

Pleomorphic Leiomyosarcoma of the Breast

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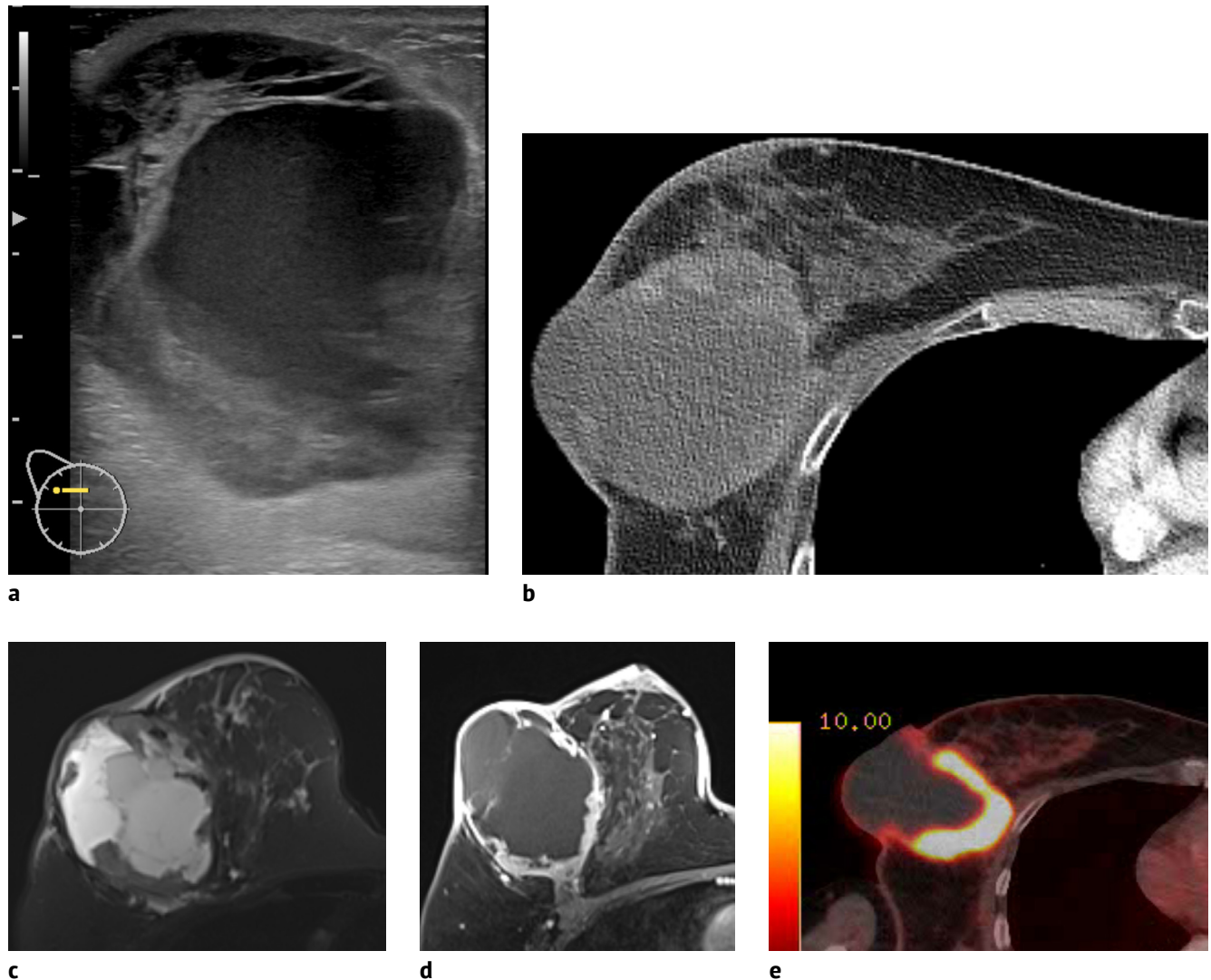


Fig. 1. A 58-year-old woman presented with a palpable mass in her right breast. **a.** The breast US revealed an exophytic complex cystic and solid mass in the right upper outer breast. **b.** Chest CT Scan showed an irregularly shaped cystic mass with internal fluid, septations, and enhancement at the solid portion and septations. **c.** T2 weighted image of breast MRI showed loculated cystic areas with various signal intensities divided by septations. **d.** On the 2minute dynamic contrast -enhanced breast MRI with subtraction showed strong contrast enhancement within septations and at the peripheral solid portion of the mass. **e.** PET-CT indicated high FDG uptake at the solid portion of the mass.

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A 58-year-old woman presented with a palpable mass in her right breast. She had no significant past medical history. Her ultrasonography, chest CT, MRI, PET-CT images were presented as Fig. 1. The patient underwent an ultrasound-guided biopsy, which suggested a malignant spindle cell tumor. Subsequent right total mastectomy was performed. Final pathologic examination confirmed pleomorphic leiomyosarcoma. Histopathological evaluation revealed pleomorphic spindle cells with smooth muscle markers (e.g., desmin, SMA). Notably, there were no axillary lymph node metastases.

Pleomorphic leiomyosarcoma of the breast is an extremely rare malignancy, representing a subtype of primary breast sarcomas. Radiologic findings are known to be nonspecific and can mimic benign lesions like fibroadenomas or phyllodes tumors. In our case, key differential diagnoses should include metaplastic carcinoma, squamous type, which presents with distinct imaging features such as irregular shape, internal cystic components with high T2 signal intensity with peripheral enhancement on MRI. Accurate diagnosis relies on histopathological

evaluation, emphasizing the importance of biopsy in cases with suspicious radiologic findings. Therefore, radiologists should be aware of the possibility of pleomorphic leiomyosarcoma when facing a complex cystic and solid mass.

References

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