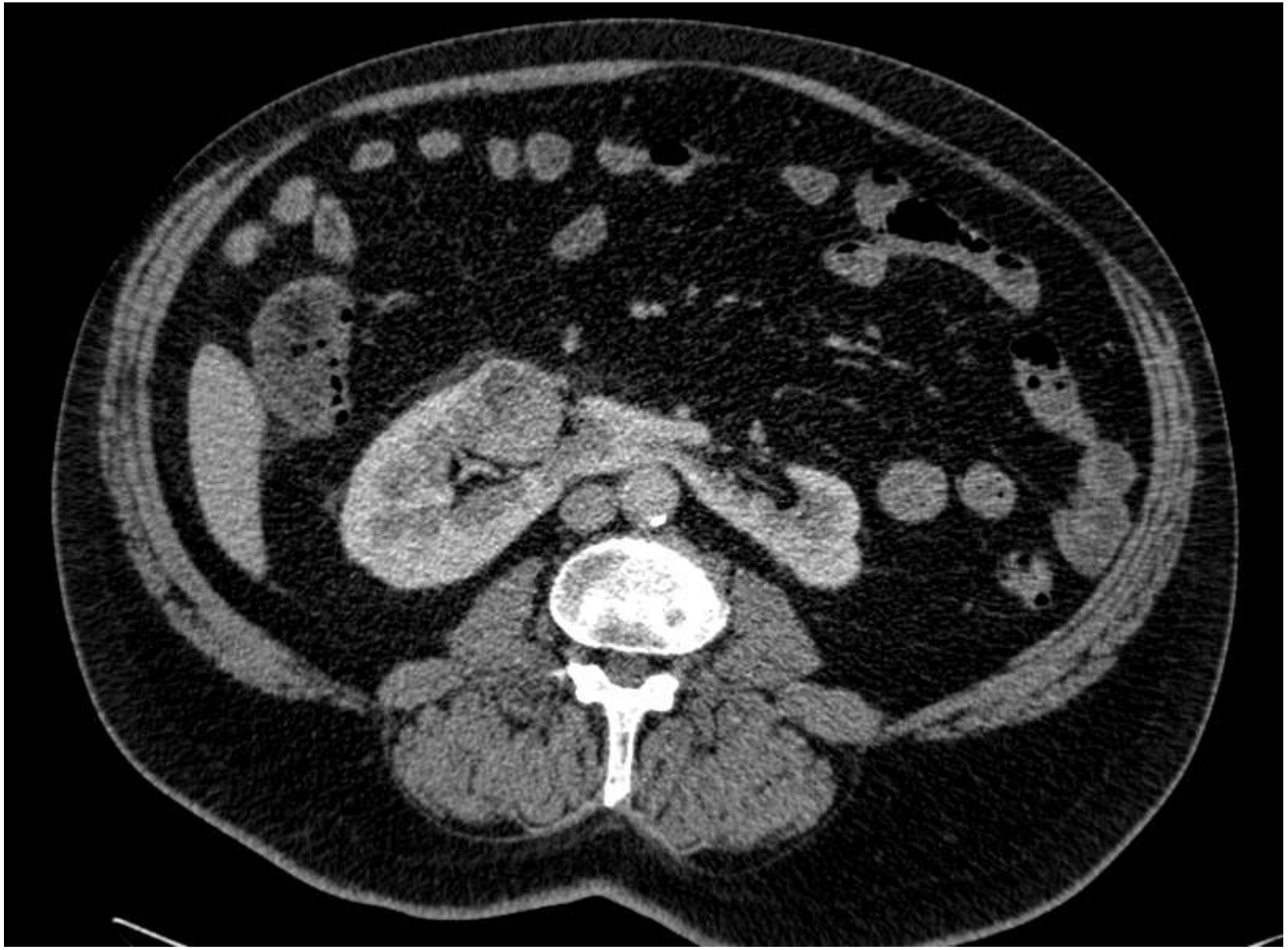
# Case 1c

- Would you recommend a biopsy?
- How would you counsel this patient?



