Experimental vaccine sets sights on lung cancer

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An experimental immunotherapy may someday become the newest weapon against lung cancer. Physician-scientists from Weill Cornell Medical College and Columbia University Medical Center are enrolling patients with non-small cell lung cancer (NSCLC) at NewYork-Presbyterian Hospital as part of an ongoing Phase III trial.

The experimental immunotherapy is intended to prevent cancer recurrence in patients who have already undergone surgical removal of the tumor. The therapy works by exposing the body to a protein called melanoma-associated antigen-A3 (MAGE-A3), normally produced by lung cancer cells.

"By exposing the body to the antigen, the immune system is primed to attack the cancer," says Dr. Nasser Altorki, principal investigator for the study at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, where he is a thoracic surgeon. He is also director of the Division of Thoracic Surgery and professor of cardiothoracic surgery at Weill Cornell Medical College.

The MAGE-A3 protein is classified as an Antigen-Specific Cancer Immunotherapeutic (ASCI). ASCIs are meant to trigger a specific response, telling antibodies and T-cells of the immune system to recognize and attack the cancer cells in a highly specific manner.

"We are hopeful that if this investigational therapy continues to show encouraging results in clinical trials that it may become a new weapon

against non-small cell lung cancer," explains Dr. Joshua R. Sonett, the study's principal investigator at NewYork-Presbyterian Hospital/Columbia University Medical Center, where he is also chief of thoracic surgery and surgical director of the lung transplant program. He is also professor of surgery at Columbia University College of Physicians and Surgeons. "Because the vaccine augments the patient's own immune system, it may be less toxic to normal cells and can be used even when standard chemotherapy is needed. It is a win-win situation."

The most commonly reported side effects are mild local pain, redness, swelling near the site of injection, fever, fatigue and muscle pain.

Patients enrolled in the study are randomly assigned to receive either the vaccine or a placebo. The vaccine is administered through an injection in the arm every three weeks for five injections, then every three months for eight injections.

Provided by New York- Presbyterian Hospital