Surgical Solutions

Colon Cancer Vaccine: Clinical Trial Enrollment Continues

Clinician-researchers at Jefferson are testing a vaccine that may support better outcomes for patients with colon cancer.

For people with Stage 1, 2 or 3 colon cancer, surgery is the standard of care. For most, it turns out to be a cure. But for a minority of patients who undergo surgery for colon cancer, disease later emerges in the liver, lung or another part of the body. When that occurs, the prognosis is poor.

"Once you have metastatic disease in colon cancer, a clock is ticking," explains Scott Waldman, MD, PhD, Associate Dean, Clinical and Translational Research and Samuel M.V. Hamilton Professor and Chair, Department of Pharmacology and Experimental Therapeutics. "With this vaccine, which is administered after surgery, we're trying to get ahead of that. The idea is to boost the patient's own immune system to attack microscopic nests of cells before they become a real threat."

Dr. Waldman notes that this Phase I vaccine trial represents the culmination of 18 years of work at Jefferson – and is a powerful example of the institution's capabilities in discovery as well as translating research into clinical practice through close collaboration with Jefferson surgeons.

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It was in 1996 that Jefferson researchers first identified a protein expressed by colon cancer that acts as an identification tag, also known as a marker. Much like flu vaccines train the immune system to fight cells infected with flu virus, this experimental cancer vaccine is intended to teach the immune system to recognize and destroy cancer cells expressing this marker when they begin to grow in new locations throughout the body.

The final test – whether or not the cancer returns – won't be known for a number of years and will require additional clinical trials.

"If the vaccine works as we expect, a single shot could protect patients against the cancer cells that remain in their system after surgery while also offering lifelong protection from a recurrence," Dr. Waldman says. He adds that the same approach could also apply to patients with some forms of esophageal, gastric and pancreatic cancers. (A similar Phase II immunotherapy trial for pancreatic cancer is currently accruing patients at Jefferson.)

To be eligible for the current clinical trial, patients must have Stage 1 or 2 colon cancer. They must have undergone surgery (at any hospital) to remove the primary tumor but also offering lifelong protection from a recurrence.

Since the trial's initiation in November 2013, five patients have received the vaccine, and Dr. Waldman reports that no one has had any adverse effects. Additional patients are in various stages of enrollment, but more patients are still needed for this ongoing trial.