

Disclosures

Dr. Hall holds a minority equity stake in Veradermics Inc.
We have no other relevant disclosures.

Case Presentation

A 29-year-old active-duty military male in basic training presented to his primary care clinic with a two week history of a tender lesion on his right thigh. The patient reported trauma as a possible inciting event. Physical exam revealed an isolated 15mm erythematous, firm, tender, domed nodule on the right lateral thigh. An infectious abscess was suspected and incision and drainage was attempted. Upon incision, an adipose-like tumor was discovered and the procedure was aborted. Dermatology was consulted for evaluation of a possible lipoma. At presentation to the dermatology clinic the above lesion was identified with an overlying 1cm incision with hemorrhagic crust. A shave biopsy was performed which revealed an underlying encapsulated adipose-like tumor. The procedure was then converted to an excision and the residual mass was easily dissected and removed.

Histology

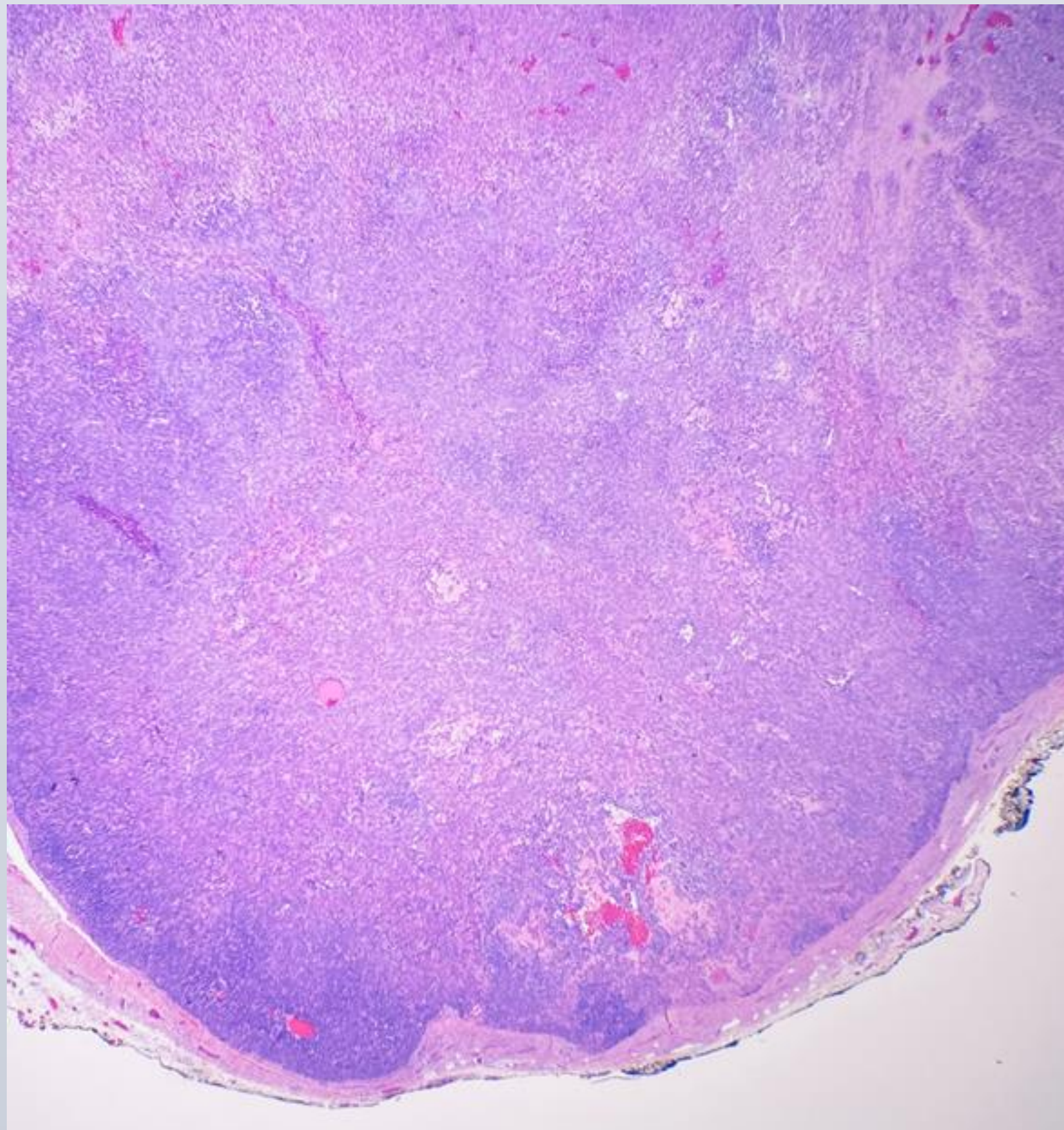


Figure 1: H&E 40x. There is a highly cellular tumor with concentric growth around vascular channels.

