

## ABSTRACT

Pancreas is an uncommon site of metastatic disease. Almost 63% of pancreatic metastasis arise from renal cell cancer and occur within ten years of diagnosis of renal cell cancer. We report a case of metastatic renal cell cancer to pancreas, with contralateral adrenal metastasis, fifteen years after a radical nephrectomy.

## INTRODUCTION

- 61 years old man with past medical history of renal cell cancer, status post left radical nephrectomy fifteen years ago, presented with dull pain in right lower abdomen for one day.
- He denied any other abdominal symptoms or weight loss.
- History of smoking half a pack of cigarettes daily.

## PHYSICAL EXAM AND LAB / RADIOLOGY/ ENDOSCOPY FINDINGS

- Physical examination was unremarkable.

### Labs

- Elevated lipase (213U/L) and a bilirubin of 1.1 mg%.

### Imaging

- On computer tomography scan of abdomen, he had bulky, soft tissue mass (~6.7 cm), with contrast enhancement, with dilated pancreatic duct of 1.5 cm. (Figure 1)
- Right adrenal mass. (Figure 1)

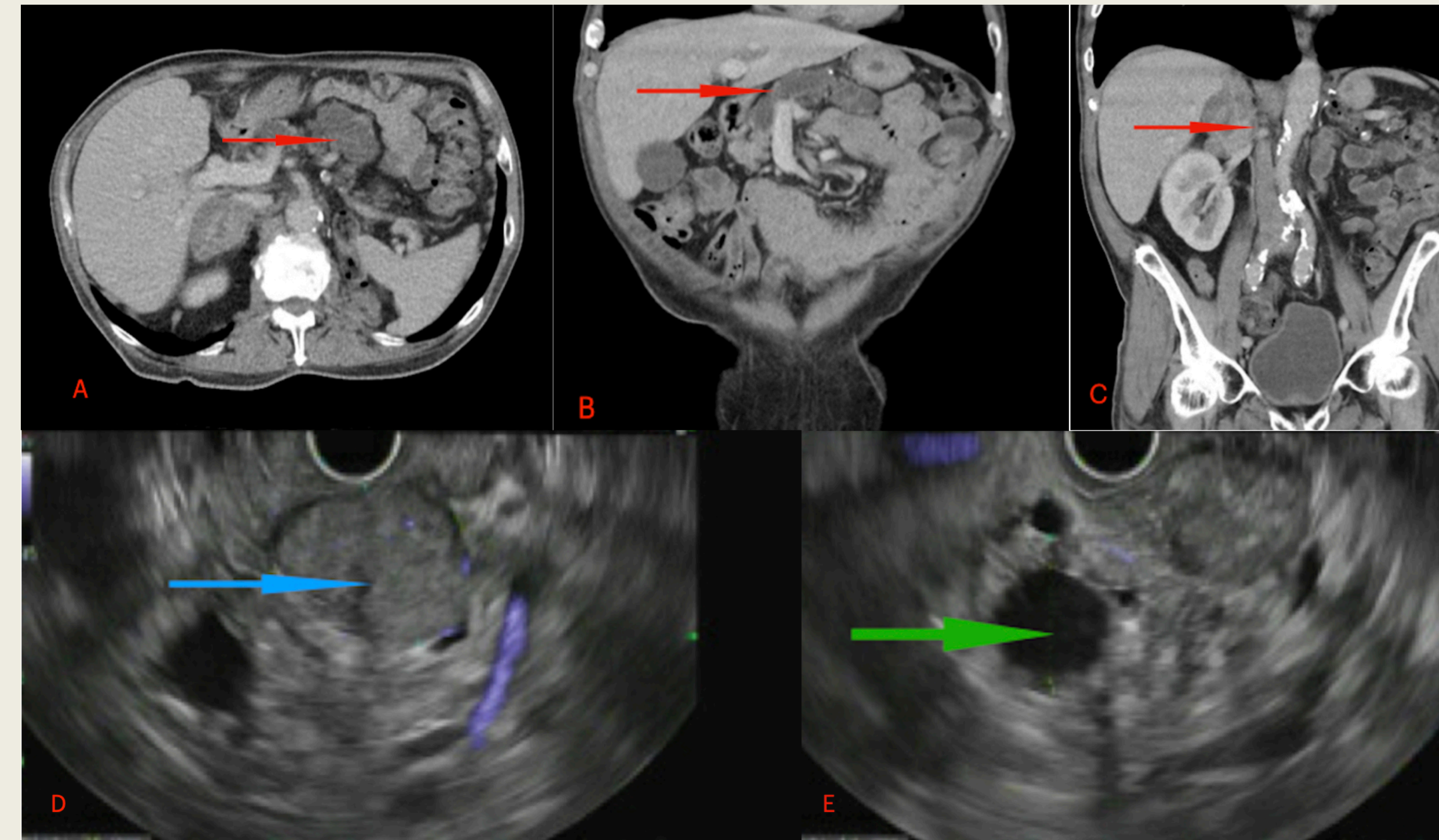
### Endoscopy

- On EUS, the lesion appeared well circumscribed and previously known pancreatic duct dilation was seen.

### Pathology

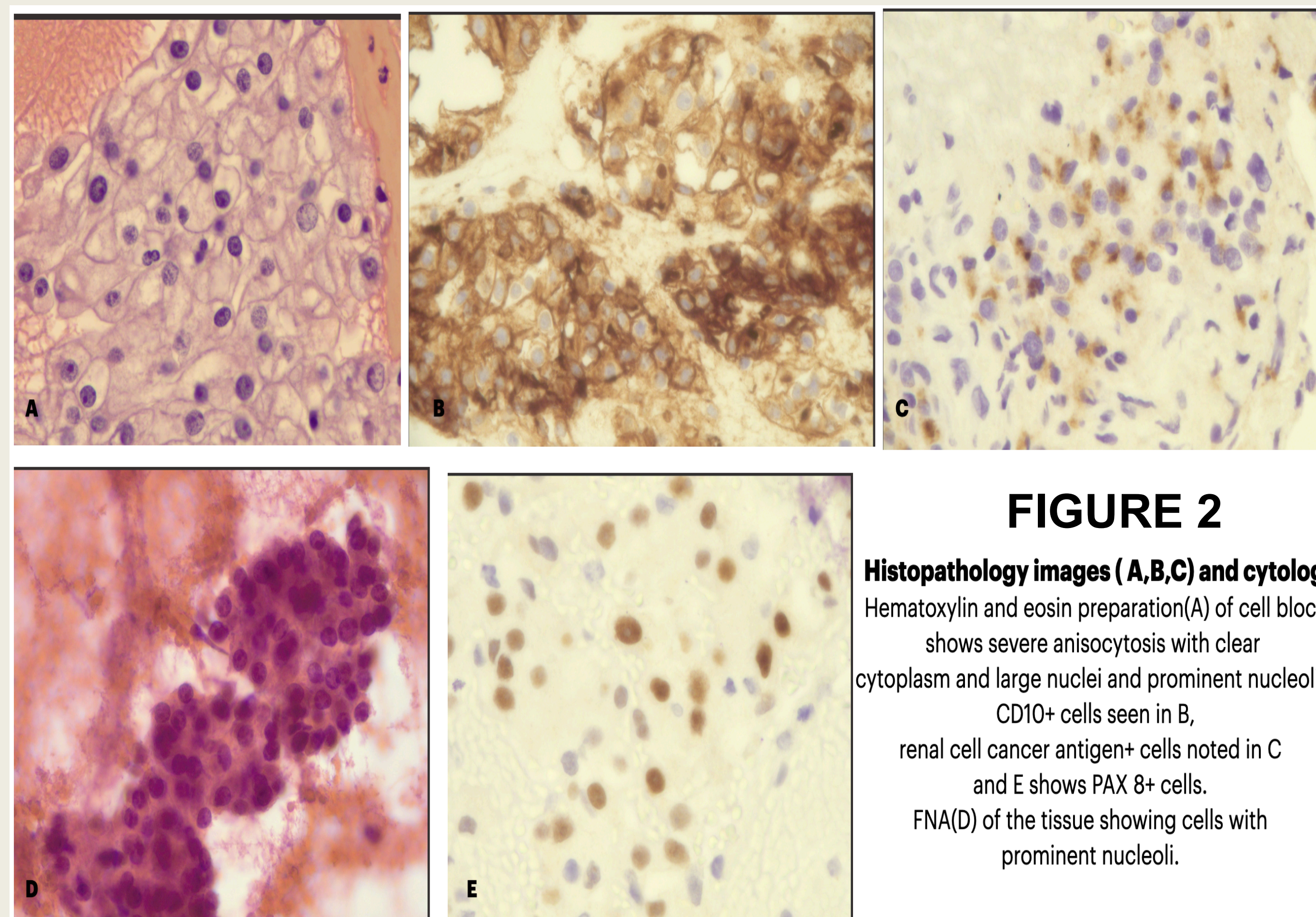
- Fine needle biopsy of the mass showed numerous atypical cells with round irregular nuclei with prominent nucleoli with clear cytoplasm suggestive of clear cell renal cell carcinoma. (Figure 2)
- On immunohistochemistry, the tumor was positive for CD10, renal cell carcinoma antigen and PAX 8. (Figure 2)

