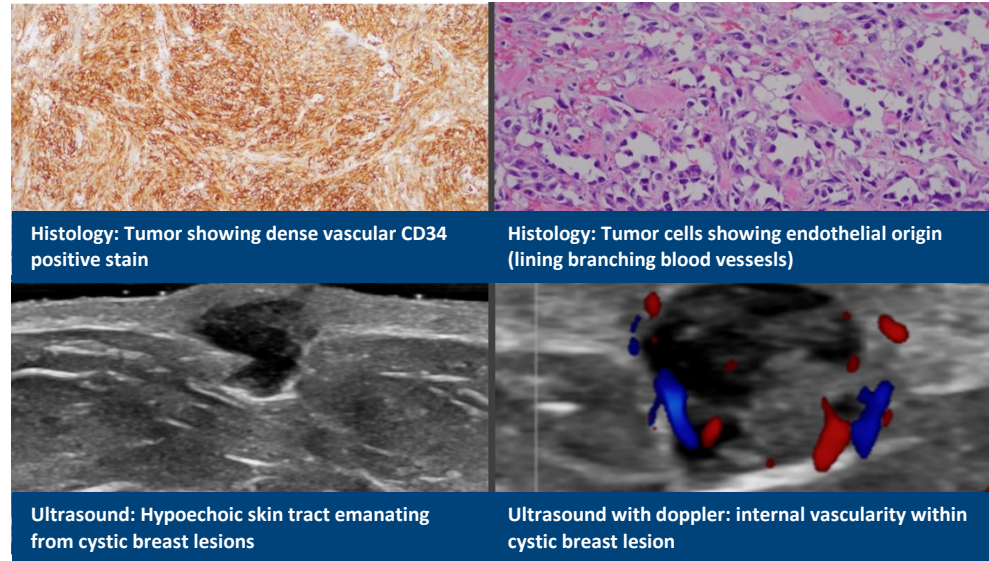


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## INTRODUCTION

- Angiosarcoma is a rare tumor of the breast (0.05% of all primary breast malignancies)
- Angiosarcoma is often secondary to prior radiation therapy for breast carcinoma, in older patients
- Surveillance of breast cancer recurrence is more commonly done by mammogram/ultrasound
- MRI of the breast is the mainstay of diagnostic imaging for radiation angiosarcoma of the breast
- MRI, however, is an uncommon/expensive mode of surveillance
- Ultrasound can be helpful in surveillance
- We describe a case breast cancer patient with prior exposure to radiation with new sonographic findings as a new mode of detection for diagnosis of angiosarcoma of breast.

## HISTOLOGIC/ULTRASOUND IMAGING



## DISCUSSION

- This case highlights early imaging findings of radiation-associated breast angiosarcoma.
- Mammographic findings for angiosarcoma can be nonspecific and MRI is less commonly used
- Mimicking of angiosarcoma as a cystic lesion can confound early diagnosis of disease and delay in definitive treatment in this poorly prognostic disease.
- In literature, sonographic findings only emphasize heterogeneity, hyper/hypo-echogenicity, and hypervascularity for identifying breast angiosarcoma
- We delineate the importance to look for internal vascularity and skin tracking cysts as sonographic features in the diagnosis of radiation-angiosarcoma

## CASE PRESENTATION

- A 48 year-old patient with stage II left breast cancer (ER+/HER2-) and was treated with lumpectomy, chemotherapy with cyclophosphamide/docetaxel, and 36 radiation treatments presenting with a new palpable left breast mass
- All mammograms on yearly surveillance for eleven years after diagnosis of breast cancer were benign
- Ultrasound of the mass revealed an 8 mm hypoechoic lesion with **internal vascularity** and a **hypoechoic tract** towards the skin, deemed an inflamed cyst. Repeat ultrasound 3 months later confirmed a 9 mm **hypoechoic lesion** with a new adjacent **cyst tracking to the skin surface**, also deemed a benign sebaceous cyst.
- 5 months later, two fungating masses were biopsied with fine needle aspiration -- conclusive for malignant cells.
- Left breast mastectomy revealed a highly mitotic tumor with vasoformative growth, and CD34+/CD31+/nuclear-ERG+/CKC- histopathology, consistent with a high-grade radiation-associated breast angiosarcoma.
- Treatment on paclitaxel, doxorubicin and docetaxel was not tolerated. She has recurrence of disease with grape-sized, draining nodules on the contralateral breast. Due to metastasis to lungs, lymph nodes, and liver, the patient sought palliative treatments with radiation and pazopanib. She passed away 1.5 years from time of diagnosis.

## REFERENCES

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