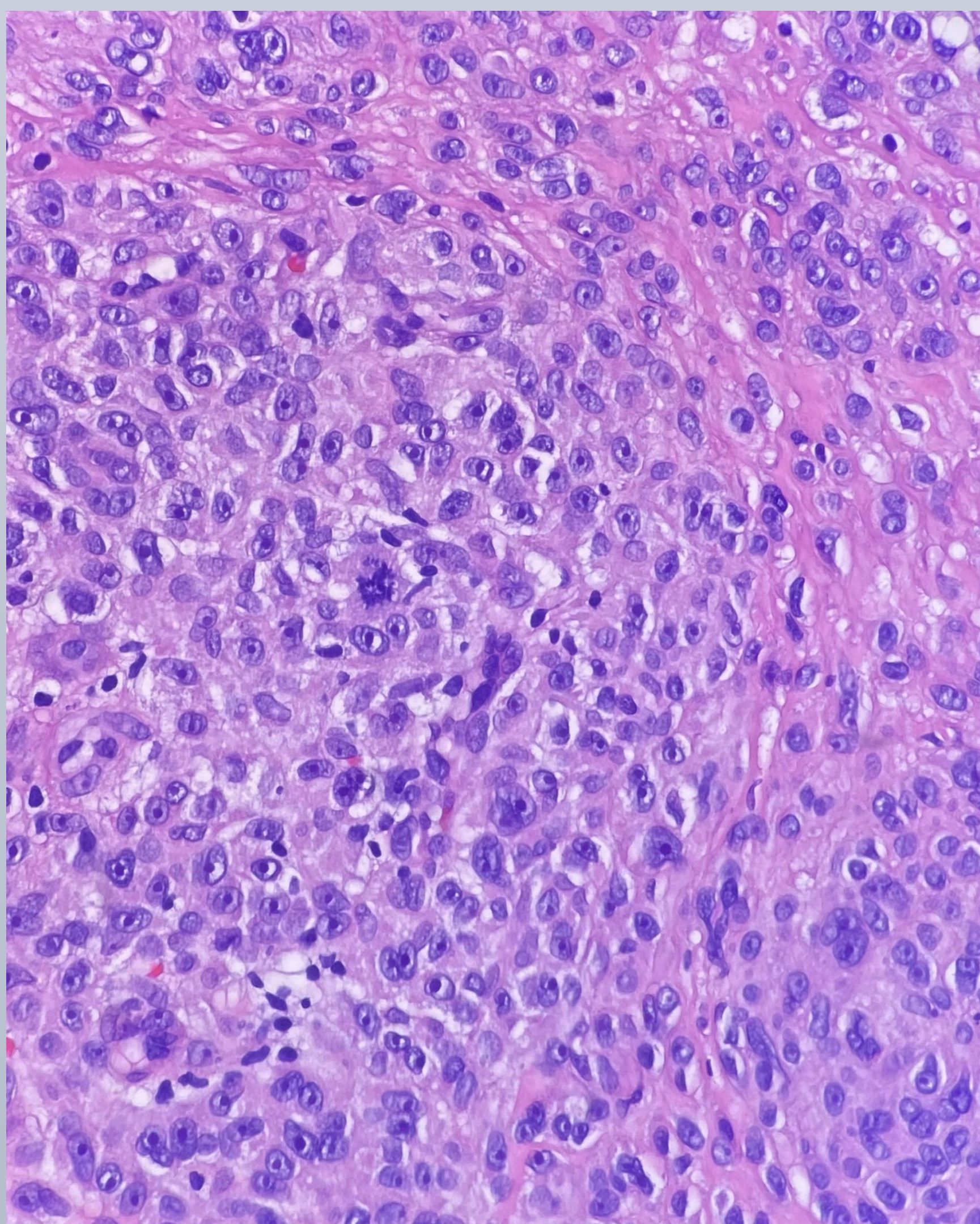


Figure 2: H&E 200x. The tumor demonstrates eosinophilic to amphophilic cytoplasm, irregular vesicular nuclei, prominent nucleoli, and multifocally scattered mitoses.

Histology (cont.)

