Immune therapies finally working against cancer

May 31 2009, By MARILYNN MARCHIONE , AP Medical Writer

In this Wednesday May 27, 2009 photo, Dr. Patrick Hwu, left, talks with his cancer patient Hilde Stapleton during an examination at The University of Texas MD Anderson Cancer Center in Houston. Stapleton has been receiving an experimental treatment for melanoma. (AP Photo/David J. Phillip)

(AP) -- First there was surgery, then chemotherapy and radiation. Now, doctors have overcome 30 years of false starts and found success with a fourth way to fight cancer: using the body's natural defender, the immune system.

The approach is called a cancer vaccine, although it treats the disease rather than prevents it.

At a cancer conference Sunday, researchers said one such vaccine kept a

common form of lymphoma from worsening for more than a year. That's huge in this field, where progress is glacial and success with a new treatment is often measured in weeks or even days.

Experimental vaccines against three other cancers - prostate, the deadly skin disease melanoma and an often fatal childhood tumor called neuroblastoma - also gave positive results in late-stage testing in recent weeks, after decades of struggles in the lab.

"I don't know what we did differently to make the breakthrough," said Dr. Len Lichtenfeld of the American Cancer Society.

Instead of a single "A-Ha!" moment, there have been many "ah, so" discoveries about the immune system that now seem to be paying off, said Dr. John Niederhuber, director of the National Cancer Institute.

It's way too soon to declare victory. No one knows how long the benefits will last, whether people will need "boosters" to keep their disease in check, or whether vaccines will ever be a cure. Many vaccines must be custom-made for each patient. How practical will that be, and what will it cost?

Those are all good questions - but there are no answers yet, said Dr. Richard Schilsky, a University of Chicago cancer specialist who is president of the American Society of Clinical Oncology.

Several vaccine studies were reported over the weekend at the oncology group's annual meeting in Florida.

A big problem has been getting the immune system to "see" cancer as a threat, said Dr. Patrick Hwu, melanoma chief at the University of Texas M.D. Anderson Cancer Center. Viruses like the flu or polio are easily spotted by the immune system because they look different from human

cells.

"But cancer comes from our own cells. And so it's more like guerrilla warfare - the immune system has trouble distinguishing the normal cells from the cancer cells," he said.

To help it do that, many cancer vaccines take a substance from a cancer cell's surface and attach it to something the immune system already recognizes as foreign - in the lymphoma vaccine's case, a shellfish protein.

"It's a mimic to what you're trying to kill, a training device to train the immune system to kill something," Hwu explained.

To make the attack as strong as possible, doctors add a substance to put the immune system on high alert.

Dr. Stephen Schuster of the University of Pennsylvania School of Medicine led a study testing BiovaxID, an experimental vaccine against follicular lymphoma developed by the National Cancer Institute. Rights to it are now held by Biovest International Inc. of Worcester, Mass., and some of his co-researchers have financial ties to the company.

To be in the study, patients had to have achieved a remission for at least six months with standard chemo. This often occurs with this type of lymphoma, but the disease usually comes back.

Researchers gave 41 patients the shellfish protein and an immune booster; 76 other patients were given those plus the vaccine. After nearly five years of followup, the average time until the cancer worsened was 44 months in the vaccine group and 30 months in the others.

Big gains also were seen with a neuroblastoma vaccine developed by the

cancer institute. In a study of 226 patients, 86 percent of vaccine recipients were still alive after two years versus 75 percent of others not given the vaccine. Results were released by the oncology society two weeks ago.

The benefits from a melanoma vaccine developed by the cancer institute were more modest. It extended the time until patients relapsed - three months versus one and a half for those not given the vaccine.

Hilde Stapleton, 53, of suburban Houston, is one of the lucky ones it helped. Still, she found what many other vaccine recipients have learned: The vaccine had few side effects, but the immune system boosters were "like the worst case of flu you've ever had," she said.

The prostate cancer vaccine, Provenge, is farthest along. Its maker, Seattle-based Dendreon Corp., is seeking federal Food and Drug Administration approval for it. A study last month found that it extended survival by four months in men with very advanced disease.

Doctors unconnected with these experiments are cautiously optimistic.

"We've raised so many false hopes in the past," said Lichtenfeld of the Cancer Society. "What's different this time is we have the science reports to back up improvements."

---On the Net:

Cancer meeting: http://www.asco.org

National Cancer Institute: http://www.cancer.gov