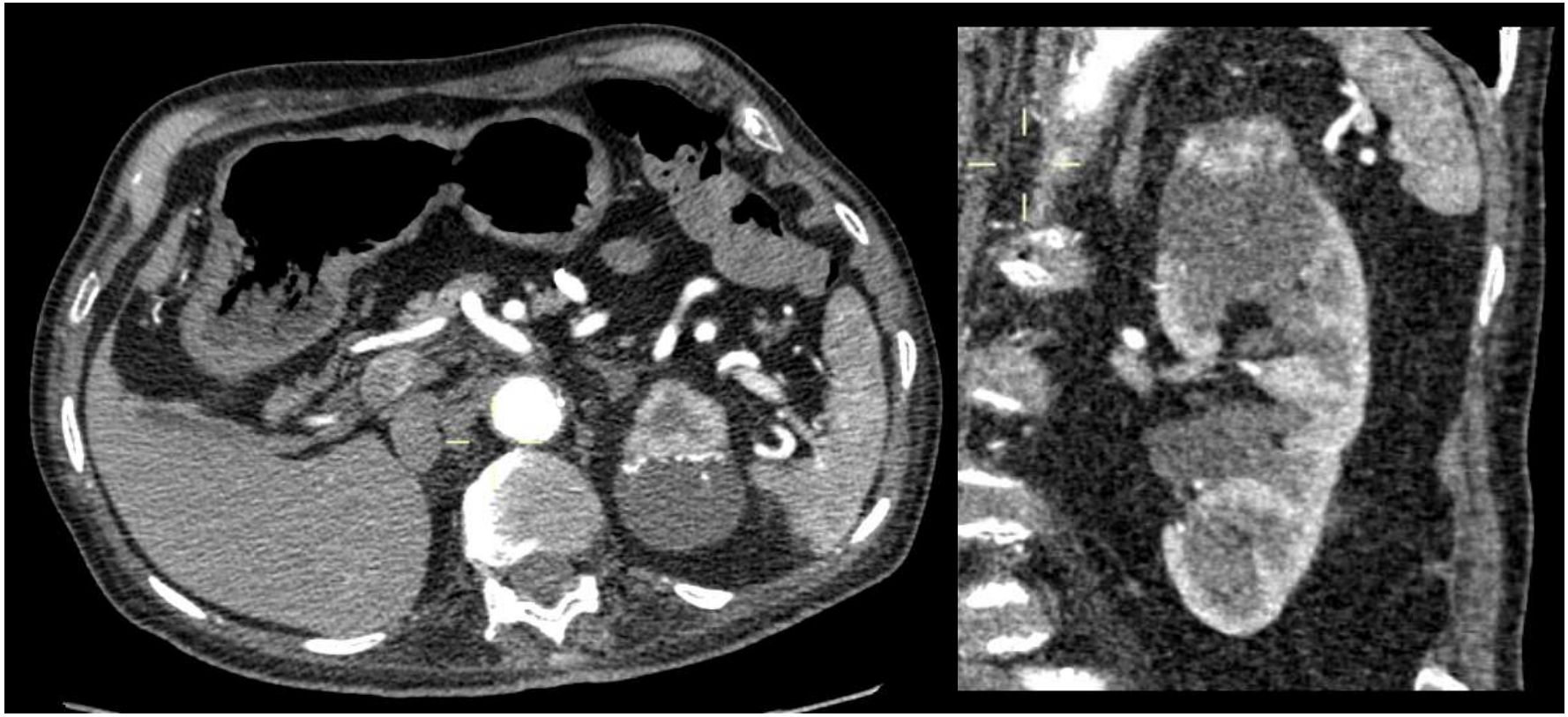
# Case 2 Anatomical considerations

- 63yo man
- Fit and well
- USS for haematuria
- eGFR >60



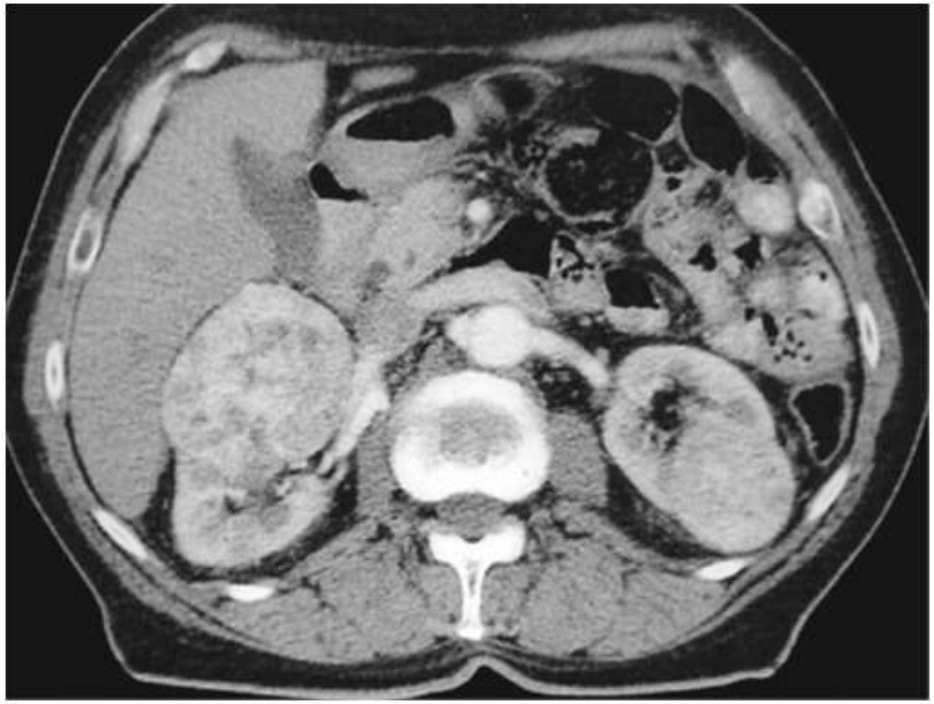
# Case 3 - Cystic

- 74 yo man
- Hypertension
- Previous TURP
- eGFR>60

