

## BREAST ANGIOSARCOMAS

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An unusual type of tumor is called breast angiosarcoma. These are connective tissue tumors that commence in the breast itself. It can be a sporadic event or related to prior therapy.

Primary breast angiosarcomas are exceedingly rare. There are about 220 cases in the literature and occur mainly in women aged 20-40 years.

Secondary angiosarcomas, that is similar tumors occurring after breast treatment, have as well been reported. They occur after radical mastectomy (removal of the breast) or lumpectomy (removal of the cancer alone) and radiation.

In fact the first reports were described in women undergoing radical mastectomies. The interval time between the mastectomy to the tumor was about ten years although the range was four to twenty-seven years. It also can occur in extremities with swelling or lymphedema. There have been fifty-two reported cases after breast conserving therapy - seven after lumpectomy and radiation but as well can occur after partial surgery only of the breast (a form of lumpectomy).

A recent article by Marchal et al in the International Journal of Radiology, Oncology, Biology and Physics attempted to analyze the frequency and possible cause of these tumors. In eleven centers throughout France 20,000 women had been treated with lumpectomy and radiation. Nine cases of angiosarcoma were discovered. More detailed information was available in 11 centers treating 18,115 patients. The average age at time of diagnosis of breast cancer was 62.5 years and was 69 years at time of diagnosis of angiosarcoma.

The tumors are usually found by noting a palpable lump. For secondary tumors, the time of onset between breast cancer diagnosis and the diagnosis of the angiosarcoma was 74 months with a range of 57 to 108 months. All patients having angiosarcomas had radical mastectomy as treatment. A woman developing angiosarcoma after mastectomy did so within 16 months after the mastectomy.

The French researchers noted that "of 18,115 breast cancers treated conservatively, only 9 breast angiosarcomas have been reported by the 11 French cancer centers participating in this retrospective survey which represents a prevalence of 5 cases of angiosarcomas per 10,000 and a maximum cumulative frequency of 6 cases per 100,000 conservative treatments per year. This is the same prevalence for cases described as primary breast angiosarcomas occurring in healthy breasts."

For purposes of a diagnosis there have been various changes in the breast at the time of angiosarcoma including discoloration, red areas, bluish, purple and black nodules or swelling with or without a lump that can be palpated in the breast.

The authors felt that little help was obtained from mammograms. Thickening of the skin was usually the only sign of angiosarcoma. Needle biopsies or placing a needle and sucking out cells was not usually helpful. It was found that biopsy was the most important method of making the diagnosis.

Researchers concluded that "angiosarcoma developing after breast conserving therapy for carcinoma is a very rare event and the induction of primary angiosarcoma by radiotherapy is controversial. However diagnosis must be prompt as radical mastectomy offers the best chance of cure."

The importance of this review suggests that while radiation may play a role in the development the risks of developing angiosarcoma in patients undergoing lumpectomy and radiation is no greater than in women having no prior history of breast cancer diagnosis or treatment. It remains

an exceedingly rare disease. The critical feature is that the skin thickening should be evaluated and evaluated thoroughly and potentially biopsied for best diagnosis.

For best breast care, women need to perform self-examination on a routine basis, undergo physician examination and have regular mammograms. Any suspicious lesion should be evaluated and biopsied if it cannot be explained by specialized studies. Early diagnosis leads to best results and survival.

Patient involvement in health care always produces the best outcome. Breast cancer is a case in point where self-diagnosis produces the optimal outcome.