

INTRODUCTION

- Ewing sarcoma (ES): small round blue cell tumor of neuroectodermal origin.
- We report a 21-year-old male whose RCC-suspected renal mass proved to be primary renal ES.
- Primary renal ES is rare and may mimic renal cell carcinoma (RCC) on imaging. [2,4]

CASE PRESENTATION

- 21-year-old male student, no comorbidities, ECOG 1.
- 3 weeks of right flank and back pain; palpable right hypochondrial mass, flank tenderness.
- Creatinine 1.02 mg/dL, normal CBC; viral serology negative

TIMELINE OF EVENTS

Apr 2026

CT-IVU: renal mass, likely RCC

6 May 2026

CT: renal mass + subcapsular hematoma

22 May / 9 Jun

Tumor board; open radical nephrectomy

17 Jun 2026

Histology: Ewing sarcoma, 110 mm

9 Jul 2026

PET/CT; adjuvant chemotherapy Planned

4 August 2026

Vincristine/Doxorubicin/Cyclophosphamide (VDC) x 7 alternating with Ifosfamide/Etoposide (IE) x 7, 2-weekly; scan after cycle 6.

DIAGNOSTIC ASSESSMENT

- Contrast CT (6 May 2026): Heterogeneously hyperdense mass from the interpolar right kidney, growing exophytically into a subcapsular collection.
- Impression: likely RCC; less likely ruptured angiomyolipoma with chronic hematoma.
- Tumor board: imaging reviewed; right radical nephrectomy agreed.

SURGICAL TREATMENT

- Open right radical nephrectomy (9 Jun 2026).
- Renal vessels and ureter divided; adrenal gland spared.

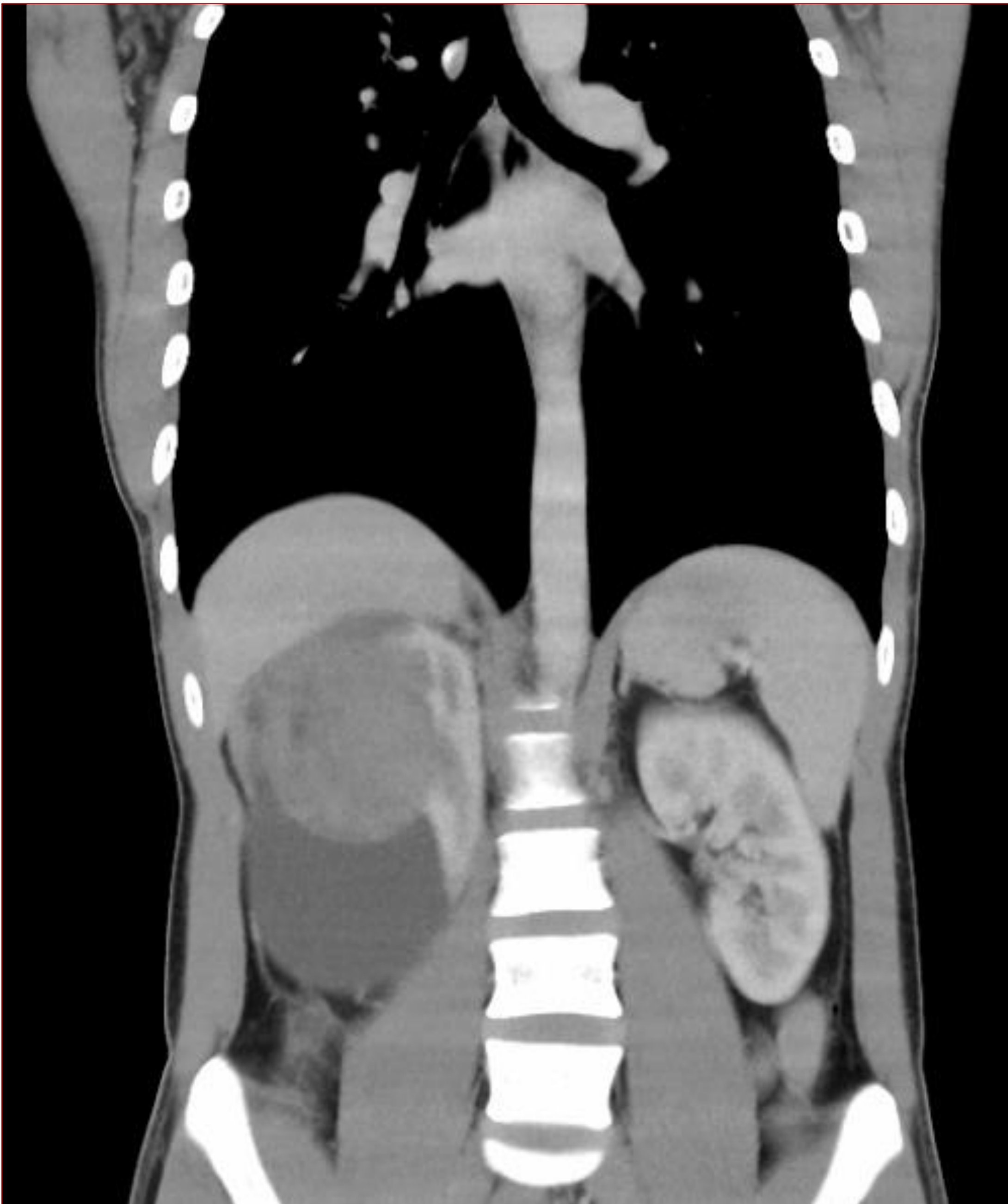


Image 1: Coronal view of specimen—Computed Tomography Chest and Abdomen with contrast – 6th May 2026



Image 2: Axial view of specimen—Computed Tomography Chest and Abdomen with contrast – 6th May 2026

