# Viral Oncoprotien Antibodies May Help Detect Merkel Cell Carcinoma Recurrence

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**By John Schieszer**

Scientists have found a way to detect earlier if Merkel cell carcinoma (MCC) is recurring in patients. They have published a paper in the journal *Cancer* demonstrating how an immune system marker may be able to outperform and supplement imaging studies for recurrence of MCC.



The majority of MCC cases are caused by the Merkel cell polyomavirus (MCPyV) and antibodies to MCPyV oncoprotein have been correlated with MCC tumor burden. The authors prospectively analyzed the clinical utility of MCPyV-oncoprotein antibody titers for MCC surveillance and prognostication. The study included 219 patients whose initial MCC had been effectively treated with surgery and/or radiation. They compared how well the test detected MCC compared with radiologic imaging and found that over a 5-year period, the test was significantly better.

“The findings highlight how monitoring the robustness of the immune system provides key insights into cancer treatment, and they are emblematic of a broader shift in how physicians can track disease,” said senior author Paul Nghiem, MD, who is a member of Fred Hutchinson Cancer Research Center and the head of Dermatology at the University of Washington in Seattle. “It underscores a key tenet of immune therapy that your immune system is naturally attuned to fighting cancer and the challenge is how best to harness that.”

Dr. Nghiem and his team report that antibodies to MCPyV oncoproteins are rare among healthy individuals (1%). However, 52% (114 of 219 patients) were seropositive in this current study. The study demonstrated that seropositivity at diagnosis independently predicted decreased recurrence risk (hazard ratio, 0.58) in multivariate analyses, after adjusting for age, sex, disease stage, and immunosuppression.

The researchers found that seropositive patients who did not have disease recurrence had rapidly falling titers that became negative by a median of 8.4 months. They also looked at the 71 seropositive patients, who underwent serial evaluation (282 time points), and found that increasing oncoprotein titer had a positive predictive value of 66% for clinically evident recurrence. A decreasing titer was found to have a negative predictive value of 97%.

The researchers noted that this approach can assist in the clinical management of patients with newly diagnosed MCC. It may be possible to use this test to stratify patients into a higher risk seronegative cohort, allowing radiologic imaging to play a more prominent role. Other patients may be classified into a lower risk seropositive cohort and monitored by oncoprotein antibody titer. The researchers write that earlier detection and treatment of metastatic disease may be associated with better outcomes because patients could start immunotherapy at a time of lower disease burden.

Dr. Nghiem said all of his MCC patients now get the test at the time of diagnosis. Clinicians can get the test for their patients by sending blood samples to a lab at the University of Washington (UW). The new test costs about $200; however, the UW lab does not expect to profit from it and currently is not fully covering its costs.

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