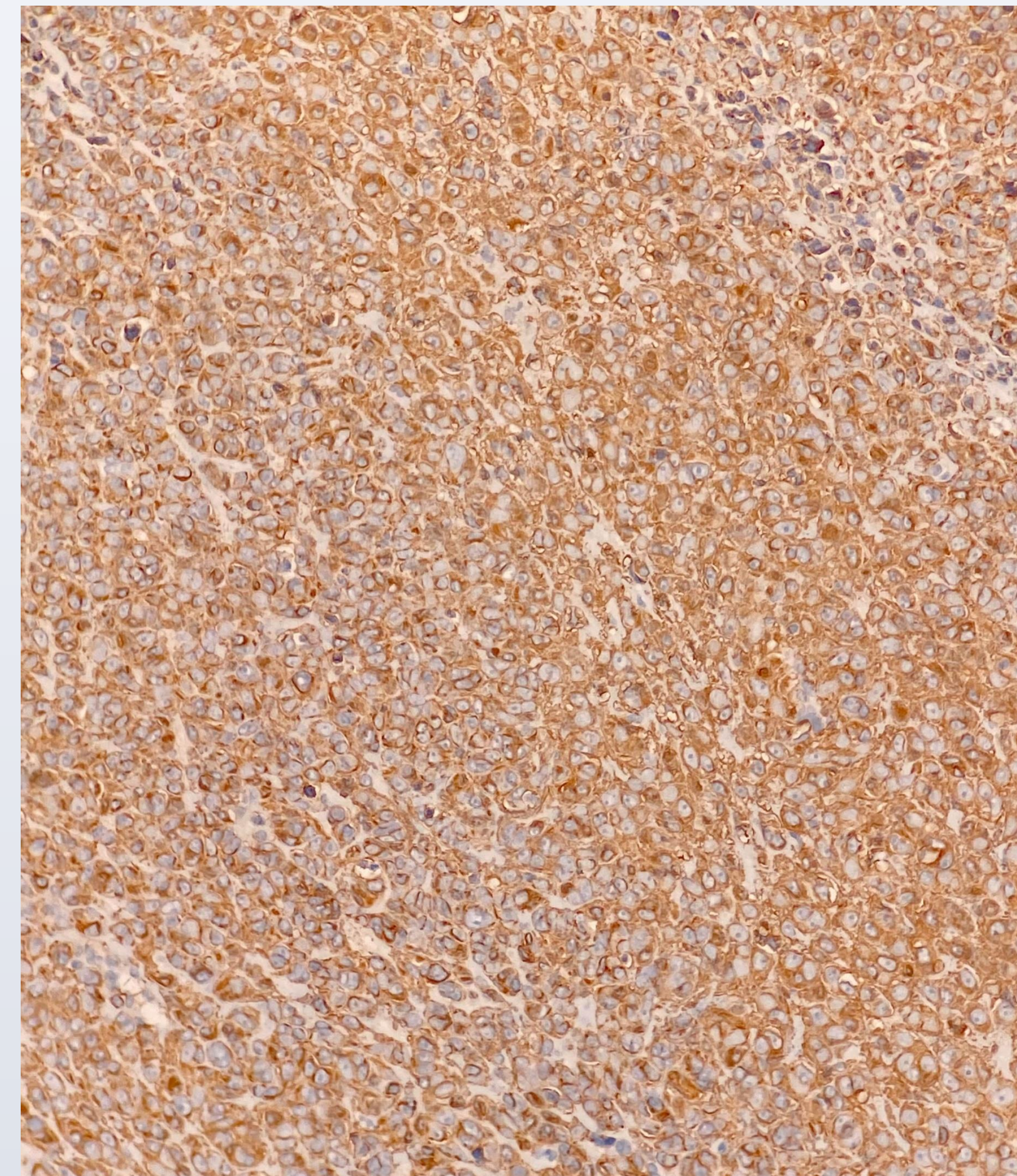


Figure 3: Strong positivity with SMA.