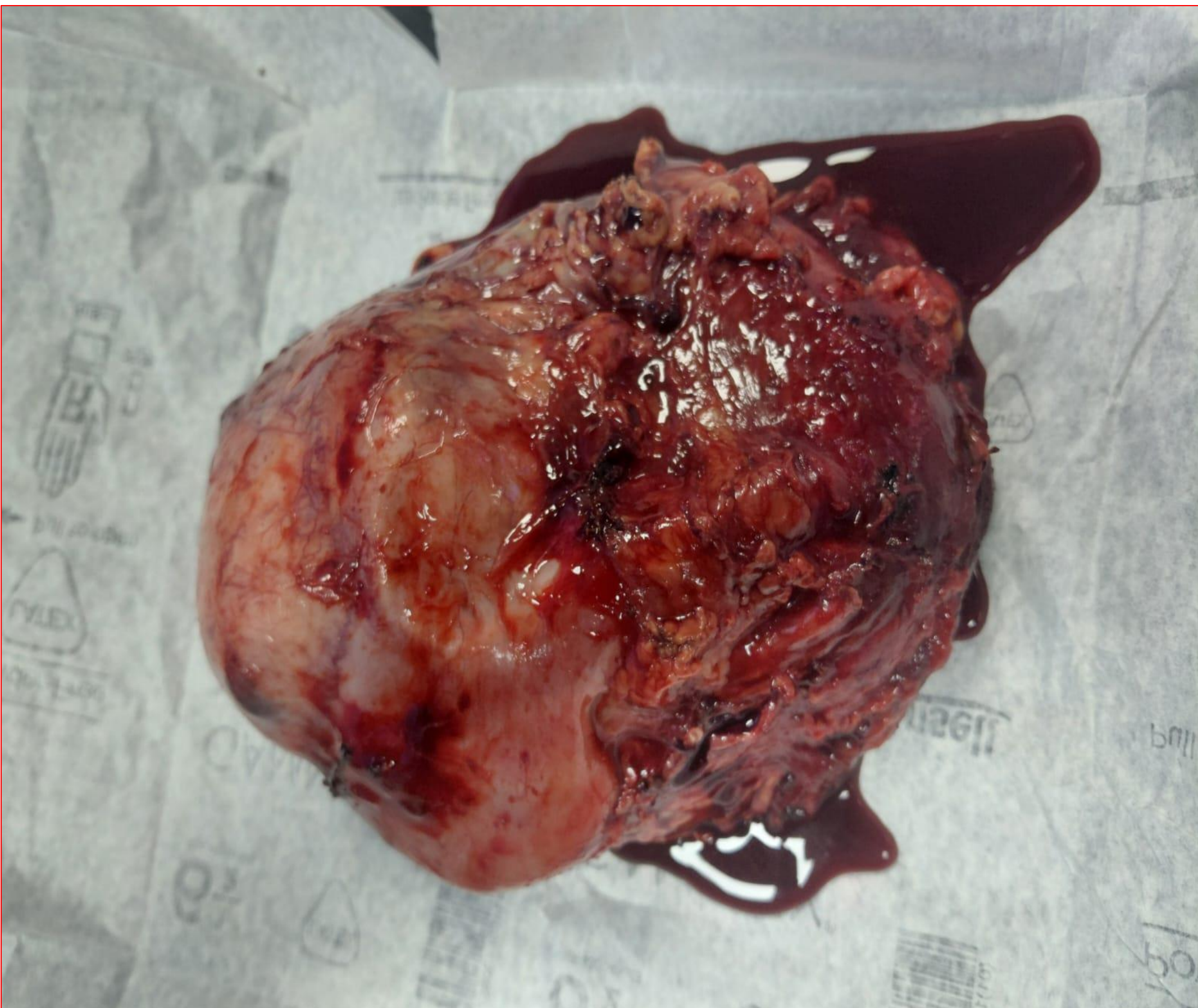


Image 3: Gross Specimen – 9th June 2026

PATHOLOGY

- 110 mm tumor, intact capsule; all margins free.
- Sheets of small round blue cells: Ewing sarcoma.
- Immuno/Histochemical/In Situ Hybridization (Ish) Stain(s): CD99 and NKX2.2 : Positive in tumor cells
- FISH test not performed and serves as a limitation in this case report. [5,6]

OUTCOME AND FOLLOW UP

- PET/CT (9 Jul): nephrectomy-bed stranding likely post-surgical; residual disease excluded. No other active disease.
- Plan: Vincristine/Doxorubicin/Cyclophosphamide (VDC) x 7 alternating with Ifosfamide/Etoposide (IE) x 7, 2-weekly; scan after cycle 6.
- VDC x 1 started 4th Aug 2026 and ongoing chemo cycles.
- Patient well at latest oncologic review

LITERATURE COMPARISON

- Findlay [2] 22 M; nephx + chemo-RT
- Mahajan [3] 44 M; RCC-like; VDC/IE
- This case 21 M; nephx + VDC/IE

DISCUSSION

- Renal ES is rare and may mimic RCC on imaging. The mean age at diagnosis is just 30.4 years, and more than half of newly diagnosed cases are seen in males. [2,3,4]
- Imaging alone cannot reliably distinguish them. [4,6]
- Diagnosis: histopathology, IHC and molecular testing. [5,6]
- Management is multimodal; evidence is limited to case reports and series. [2,3,5]

CONCLUSION

- Consider renal ES in young patients with RCC-like renal masses.
- Diagnosis: histopathology, IHC, molecular testing.
- Treatment: surgery + adjuvant chemotherapy
- Results of ongoing and future clinical trials are needed to optimize therapeutic pathways.

REFERENCES

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