

Army doc leaves cancer research legacy behind

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JOINT BASE SAN ANTONIO-FORT SAM HOUSTON, Texas -- An Army physician who created a cutting-edge vaccine for breast cancer survivors has retired after 30 years of service.

Col. (Dr.) George Peoples, who served as chief of surgical oncology at Brooke Army Medical Center for eight years, dedicated a decade to developing the vaccine, which is aimed at slashing breast cancer recurrence rates.

"I'm very proud to have served my country for three decades while caring for the best patients in the world—our military beneficiaries," Peoples said.

Peoples' military and medical career started 30 years ago at the U.S. Military Academy at West Point. On a highly selective medical track, he attended Johns Hopkins School of Medicine after graduation, followed by a civilian residency at Harvard's Brigham and Women's Hospital and fellowship at M.D. Anderson Cancer Center.

As a general surgical oncologist, his practice has included a variety of cancer types, but breast cancer research sparked his interest early on. He was especially interested in immunotherapy, a treatment that uses the body's own immune system to help fight cancer. "I was fascinated by the idea that you could build up the immune system to recognize cancer and then destroy it before it becomes established, not waiting until the cancer is embedded," he said.

Peoples' interest in breast cancer research was cemented even further at then-Walter Reed Army Medical Center, where he served for eight years, when he saw the prevalence among his female patients -- active duty, retirees, and family members. "It was the No. 1 cancer I was seeing in my practice and military-wide," he recalled.

His research led him to a vaccine for women who had completed treatment for invasive breast cancer, but were at a high risk of recurrence. According to the American Cancer Society, 20 percent of these women suffer a recurrence within five years post treatment, and 30 percent at 10 years.

The vaccine, he explained, "revs" up the immune system to seek out and attack cancer cells that express HER2/neu, a protein common to tumors in breast, ovarian, pancreatic, colon, bladder and prostate cancers. The vaccine, now dubbed NeuVax, is a simple blend of a peptide from the HER2 protein plus an immune system stimulant, he said.

"The idea is to train the immune system to recognize the protein, or piece of protein, that's highly expressed on cancer cells, but not on normal cells," he said. "That way the immune

system can differentiate what's abnormal and normal. If the immune system can recognize it, it marks it for death, basically."

Peoples launched a clinical breast cancer trial in 2001, accumulating 200 patients worth of data over the next five years. The outcome was promising, he said. The recurrence rate among women in the control group was 20 percent, and 10 percent among women who received the vaccine. "We cut recurrence in half," he said. "It was a tremendous result."

In 2006, Peoples presented his data at the Breast Cancer Symposium in San Antonio, the world's largest breast cancer meeting, where his team made a "big splash." "We were presenting a vaccine that's very simplistic in design, easily exported to clinics around the world, safe with minimal side effects, and appears to cut recurrence by half," he said. "These results put our Army program on the map for breast cancer research."

Now assigned to BAMC, Peoples continued to follow the women for another five years, officially ending the cancer trial in 2012. The trial's success spurred the Army to license out NeuVax for commercial development. After a 10-year journey, the cancer vaccine is currently in phase 3 trial for FDA approval as the first preventive breast cancer vaccine.

"There's only one breast cancer vaccine in Phase 3 trials," Peoples noted, "and it's NeuVax."

If proven successful, NeuVax could impact other types of cancer that express HER2/neu, such as ovarian and prostate cancer. The long term goal is primary prevention, Peoples said, "but we first have to prove we can help prevent recurrence." During this same time period, Peoples' team has discovered and/or tested multiple cancer vaccines resulting in a dozen patents and seven investigational new drug applications with the FDA.

Concurrent with his research activity, Peoples maintained a robust clinical practice caring for over 20,000 military beneficiaries and performing over 3,000 complex oncologic procedures during his military tenure. He deployed seven times and led the first surgical teams into Afghanistan in 2001 and into Iraq in 2003. In addition, he cared for casualties at the Pentagon on 9/11. For his service, he was awarded the Bronze Star twice, ARCOM with valor device, the Presidential Unit Citation, and the Legion of Merit among other awards.

Although Peoples' military journey has come to an end, his research will continue through the Cancer Vaccine Development Program, a military-civilian partnership based at Uniformed Services University of the Health Sciences in Bethesda, MD. Peoples will continue to serve as the program's director and professor of surgery.

"I've greatly enjoyed my military service, but my next 30 years will be solely devoted to this research and the discovery and development of these vaccines," he said. "My goal is to see effective and widely accessible cancer vaccines within my lifetime."

At BAMC, Peoples leaves behind a Cancer Care Program that's been accredited by the Commission on Cancer three consecutive times, and has been named among the top 5 percent of accredited programs in the nation. The Breast Cancer Care Clinic and Conference he founded at BAMC has provided multidisciplinary care for about 2,000 newly diagnosed breast cancer patients over the past eight years.

Peoples said he has no doubt this tradition of excellence will continue long after he's gone. "I've trained at some of the top hospitals in the country, and I guarantee you the level of care at BAMC is at the same high level as some of the best medical facilities in the world," he said. "I am immensely proud of my time in the service and thankful for the opportunities that have been afforded me. In return, I have sought to make meaningful contributions to military medicine specifically and cancer care in general."