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Nivolumab shows promise in first-ever trial for patients with refractory, metastatic anal cancer

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In the first-ever clinical trial for metastatic patients previously treated for the disease, research led by The University of Texas MD Anderson Cancer Center found that the immune checkpoint blockade nivolumab shows promise for the majority of patients with squamous cell carcinoma of the anal canal (SCCA).

The study also is the first to investigate the use of immunotherapy in this patient population. The prospective Phase II findings will be presented at the American Society of Clinical Oncology's annual meeting by Cathy Eng, M.D., professor of Gastrointestinal Medical Oncology at MD Anderson and the study's national principal investigator.

According to the American Cancer Society, more than 8,000 people will be diagnosed with anal cancer in the United States in 2016 and more than 1,000 people will die from the disease. About 20 percent of patients present with metastatic SCCA, and an additional 20 percent who had early-stage disease will later develop metastatic anal cancer, explained Eng.

"Although a rare malignancy, the incidence is on the rise and has a strong association with the HPV virus," said Eng, the study's senior author and co-leader of MD Anderson's HPV-related Cancer Moon Shot. "There are no standardized treatment options for metastatic anal cancer patients, so there's truly an unmet need in those whose disease has

not responded to initial therapy."

Nivolumab unleashes an immune system attack on cancer by blocking activation of a protein called PD-1 on T cells, white blood cells that find and attack cells, viruses or bacteria that have specific targets. PD-1 acts as a brake, or checkpoint, to shut down activated T cells. PD-1 is turned on by a ligand called PD-L1, which often is found on cancer cells and other types of cells.

Conducted through the National Cancer Institute's (NCI) Experimental Therapeutic Clinical Trial Network and Cancer Therapy Evaluation Program, 39 patients enrolled in the trial, NCI9673, with 37 patients receiving treatment. MD Anderson enrolled 18 patients. All were previously treated; however, prior immunotherapy treatment was not allowed. PD-L1 expression was not required for participation. The study's primary endpoint was response rate, with overall and progression-free survival rates (OS and PFS, respectively) and toxicity as secondary endpoints.

The study closed within five months of opening because of the rapid accrual rate - underscoring the unmet need in this patient population.

Also of note, this is the first completed anti-PD1 study to include HIV-positive patients as well as patients with Hepatitis B or C. Two HIV-positive patients were enrolled in the trial.

"Immunosuppression is a known risk factor for this disease. Since HIV predisposes patients to compromised immune systems, it is a well-defined risk factor for anal cancer," said Van Morris, M.D., assistant professor of Gastrointestinal Medical Oncology at MD Anderson. "It was important to include a patient population that was representative of this disease."

All patients received nivolumab every two weeks. Of the 37 patients evaluable for response based on intent to treat, two patients (5 percent) had a complete response, seven (19 percent) had a partial response, and 17 (46 percent) had stable disease - a control rate of 70 percent. The median PFS was 3.9 months. Six patients remain on study. Common adverse events include: fatigue, anemia and rash; there was one incident of pneumonitis.

"Our findings represent an exciting step forward for patients with no standard of care. We now plan to expand the study further looking at combined immunotherapy agents," said Eng.

The researchers will also report on additional biomarkers samples later in June at the ESMO World Congress on Gastrointestinal Cancers. Preliminary correlative research was presented by MD Anderson researchers in April at AACR.

Provided by University of Texas M. D. Anderson Cancer Center