diagnostic uncertainty, particularly when brown fat presents in a similar pattern as nodal uptake as in our case. Moreover, hibernomas demonstrate uptake values similar to those described for liposarcomas, and thus biopsy is required to exclude a malignant etiology.

Accurate assessment is crucial because misinterpretation could lead to inappropriate therapeutic approaches like unnecessary invasive staging and diagnostic procedures or follow-up imaging with additional radiation exposure. Although hibernoma would not normally be subject to CT–PET scanning, in the setting of a known malignancy and routine oncologic follow-up, it can lead to a false-positive diagnosis of metastasis. This diagnosis should therefore be taken into consideration in FDG avid masses of the soft tissues during oncologic follow-up.

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DISCLOSURE

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Postradiation Cutaneous Angiosarcoma of the Breast: A Diagnosis to Keep in Mind

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Angiosarcomas are rare, highly malignant endothelial cell tumors, arising most frequently in the skin and soft tissue. They account for less than 1% of all malignant neoplasms of the breast. Because of their rarity and seemingly harmless presentation, physicians and patients may frequently neglect initial signs and symptoms with consequent diagnostic delay. We report an exuberant case of postradiation cutaneous angiosarcoma of the breast, yet unrecognized until referral to Dermatology.

A 73-year-old woman presented with a painful, violaceous, multinodular, and friable plaque occupying the entire left breast and extending to the torso (Fig. 1). This lesion had rapidly enlarged for the past 10 months. It had been misdiagnosed by several doctors either as breast hematoma or recurrent breast carcinoma, despite two breast parenchyma biopsies negative for neoplastic proliferation. The patient had a prior history of invasive ductal carcinoma of the left breast diagnosed 27 years ago, managed conservatively with lumpectomy and radiation therapy (total dose of 15 Gy), and without any evidence of recurrence on follow-up. Skin biopsy findings of a highly proliferative
endothelial cell neoplasm corroborated the clinical diagnosis of postradiation cutaneous angiosarcoma of the breast (Fig. 1). There was no evidence of distant disease. Considering the extent of the local disease, the patient was started on palliative chemotherapy, with a present uneventful follow-up of 13 months.

Angiosarcomas of the breast can be either primary or secondary. The first originate from the parenchyma, as de novo lesions in young women. Secondary angiosarcomas originate in the skin, most frequently after the sixth decade and following breast cancer treatment, either as lymphedema-associated (Stewart-Treves syndrome) or as postradiation angiosarcomas.

Postradiation cutaneous angiosarcoma of the breast is a rare and severe complication of radiotherapy, with a prevalence of 0.05–0.16% in treated patients. It is defined by three conditions: location on the previous field of radiation, latency of years after therapy (2–30 years), and distinctive histological characteristics. The association between the total radiation dose and its incidence has not been established.

The latency after irradiation may be wide, as observed in this patient, and clinical presentation varied. Cutaneous angiosarcoma usually initiates as painless “bruise-like” patches on the skin, later progressing to red or violaceous plaques with ill-defined nodular appearance. These lesions should be distinguished from radiodermatitis, hemangiomas or simple hematomas. Atypical vascular lesions should also be excluded. These may appear as a consequence of radiotherapy, although it is debatable whether they represent a precursor lesion of angiosarcoma. Mammography, fine-needle aspiration, and core biopsies are often negative in early stages of cutaneous angiosarcoma, hence the importance of skin biopsy in the definite diagnosis.

Treatment consists of wide-margin excision whenever possible; otherwise, palliative radiotherapy or chemotherapy may be offered. High recurrence rates and a tendency to metastasize account for a poor prognosis worse than for breast carcinoma. Depending upon the study, median time of survival ranges from 18 to 40 months, and the overall survival rate at 5 years is up to 20%.

In conclusion, the diagnosis of postradiation cutaneous angiosarcoma of the breast may be missed or delayed if physicians are not aware of this potential side effect of radiotherapy. As early recognition is of prognostic significance, clinical suspicion is of utmost importance. Cutaneous biopsies should be performed in any suspicious lesion arising on a previously irradiated breast.

Figure 1. (a and b) Ecchymotic plaque with a multinodular ulcerated surface on the left breast. (c) Vascular proliferation of atypical endothelial cells with interstitial hemorrhage (H&E; ×40). (d) CD31 positive cells, endothelial cell marker (H&E; ×40).