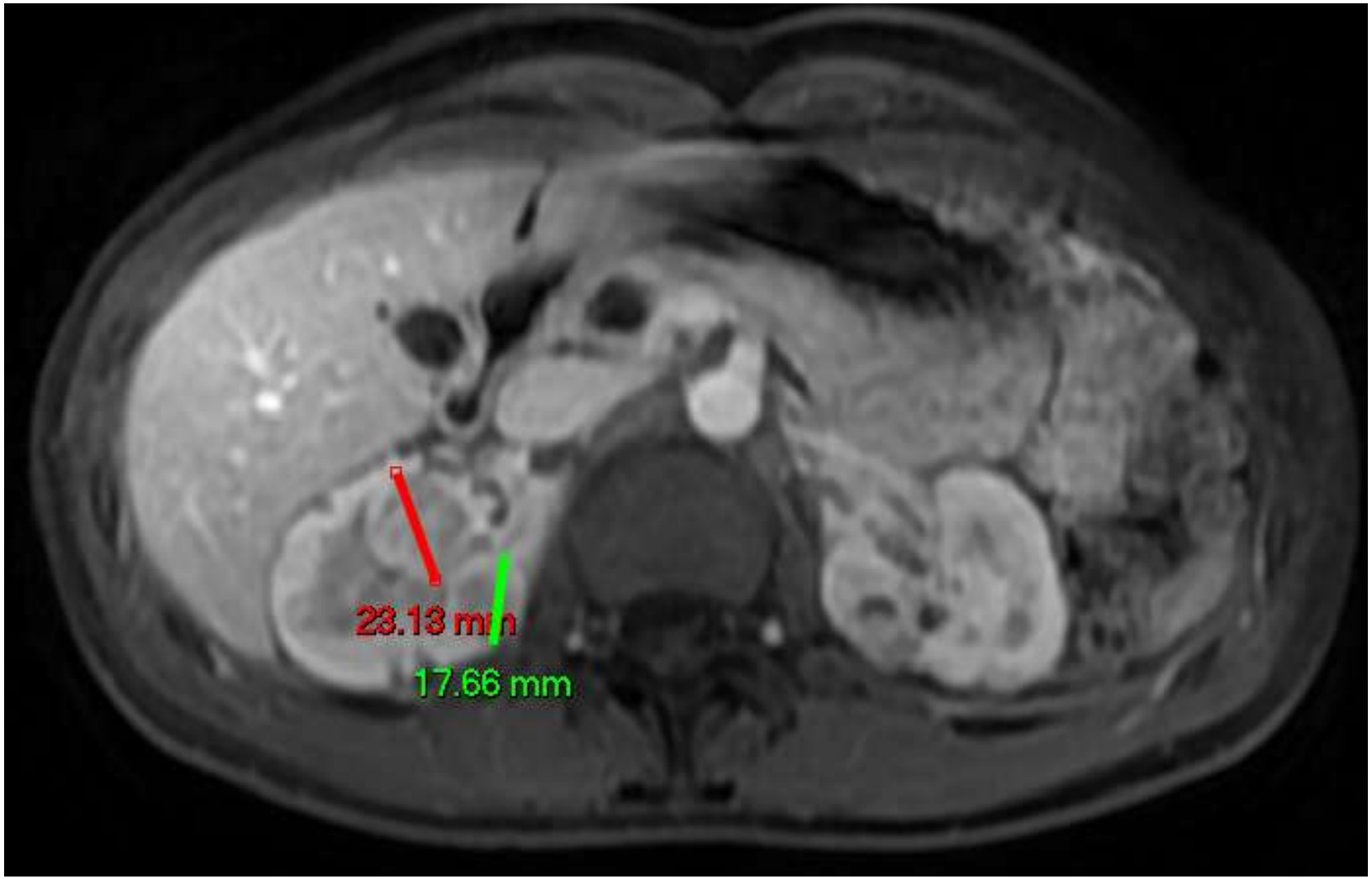


# Case 4- Bilateral

- 65
- Gamekeeper
- 40 U alcohol/week
- Hypertension
- Presented with haematuria



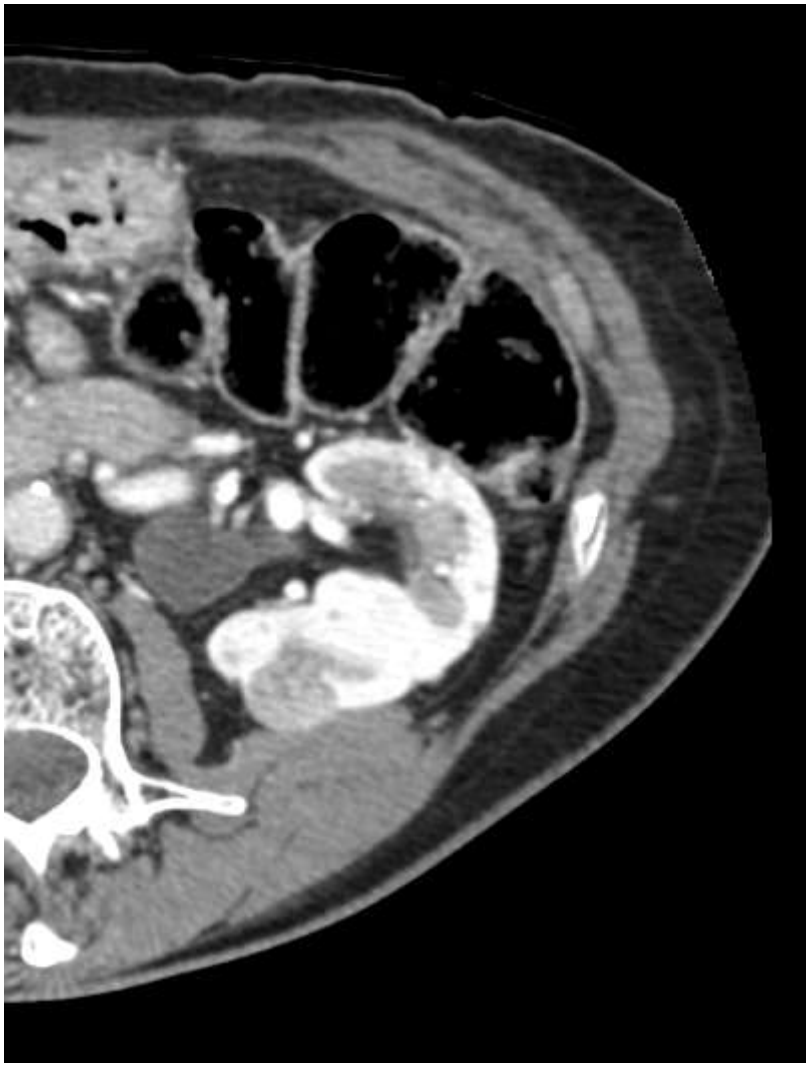
# Case 5 - VHL

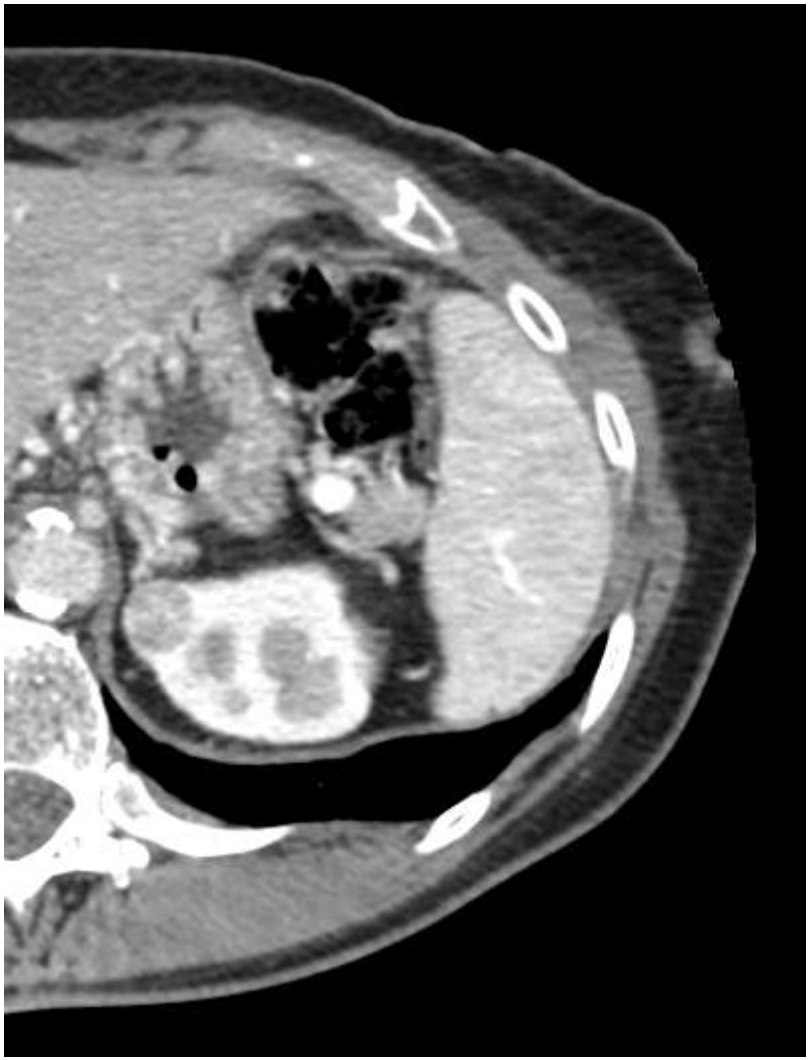


# Case 6 - Multifocal

- 61
- Right nephrectomy for Wilms' tumour age 6
- Segmental resection of G3pTa Left ureteric TCC 5 years ago
- eGFR 48

# Case 6 - Multifocal





MACRO:
5 cores and fragments, the longest 4mm. The cores are very thin.