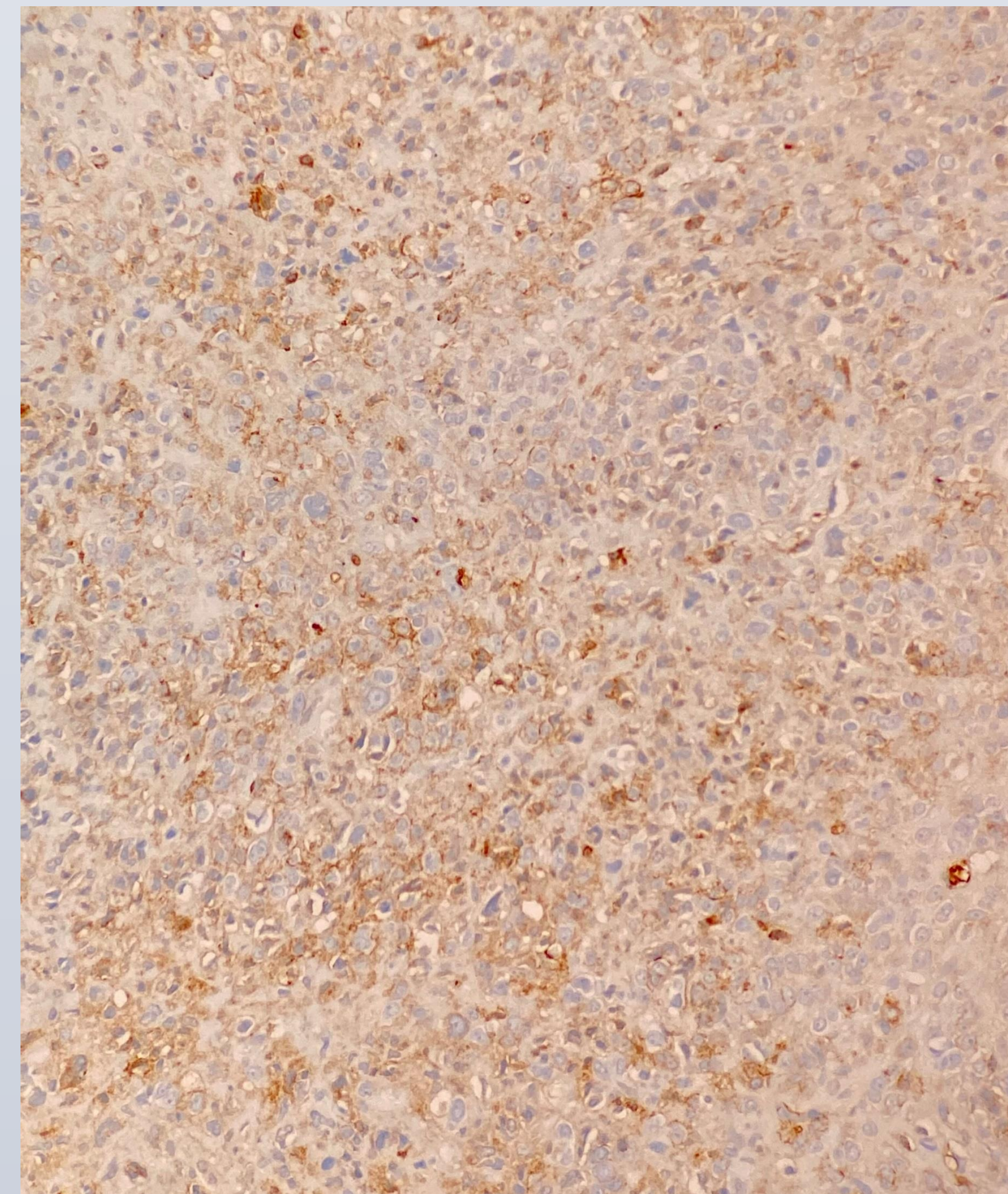


Figure 3: Multifocal and weak staining with EMA.

Clinical Presentation



Figure 5: Erythematous nodule with overlying incision with hemorrhagic crust. The original surgical plan is outlined.

Histology

The histopathologic features demonstrate a malignant neoplasm with irregular vesicular nuclei, prominent nucleoli, and multifocally scattered mitoses. The tumor cells have pale to eosinophilic to amphophilic cytoplasm and show growth around vascular channels. Staining with immunohistochemistry revealed multifocal weak staining for EMA, strong staining for SMA, with negative staining for pan-keratin, ALK, CD30, CD34, CAM5.2, and desmin. The overall staining pattern of the lesion was most consistent with the diagnosis of malignant myopericytoma.

Discussion

Malignant myopericytoma is an exceedingly rare tumor with approximately 10 cases now reported in the literature since first reported by McMenemy and Fletcher. Lesions have typically been described as solitary, well-circumscribed, growing masses involving the proximal extremities. It has also been noted in the mediastinum and head and neck. Most cases have been predominantly male. [3] The tumor is highly aggressive with a predilection for local recurrence. [1, 2, 3]

