

Novel test enables earlier detection of Merkel cell carcinoma, scientists say

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Scientists have found a way to detect earlier if a deadly cancer, Merkel cell carcinoma (MCC), is recurring in patients, according to a paper to be published 11 a.m. Eastern time, Dec. 7, in the journal *Cancer*.

The test works by measuring the presence of a novel marker - an antibody to a cancer-driving protein from the virus that causes MCC. It enables clinicians to identify which of the [patients](#) who successfully undergo treatment for MCC are most at risk of recurrence and makes it easier, more effective and less costly to see when the cancer is just starting to return.

The paper's senior author is Dr. Paul Nghiem, a member of Fred Hutchinson Cancer Research Center, the head of the Division of Dermatology at the University of Washington medical school and a clinician at the Seattle Cancer Care Alliance. Its 18 co-authors are from Fred Hutch, UW medical school and SCCA.

The research builds on a key discovery revealed earlier this year in another study by Nghiem and colleagues —that the immune system can be mobilized to effectively attack MCC, a rare cancer that kills one of every three who develop it.

The reason the new [blood test](#) matters is that detecting MCC early can be the difference between life and death. The cancer has an extremely high recurrence rate: It is several times more likely to recur than melanoma and hundreds of times more likely than [basal cell carcinoma](#); even

patients who have the earliest, lowest-risk stage of this cancer have a 20 percent risk of it coming back. "Catching and treating the recurrence before it has a chance to grow large - the difference between a cancer the size of a grape and one the size of a grapefruit - enhances the chances that [immune therapy](#) will work," said Nghiem.

The latest study involved 219 patients whose initial MCC had been effectively treated with surgery and/or radiation. The researchers examined how well the test detected MCC compared with radiologic imaging, which is the prevailing practice. The findings show that over a five-year period, the test was better at picking up small traces of the cancer when it first returns. In many cases, the blood test suggested the cancer was recurring well before tumors were visible by imaging.

Compared with traditional imaging, the test is also much less expensive and spares patients exposure to the radiation and contrast dye associated with imaging.

Nghiem says that 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 clinical lab at the University of Washington. Physicians at Mayo Clinic, Stanford and UC San Francisco as well as in individual practices around the country are already frequently using the test. This study documents the strengths and limitations of the blood test and will likely lead to it being offered to MCC patients more broadly.

The new test costs about \$200, and the UW lab does not expect to profit from it. (At present they are not fully covering their costs.)

The researchers say that the test is not practical for the initial diagnosis of MCC because the disease is so uncommon; instead, its main use is to detect recurrences earlier.

The test has different implications for MCC patients who do not produce these antibodies - nearly half of those in the study. It doesn't track Merkel cell carcinoma recurrence in this group, because such patients will not produce these antibodies even when the cancer returns. Still, getting the test done once is useful for all patients, including those found not to produce the antibodies. Because those who test negative are 42 percent more likely to have a recurrence, doctors should order more frequent imaging for them. When the recurring MCC is caught early, these patients may particularly benefit from immune therapy.

The importance of this [test](#) goes beyond the improvement in treatment for patients with MCC. "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 Nghiem. "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."

Provided by Fred Hutchinson Cancer Research Center

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