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Angiotensin 1–7 and risk for breast cancer recurrence

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We read with great interest the article by Rodgers et al. [3]. In their phase I/II dose escalation study, they tried to determine the safety and efficacy of Angiotensin 1–7 in patients with breast cancer. Their data showed that Angiotensin 1–7 might be beneficial in attenuating multilineage cytopenias following chemotherapy at a dose of 100 µg/kg per day. Although Angiotensin 1–7 is a hematopoietic agent that stimulates the proliferation of multipotential and differentiated progenitor cells in cultured bone marrow and human cord blood, Angiotensin-II, analog of Angiotensin 1–7 has a wide spectrum of target tissues, including breast epithelial cells. It acts as a growth factor both in normal and cancer epithelial cells and promotes angiogenesis [2, 4].

The presence of undetected micrometastases, isseminated before or around the time women receive local treatment for ‘early’ breast cancer, is assumed to be the reason why many subsequently develop overt distant metastases ultimately causing death. Adjuvant chemotherapy can reduce recurrence rates and improve survival for some women [1].

Taken all together, since Angiotensin has a stimulatory effect on the growth of breast cancer cells, giving Angiotensin 1–7 for attenuation of multilineage

cytopenias following chemotherapy might additionally increase angiogenesis around the micrometastatic cells and excite them to proliferate as well. Therefore, use of Angiotensin 1–7 as a growth factor for hematopoietic system might be cautioned. We believe that further studies are needed to confirm its effects on long-term survival of breast cancer patients.

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