There is no definitive treatment for malignant myopericytoma. Reported treatments have included wide excision with or without adjuvant chemotherapy and radiation. Chemotherapy and radiation have not been shown to have a clear benefit but may be considered. [4] The optimal approach for staging and individualized treatment is unclear.

Our patient received a PET CT for evaluation of distant metastases. A non-specific area of enhancement in the right buttock without definitive lesion was noted. A PET scan area was recommended. Definitive excision of the tumor was discussed with Dermatology, Radiation Oncology with plan for a wide local excision, and Medical Oncology and Radiation Oncology.

Following his diagnosis and before he could be initiated, the patient returned to his hometown to pursue treatment in a different health system. He was transferred and he provided confirmation of his diagnosis. His care with his hometown healthcare facility was transferred, further follow-up was lost. His ultimate ongoing health status remain unknown.

References

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2. Chen W, Han L, Pang H, Duan L, Zhao Z. Primary malignant myopericytoma with cancer cachexia: Report of the first case and review of the literature. *Medicine (Baltimore)*. 2017 Dec;96(49):e9064. doi: 10.1097/MD.00000000000009064. PMID: 29245316.
3. Patrick A, Soares-de-Almeida L, Heinz K. Malignant myopericytoma: A New Case and Review of the Literature. *Am J Dermatol*. Apr;38(4):307-11. doi: 10.1097/DAD.0000000000000000.
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