

A new Vaccine offers hope for breast cancer

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A breast cancer vaccine developed at Washington University School of Medicine in St Louis has shown positive results in patients with metastatic breast cancer in Phase I clinical trial.

The vaccine works to prime a type of white blood cell in the body's adaptive immune system, and seek out and destroy the cells with mammaglobin-A, a protein found almost exclusively in breast tissue. In the smaller proportion of breast cancer patients whose tumors do not produce mammaglobin-A, this vaccine would not be effective.

In the new study, 14 patients with metastatic breast cancer that expressed mammaglobin-A were vaccinated. Of the 14 patients who received the vaccine, about half showed no progression of their cancer one year after receiving the vaccine. In a similar control group of 12 patients who were not vaccinated, about one-fifth showed no cancer progression at the one-year follow-up.

Based on results of this study, the researchers are planning a larger clinical trial to test the vaccine in newly diagnosed breast cancer patients, who, in theory, should have more robust immune systems than patients who already have undergone extensive cancer therapy.

"If we give the vaccine to patients at the beginning of treatment, the immune systems should not be compromised like in patients with metastatic disease. We also will be able to do more informative immune monitoring than we did in this preliminary trial. Now that we have good evidence that the vaccine is safe, we think testing it in newly diagnosed patients will give us a better idea of the effectiveness of the therapy," said breast cancer surgeon and senior author of the study Dr William E Gillanders.

