New therapies to treat breast, lymph cancer: studies

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New therapies developed following groundbreaking clinical trials appear to effectively target breast cancer and non-Hodgkin's lymphoma, according to research unveiled Sunday at a major cancer conference.

The first therapy targeting the capacity of cancer cells to repair themselves shows promise in treating breast cancer, according to results of two small clinical trials.

The new agent, especially adept at targeting cancers that are most difficult to cure, neutralizes an enzyme called PARP (poly-ADP-ribose-polymerase) and prevents it from playing its usual role in repairing the DNA of damaged cells.

Like healthy cells, cancerous cells employ PARP to regenerate themselves after they have been damaged by chemo-therapy treatments.

The studies examined whether breast cancers are more susceptible to chemotherapy when the PARP enzymes have been neutralized.

The first clinical trial was conducted with 116 women suffering from so-called triple negative breast cancer.

These involve fast-spreading tumors that account for 15 percent of the 170,000 annual cases worldwide of breast cancer.

Some of the cases were treated with chemotherapy and a PARP inhibitor

called BSI-201 made by the firm BiPar Sciences, a US affiliate of the French-owned laboratory Sanofi-Aventis.

The rest of the group was treated only with chemotherapy.

After six months, about 62 percent of the patients treated with BSI-201 combined with chemotherapy showed a comparative clinical improvement of 21 percent over the control group, said Joyce O'Shaughnessy, of the Baylor-Charles Sammons cancer center in Dallas, Texas.

She presented the results of the study at a conference of the American Society of Clinical Oncology this weekend in Orlando, Florida.

The women treated with BSI-201 survived 9.2 months on average, including 6.9 months in which the cancer did not spread, compared to an average survival of 6.9 months and 3.3 months in which the cancer was in check for those who were treated solely with chemotherapy.

The second clinical study involved 54 women suffering from advanced breast cancer linked to the gene mutation BRCA1 or BRCA2. They were treated with the PARP blocker Olaparib made by the Anglo-Swedish pharmaceutical AstraZenica. There was no control group.

The test showed that 40 percent of the patients who took the drug experienced a reduction in their tumors, said Andrew Tutt, a cancer specialist at Kings College in London.

In another study presented here researchers examined a vaccine on patients over eight years that targeted follicular non-Hodgkin's lymphoma, a particularly aggressive form of lymphatic cancer.

The study found that patients who received the BiovaxID vaccine

experienced on average disease-free survival of approximately 44 months, compared to about 30 months for patients who received a control vaccine -- an increase of 47 percent.

The BiovaxID vaccine is patient-specific, in that each dose must be individually manufactured from tissue obtained from a patient's own cancerous tumor.

"With this vaccine, we've now moved into an era where we can safely use a patient's immune system to effectively fight follicular lymphoma and enhance the response to conventional chemotherapy" said lead study author Stephen Schuster.

"Because this vaccine uniquely recruits the patient's immune system to seek and destroy only tumor B-cells, this approach may be applicable to the treatment of other B-cell lymphomas," Schuster added.

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