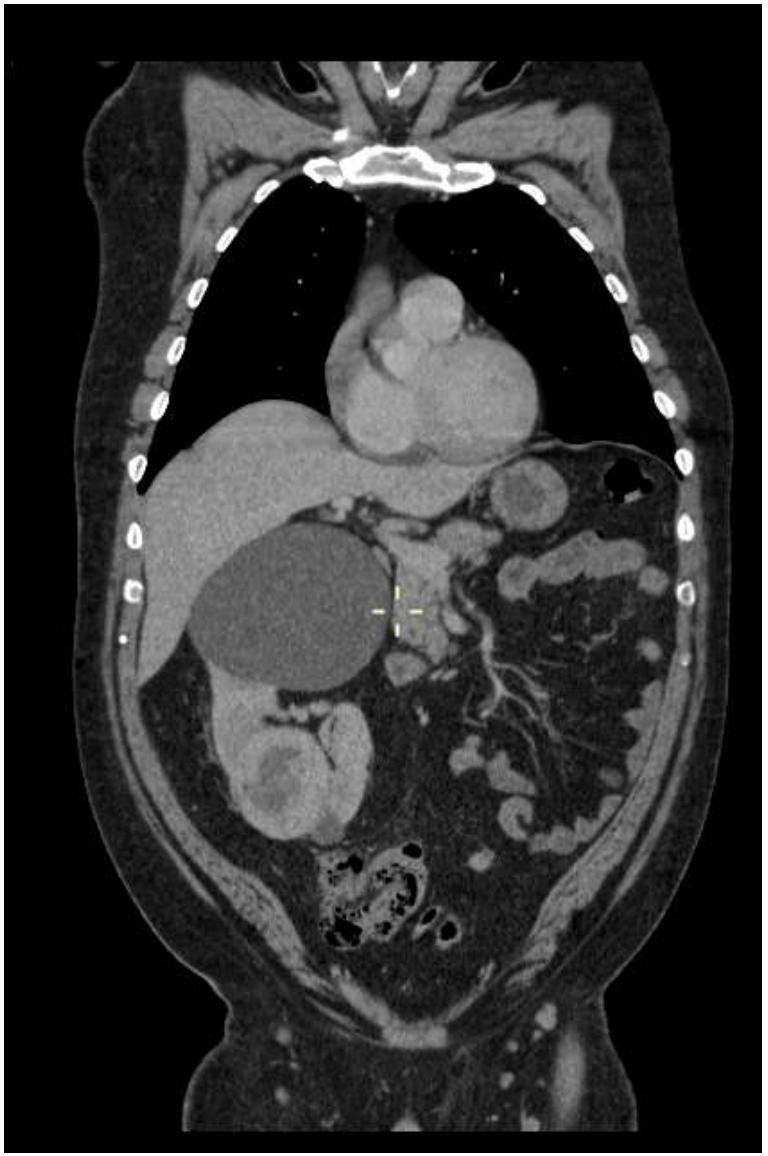
MICRO:
Tiny cores that include a small amount of normal renal medullary parenchyma. In addition there is a neoplasm comprising cells with abundant eosinophilic cytoplasm arranged in a trabecular fashion. The cell membranes are indistinct. Perinuclear halos are seen in places. The nuclei are centrally placed and round with indistinct nucleoli and bland chromatin. There are no mitotic figures and no necrosis is seen.

The tumour is CK7, CD15 and CK20 negative. There is diffuse expression of Pax-8.

The findings are those of an eosinophilic renal neoplasm. The differential diagnosis lies between a renal oncocytoma and an eosinophilic variant of chromophobe renal cell carcinoma. It is not possible to distinguish between these two lesions based on this sample. There is no evidence of TCC or Wilms tumour