## FIGURE 1



CT(A,B,C) and EUS(D,E) findings. Image A shows the bulky mass in pancreas (arrow with red head) with a dilated pancreatic duct, image B (arrow with red head). Adrenal metastasis is seen in image C (arrow with red head).

On EUS, the mass appears well circumscribed (blue arrow, image D) with dilated pancreatic duct (green arrow) in the head of pancreas in image E.



## FIGURE 2

**Histopathology images (A,B,C) and cytology(D)**  
 Hematoxylin and eosin preparation (A) of cell block shows severe anisocytosis with clear cytoplasm and large nuclei and prominent nucleoli. CD10+ cells seen in B, renal cell carcinoma antigen+ cells noted in C and E shows PAX 8+ cells. FNA (D) of the tissue showing cells with prominent nucleoli.

## DISCUSSION

- Metachronous renal cell cancer to pancreas fifteen years after radical nephrectomy without loco regional recurrence is rare.<sup>1</sup>
- The presence dilated pancreatic duct and the bulky mass on CT scan abdomen suggests pancreatic primary. However, on endoscopic ultrasound the patient was noted to have a well circumscribed lesion in the head of pancreas with dilated pancreatic duct.
- Although ipsilateral adrenal metastasis are more likely in patients with large renal cell cancer, upper pole tumors and left side lesions, contralateral adrenal metastasis also have been reported.
- Tumor cells spread hematogenously to pancreas and lie dormant for variable amount of time.<sup>2</sup>
- Direct spread to pancreas can also occur but will involve the tail of pancreas.

## CONCLUSIONS

- Prolonged surveillance is recommended after clear cell variant of the Renal cell cancer treatment.
- Bulky mass on CT abdomen or dilated pancreatic duct does not rule out pancreatic metastasis.
- Endoscopic ultrasound provides superior resolution and tissue for diagnosis, helping differentiate metastatic disease from pancreatic primary.

## REFERENCES

- 1) Sellner F, Tykalsky N, De Santis M, Pont J, Klimpfner M. Solitary and multiple isolated metastases of clear cell renal carcinoma to the pancreas: an indication for pancreatic surgery. *Ann Surg Oncol.* 2006;13(1):75-85.
- 2) Sagalowsky AI, Kadesky KT, Ewalt DM, Kennedy TJ. Factors influencing adrenal metastasis in renal cell carcinoma. *J Urol.* 1994;151(5):1181-4.

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