

Angiosarcoma of the breast and vascular endothelial growth factor receptor

Massimiliano Gennaro¹, Barbara Valeri², Patrizia Casalini³,
Maria Luisa Carcangiu², Alessandro Gronchi⁴, Alberto Rudy Conti¹,
Roberto Agresti¹, and Marco Greco⁵

¹Breast Unit, ²Pathology Department, ³Molecular Targeting Unit, and ⁴Melanoma Sarcoma Unit, Fondazione IRCCS Istituto Nazionale dei Tumori, Milano; ⁵Breast Unit H. S. Gerardo, Monza, Italy

ABSTRACT

Background. Breast angiosarcoma is rare and often associated with previous breast cancer treatment. The present study aimed to define long-term outcomes in relation to common prognostic factors. The expression of vascular endothelial growth factor receptor was also evaluated, as it may be a potential target for anti-angiogenic therapy.

Patients and methods. We retrospectively assessed outcomes in relation to age, association with previous breast-conserving treatment for breast cancer, tumor size, and grade in 19 patients without metastases at diagnosis. Vascular endothelial growth factor receptor was also assessed.

Results. Median follow-up was 33 months (range, 1-121). There were 6 local recurrences and 6 deaths for disease progression. Five-year disease-free survival and overall survival were 53% (95% CI, 20-86%) and 49% (95% CI, 14-84%), respectively. No factor significantly affected survival. Vascular endothelial growth factor receptor was positive in 50% of cases and was more frequent in better differentiated cancer.

Conclusions. The association of vascular endothelial growth factor receptor with G1/G2 tumors requires further investigations. Our findings suggest that anti-angiogenic treatment in vascular endothelial growth factor receptor-positive cases be considered as a novel therapeutic modality in this rare and aggressive disease. Although information is still incomplete, we propose a multimodal therapeutic approach including surgery, radiotherapy and chemotherapy. Free full text available at www.tumorionline.it

Key words: breast angiosarcoma, targeted therapy, VEGFR expression.

Conflict of interest statement: The authors declare that they have no financial or personal relationships with other people or organizations that could inappropriately influence (bias) their work.

Correspondence to: Massimiliano Gennaro, Breast Unit, Fondazione IRCCS Istituto Nazionale dei Tumori, Via Venezian 1, 20133 Milano, Italy. Tel +39-02-2390-2659; fax +39-02-2390-2172; e-mail massimiliano.gennaro@istitutotumori.mi.it

Received May 3, 2010;
accepted May 26, 2010.