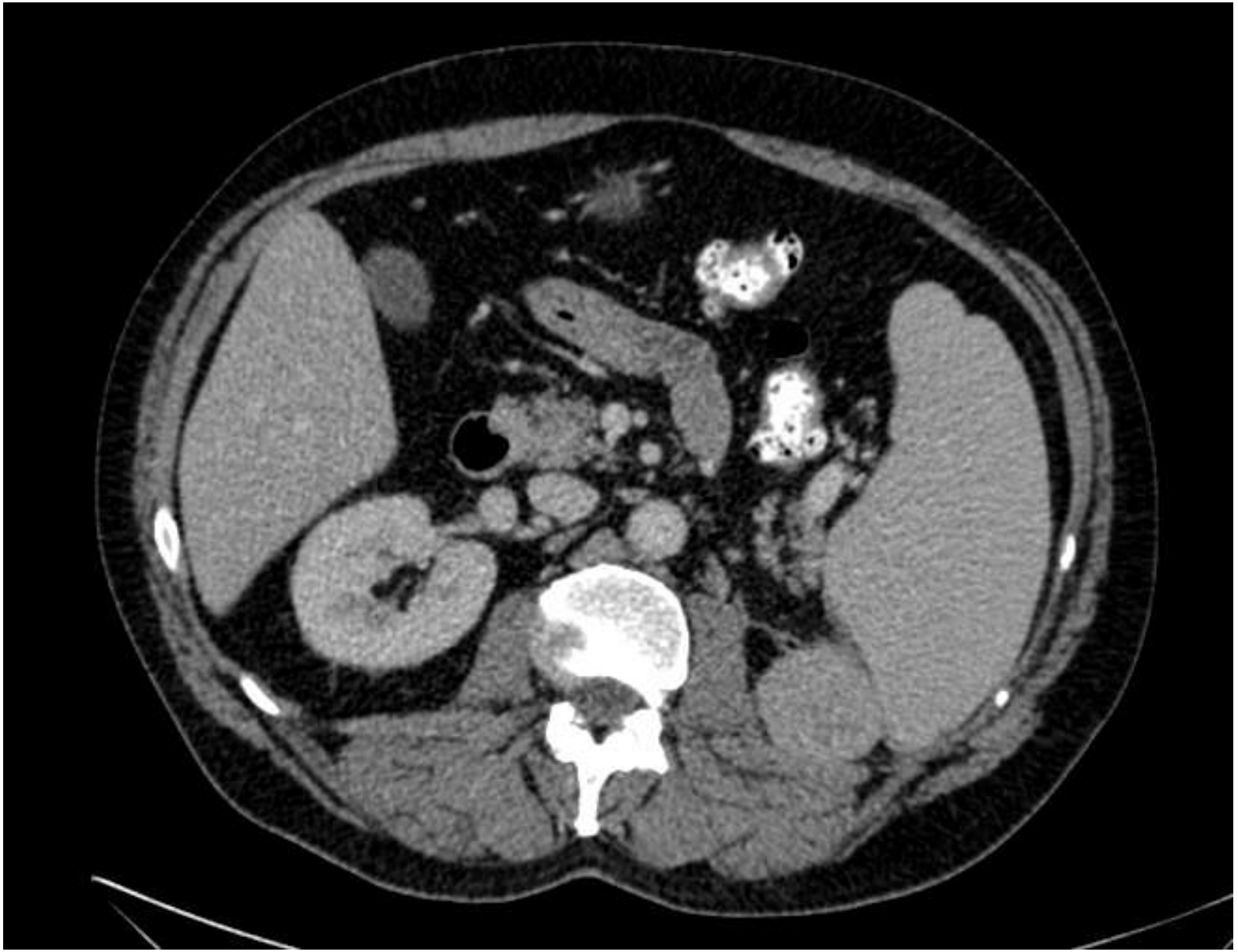
# Case 7 - Single kidney

- 65yo man
- Obese
- NIDDM
- Congenital single kidney



# Case 8 - Recurrence

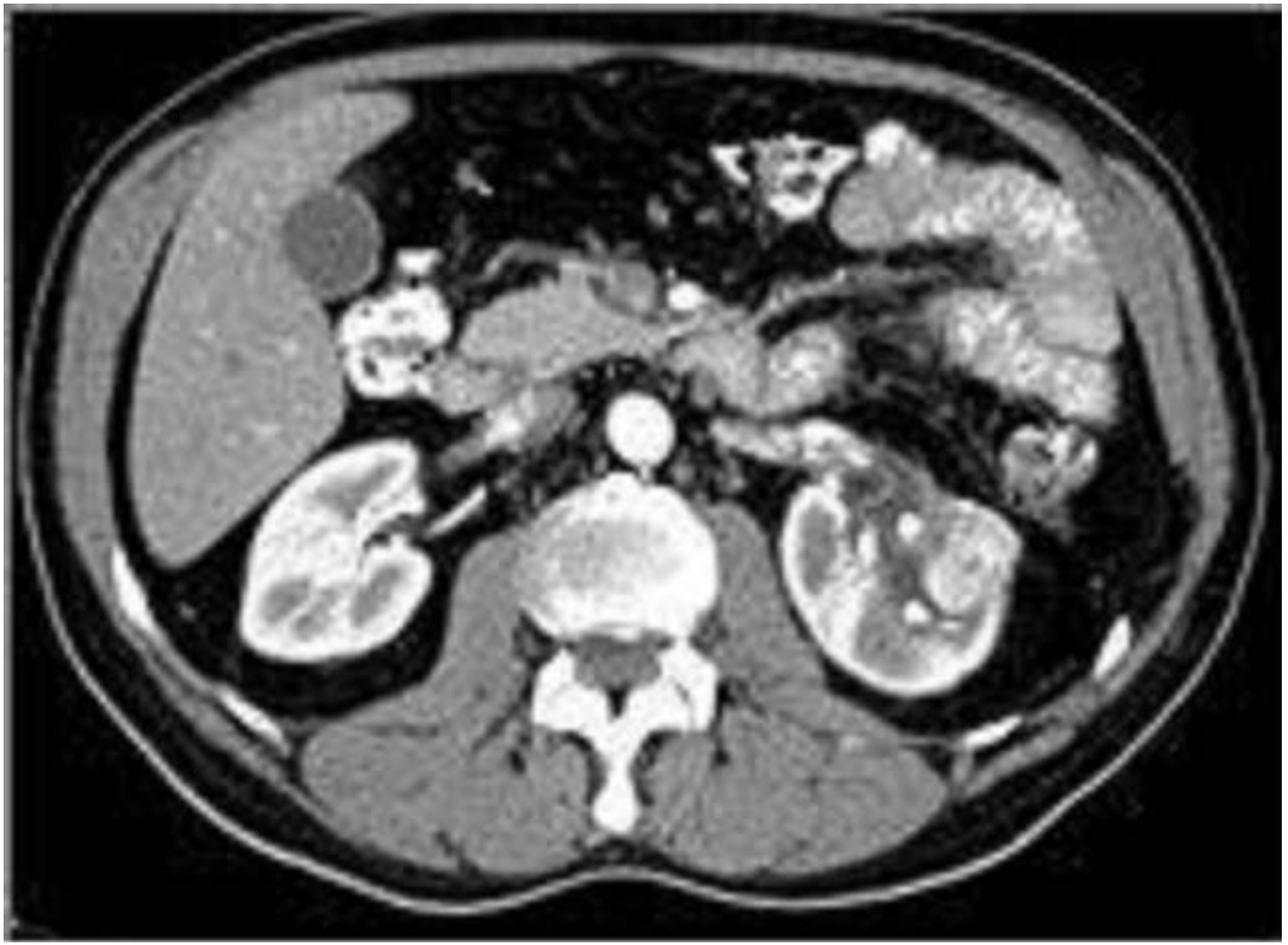
- 62yo man
- Fit and well
- Open Radical Nephrectomy in 2012 for intermediate risk RCC
- eGFR >60



