



AT THE FOREFRONT

Each year, about 20,000 women and 2,000 men are diagnosed with breast cancer. Breast cancer also happens to be the second leading cause of cancer-related deaths. Thanks to a recent milestone made by Army Medicine's Cancer Vaccine Development Program (CVDP), those statistics could be obsolete in the near future.

A PROMISING START

In 2006, Army Medicine released the results of a six-year breast cancer vaccination study at the San Antonio Breast Cancer Symposium. Col. George Peoples, M.D., founder, director and principal investigator of the CVDP, revealed that although in the early stages of testing, the results of the vaccination study were promising.

The study targeted HER2/neu, a protein that promotes cell growth. Large amounts of this protein accelerate tumor growth and cause poorer diagnosis for women with breast cancer. In response, researchers created a vaccine that boosted the body's immune system so it could recognize and battle HER2/neu before it stimulated growth. The outcome of the study suggested a 50 percent reduction in disease recurrence for vaccinated women.

RESEARCH THAT CONTINUES TO MAKE A DIFFERENCE

On January, 20, 2012, the CVDP team that helped develop the vaccine began phase III clinical trials. The vaccination drug is the product of nearly 20 years of research conducted by Peoples and many others. Its development has paralleled the creation of another breast cancer medication that cut the rate of breast cancer recurrence in half. While those results are strong, Peoples and his team are still working to find a truly preventive vaccine.

ADDITIONAL MEDICAL MILESTONES

Over the years, Peoples and Army researchers at CVDP studied several peptides to learn how to identify and eliminate cancerous cells in different stages of development. Here are a couple milestones from their extensive research:

- **E75 Phase II Clinical Trials Completed**
September 10, 2012 was a significant day for the CVDP. This date marked the completion of phase II of an eleven-year clinical trial on a peptide called E75. It was discovered in the mid-1990s, and Peoples worked with the peptide through consecutive stages

ARMY MEDICINE IS LEADING THE BATTLE AGAINST BREAST CANCER.

of development—pre-clinical, clinical and human trials. Phase II of the trial examined E75's ability to prevent the recurrence of breast cancer in a control group of cancer survivors, and compared the results to those of a vaccinated group. Trial data revealed the rate of breast cancer recurrence in women who received E75 was half the rate observed in the control group.

- **AE37 Study Presented at the American College of Surgeons Clinical Congress**

On October 2, 2012, the CVDP presented information about another peptide, AE37. Research showed that after completing standard treatment, breast cancer survivors who received injections of AE37 were more likely to survive in remission without recurrence than the control group in the study. While AE37 did not prevent recurrence in all patients, it provoked an immunologic response in patients across the board, including survivors at high risk of recurrence, those with the hard-to-treat "triple negative" form of breast cancer and those with lower levels of HER2 expression.

GROUNDBREAKING MEDICAL EXPLORATION

The U.S. Army health care team's innovation in breast cancer treatment is one example of how our clinical professionals are at the forefront of medical innovation every day. As part of our team, you can explore areas that interest you the most, while providing crucial support and care for the nation's Soldiers and their families. We're leading the way in health care—and are looking for physicians who are committed to strengthening the health of our country.

TO REQUEST MORE INFORMATION ABOUT A CAREER ON OUR INNOVATIVE HEALTH CARE TEAM, [CLICK HERE. >>](#)

