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Human Resistin is a Novel Prognostic Factor of Breast Cancer by Promoting Tumor Growth through Angiogenesis

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Background : Both obesity and inflammation are important in breast cancer development and progression. However, the role of resistin, a novel adipokine, which is related to both obesity and inflammation, has not been demonstrated in cancer biology. We assessed the expression of resistin, its prognostic significance and its effects on tumor growth in breast cancer. **Methods :** In a cross-sectional case control study, we compared serum resistin levels of breast cancer patients (n=30) and healthy controls (n=35) and immunostained the cancer tissue to identify the source of resistin expression. Then, from a prospective cohort study, the prognostic significance of serum resistin level was assessed in patients with lymph node positive breast cancer (n=87). Using xenograft tumor model we demonstrated the effects of resistin on breast cancer progression. **Results :** In the case control study, serum resistin was increased in patients with breast cancer, especially stage II-IV advanced breast cancer. Resistin was expressed by infiltrative monocytes in cancer tissue, which was mediated by IL-6 secreted by cancer cells. In the cohort study, there was significant difference in baseline serum resistin level between those who experienced distant recurrence and those who didn't (24.5±14.0 ng/mL vs 17.1±8.8 ng/mL, p=0.007). Also, baseline serum resistin level was a strong prognostic factor for the development of distant recurrence in Cox proportional-hazards models. Xenograft tumor model showed that resistin promoted breast cancer growth by stimulating angiogenesis. **Conclusions :** Our results show that resistin is a novel prognostic factor of breast cancer and that resistin directly promotes tumor growth through stimulating angiogenesis.

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Phase II study of capecitabine in anthracycline/taxane pretreated metastatic breast carcinoma patients

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Background : Capecitabine is an oral, tumor-targeted fluoropyrimidine carbamate with highly activity in metastatic breast carcinoma and in anthracycline/paclitaxel-pretreated metastatic breast carcinoma. **Patients and Methods :** From April 2001 through May 2006, 55 patients with anthracycline/taxane pretreated metastatic breast cancer were enrolled in the study. All patients had failed treatment or had disease that was refractory to two or three previous chemotherapy regimens. They received 3-weekly cycles of oral capecitabine 1250mg/m2/day twice daily, days 1-14 followed by one week rest. **Result :** Overall, 55 patients were enrolled. Median age was 56 years(range 25~81). A total of 308 cycles were administered (median 4, range 1~12). Overall response rate of 28% was obtained (CR 2, PR 13) and median duration of response was 5.2 months, and the median time to disease progression was 3.6 months. The most common treatment-related adverse events were hand-foot syndrome (64%), diarrhea (35%), and stomatitis (42%). However the majority were mild to moderate in intensity. The treatment adverse events of ≥ Grade 3 reported only the three patients were hand-foot syndrome and oral mucositis. There were no treatment-related death and neutropenic fever. **Conclusions :** Capecitabine is feasible and effective in heavily pretreated metastatic breast cancer patients who had previous exposure to anthracycline and taxane.