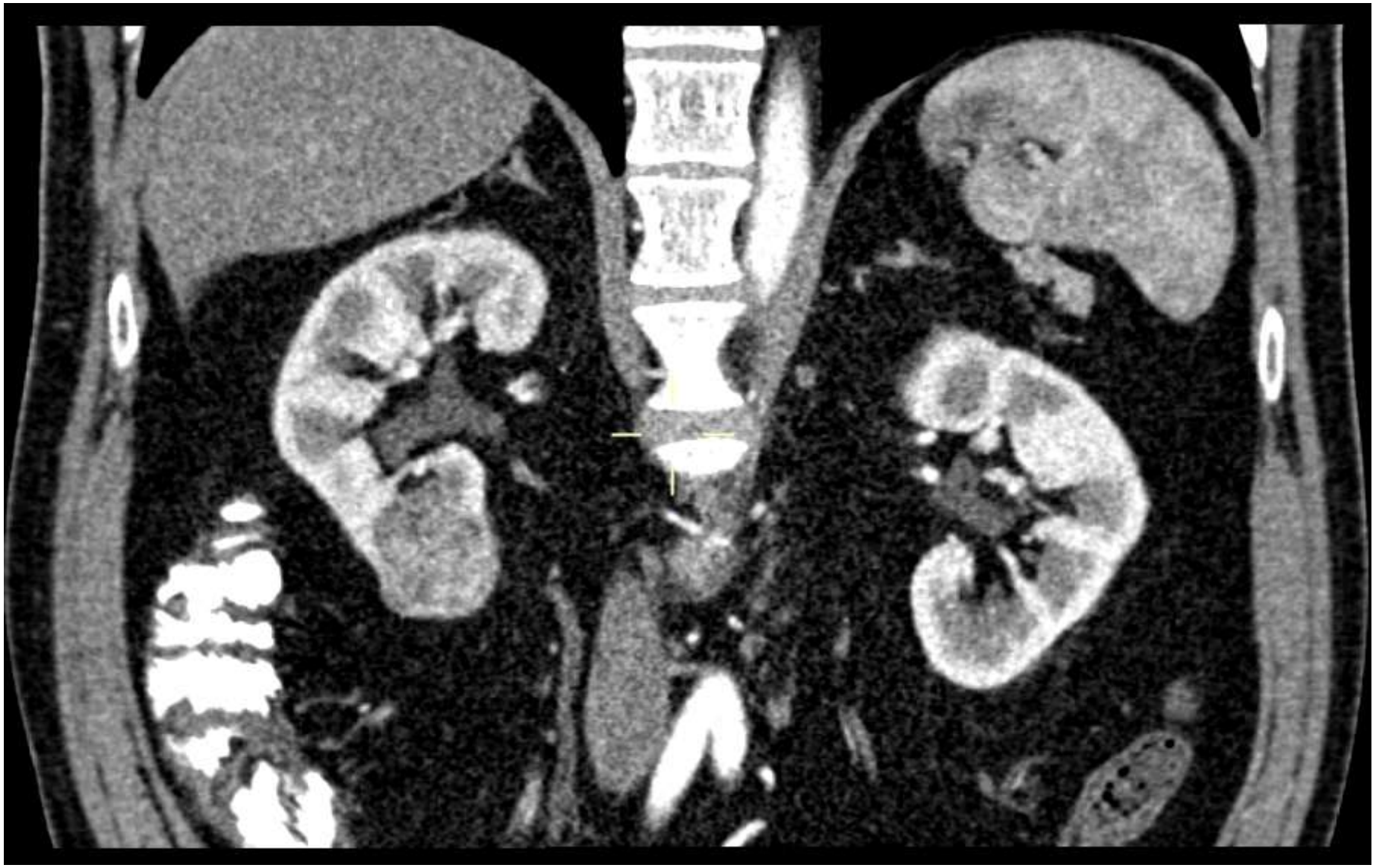
# Case 9 - Local Recurrence

- 58 yo man
- Fit and well
- Partial Nephrectomy in 2011 for intermediate risk RCC
- eGFR 58

# Case 9 - Local Recurrence



# Case 10



# Case 10

- RIGHT KIDNEY

  CLINICAL HISTORY:
  Likely renal carcinoma.

  MACRO:
  Three cores, the longest measuring 17mm.

  MICROSCOPY:
  Microscopy shows a core of renal cortex and 2 cores of an oncocytic lesion. The cells have granular eosinophilic cytoplasm.
  The nuclei show mild variation in size. Nucleoli are not readily identified.There is no evidence of atypical mitoses or necrosis. Immunocytochemistry shows the tumour to be positive for CD117, E-Cadherin and CD15. The tumour is negative for CK7, CK20, CD10, RCC and Vimentin. The appearances are those of a eosinophilic renal tumour. The overall morphology and immunoprofile would favour an Oncocytoma more than a chromophobe RCC

# Case 10

MICROSCOPY:

