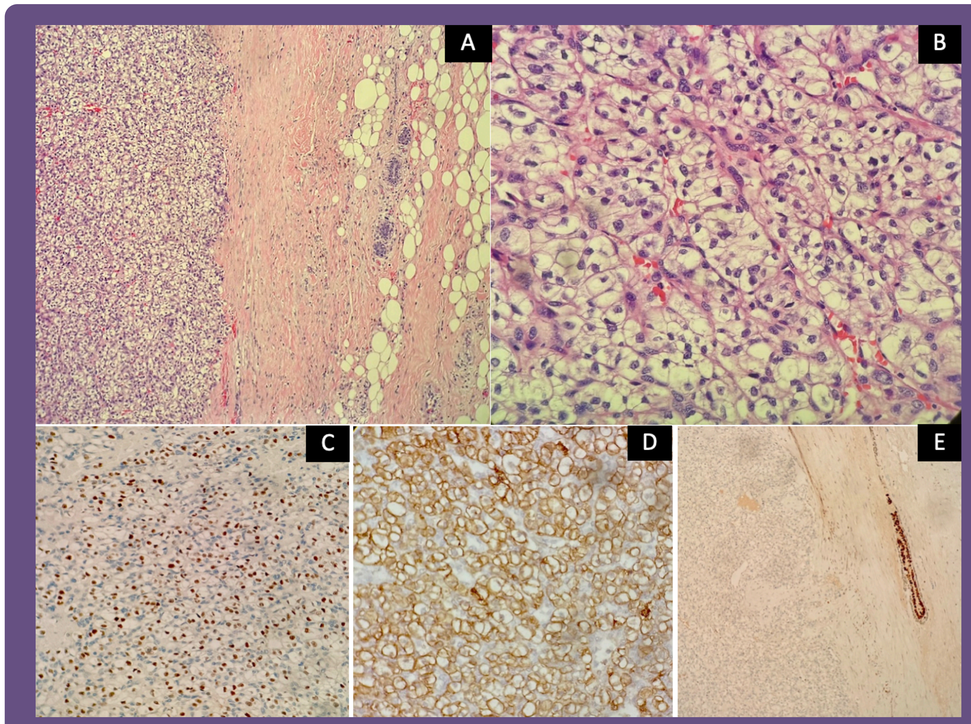
A RARE METASTASIS OF RENAL CELL CARCINOMA TO THE BREAST: A CASE REPORT

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Introduction

- Renal Cell Carcinoma (RCC) has a metastasis rate of approximately 33%, but metastasis to the breast is extremely rare[1].
- The common sites of metastasis include lung, bone, lymph nodes, and liver[2].
- Here we present a case of RCC that metastasized to the breast three months after radical nephrectomy.



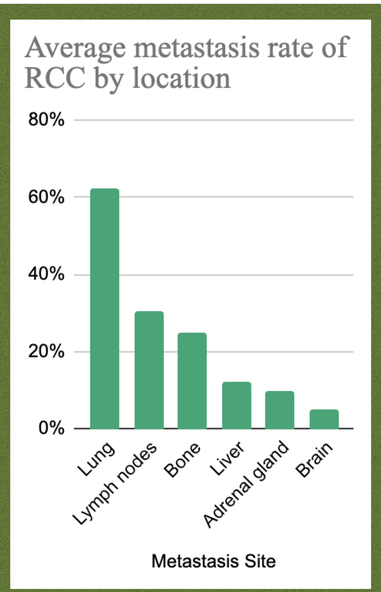
A: Clear cell renal cell carcinoma (left), and benign breast tissue (right)

B: Clear cell renal cell carcinoma (high power microscopic field view)

C, D, and E: PAX 8, and CA IX (positive), and GATA3 (negative) immunostains in the tumor support the diagnosis of metastatic clear cell renal cell carcinoma

Conclusion

- This case demonstrates a rare breast metastasis of RCC to add to the small body of case reports that describe this phenomenon.
- Documenting these cases is important in order to direct treatment options for future cases of RCC metastasis to the breast.
- Although resection of oligometastatic disease has been described, data is insufficient to indicate that it has an effect on survival.



- 60 year old female with thyroiditis and heart failure diagnosed with cT2bN0M0 RCC initially treated with Cabozantinib.
- After medical optimization, she underwent left radical nephrectomy and left adrenal gland resection, with negative margins and no nodal involvement.
- 3 months later, surveillance CT showed a 1.1 cm left breast mass. Biopsy showed RCC and a lumpectomy was performed.
- Surveillance CT four months later was suspicious for recurrence in the right adrenal gland and multiple subcentimeter nodules were seen in the left breast. PET showed equivocal standardized uptake value (SUV) on the right adrenal metastasis and a 6th rib lytic lesion, no elevated SUV in the breast.
- She underwent 9 cycles of Axitinib with pembrolizumab.
- Repeat breast biopsy showed RCC. She continued on her immunotherapy regimen for 2 more cycles.
- Repeat breast imaging showed 2 breast masses that had increased in size (one from 11 mm to 23 mm and one from 7 mm to 10 mm) and osseous destruction of the sixth rib.
- She subsequently underwent left mastectomy and radiation therapy to the affected rib and chest wall.
- Final pathology showed 3 foci of metastatic clear cell carcinoma (1.8cm, 2cm, and 0.3cm) with negative margins in the breast.
- She then received adjuvant radiation therapy of the left chest wall and was restarted on pembrolizumab.
- Subsequent surveillance CT 6 months after surgery showed soft tissue invasion on the left chest wall by metastatic RCC. Pembrolizumab was stopped due to lack of response and immunotherapy related arthritis. Biopsy of right rib showed RCC.
- 3 months later she presented to the ED after a fall and was found to have metastases in the left anterior frontal lobe. She underwent craniotomy to resect the lesion followed by SRS and and was started on Everolimus.
- Surveillance imaging showed worsening of rib lesion, and she was started on Belzutifan.

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