

Images – A nose metastasis heralding renal cell carcinoma recurrence 25 years post-nephrectomy

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Introduction

Renal cell carcinoma (RCC) represents 2–3% of all cancers and 85% of primary renal tumors.¹ Approximately 20% of patients with RCC will have locally advanced disease, while 25% will have metastatic disease at diagnosis.¹ RCC will most commonly metastasize to the lungs, lymph nodes, bones, brain, and liver, with less common metastasis in the head and neck area.²⁻⁴ In one large study investigating the patterns of metastasis in different malignancies, no cases of RCC metastasis to the skin were noted.⁵ It is thought that up to half of patients with RCC will have distant metastases at some point, and when RCC recurs, it is typically within the first five years, but there are reports of metastasis in unusual distant sites beyond 10 years.^{3,6-8}

Recently published Canadian guidelines for non-metastatic RCC followup emphasize the importance of surveillance and the use of pathological stage for the surveillance regimen.^{3,4} Risk-stratification is primarily based on pathological stage but should take into account other risk factors, such as histological subtype, Fuhrman nuclear grade, and clinical factors (including blood neutrophil to lymphocyte counts).³ The role of elevated neutrophils in promoting metastasis, including tumor-infiltrating neutrophils, in late-stage patients could be due in part to neutrophils acting as chaperones for circulating tumor cells via homing receptors to various distant metastatic sites, such as skin.^{9,10}

Case report

An 88-year-old, Caucasian male was seen for voiding symptoms. He had a history of open right radical nephrectomy for RCC 25 years prior. He was noted to have a fleshy

lesion on the tip of his nose, which had been present for several weeks and associated with minor bleeding (Fig. 1). The patient reported increasing fatigue over the past two months but did not report any other systemic symptoms. His neutrophil to lymphocyte was significantly elevated on complete blood count.

The patient underwent excisional biopsy of his nose lesion, which demonstrated a clear-cell carcinoma composed of alveolar nests of malignant clear cells surrounded by delicate capillary network with hemorrhage located within the dermis (Fig. 2A). Immunohistochemical stains were positive for A/E1/3, CK8/18, and Pax-8 — findings consistent with metastasis from patients with known RCC (Figs, 2B, 2C). Non-contrast computed tomography scan of the head/neck/chest/abdomen/pelvis was performed, which demonstrated the secondary lesion of the nose, numerous pulmonary nodules, enlarged subcarinal lymph node, cerebellar lesions, and several soft tissue deposits of the body wall, and within the abdomen and pelvis. The patient was assessed by medical oncology and was started on systemic therapy with pazopanib at 50% dose. He was also assessed by radiation oncology and received palliative external beam radiation to the lesions on the nose, as well as one on his back.



Fig. 1. Clear-cell renal carcinoma metastasis to the tip of the nose 25 years post-nephrectomy.

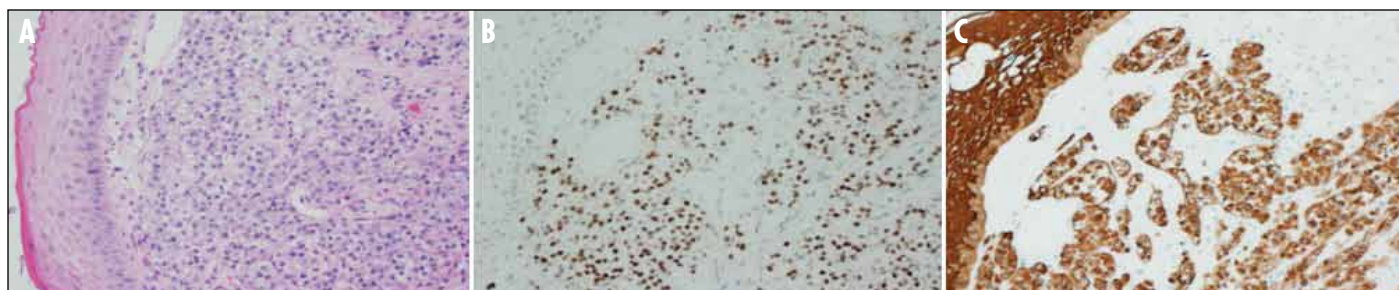


Fig. 2. Pathologic findings of case. **(A)** 10X HE stained slide of skin metastasis; **(B)** Pax-8 positive immunolabeling; **(C)** pancytokeratin (AE1/AE3) positive immunolabeling.

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