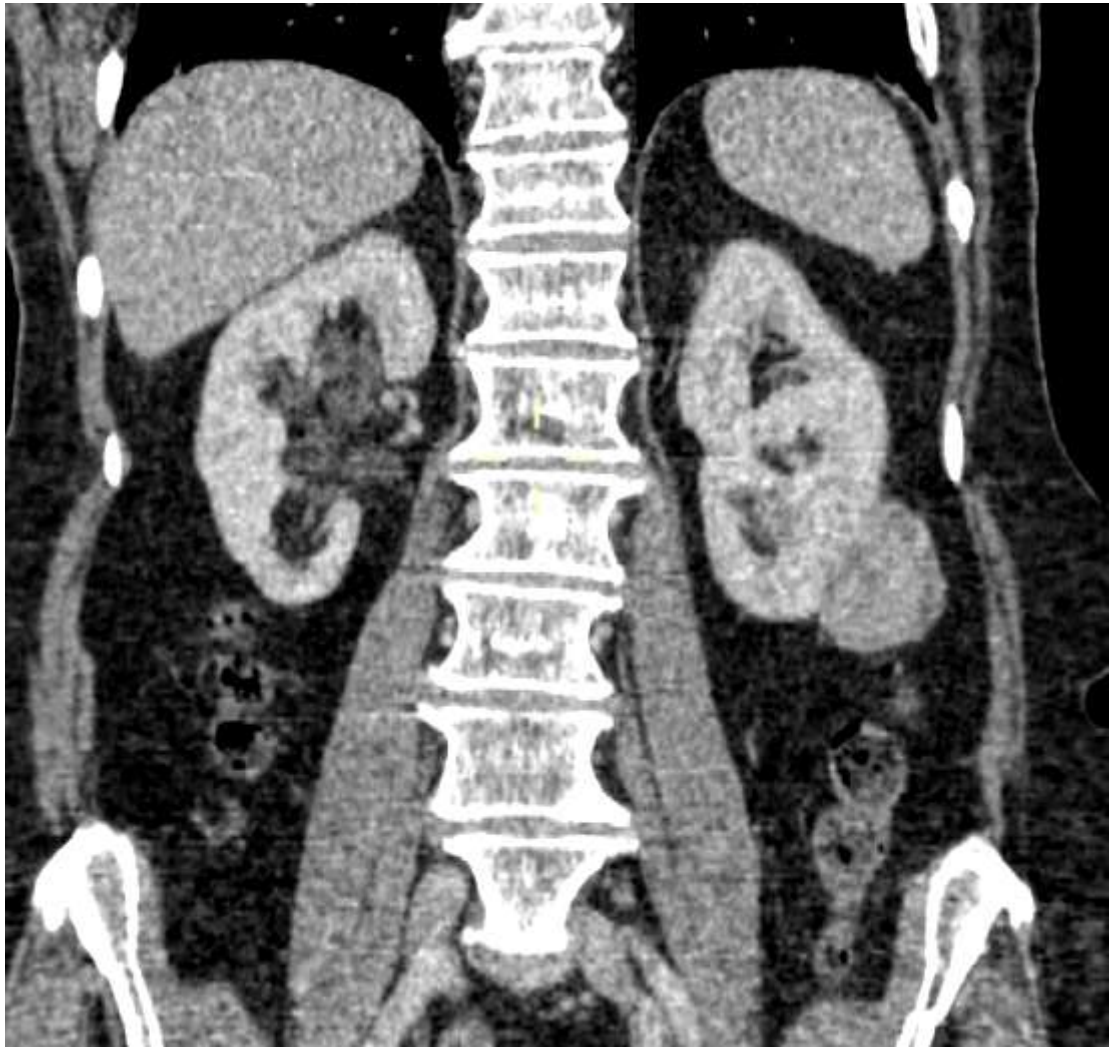
The tumour has both a solid nested and trabecular architecture with some blood filled cystic spaces. The cells have abundant cytoplasm with mainly pale esoinophillic floculant cytoplasm and well defined cell membranes. Perinuclear clearing is seen. Some more densely eosinophillic cytoplasm is seen focally particularly at the edge of the specimen. The nuclei are occasionally binucleate and show irregular nuclear membranes.

Immunohistochmistry shows focal strong membranous staining with CK7. CD10, CD117, EMA and ECAD are all positive. Vimentin, CD15 and CD20 are all negative.

Overall the morphology of the tumour is more in keeping with a chromophobe carcinoma rather than an oncocytoma.

# Case 11 – unusual pathology

- 73 yo woman
- NIDDM
- Hypertension
- Depression
- eGFR>60



# Case 11 – unusual pathology

MACRO:
A smooth round nodule 40 x 42 x 21mm with a surrounding rim of fatty tissue up to 45mm in length. There is ragged surface at one edge 21 x 15mm ?renal resection margin. On cut section the tumour is firm and white with a whorled appearance. The tumour is well circumscribed and does not invade perinephric fat.

MICRO:
This is a spindle cell tumour with a fascicular growth pattern, the morphological appearances of which are in keeping with smooth muscle differentiation. This is confirmed with immunocytochemistry which shows strong positivity for SMA, H-Caldesmon and Desmin. HMB45, Melan-A, CD117 and S100 are negative. The Ki-67 proliferation fraction is largely low with focal areas of moderate staining. Within the tumour there is lipocytic component. There is no significant nuclear atypia and necrosis is not a feature. Mitoses are infrequent with less than 1 mitotic figure per 50 high power fields. Further immunocytochemistry has demonstrated strong oestrogen receptor and progesterone receptor positivity, indicating that this is a smooth muscle tumour of gynaecological type.

Overall the appearances are of a smooth muscle tumour within retroperitoneum. Benign leiomyomas of such a deep soft tissue site are exceedingly rare with most behaving in a malignant fashion. Applying the criteria of malignancy (necrosis, atypia and mitotic activity), this does however appear to fall into the benign category. It would, in view of this be worth keeping the patient under clinical follow-up