

Merkel cell polyomavirus associated with Merkel cell carcinoma

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The Merkel cell polyomavirus (MCPyV) is the only human polyomavirus known to be associated with a rare skin cancer, known as Merkel cell carcinoma, according to a new study published online September 23 in the *Journal of the National Cancer Institute*.

The majority of patients with Merkel [cell carcinoma](#) carry MCPyV, but little is known about the polyomavirus' prevalence in the general population and the association between circulating [antibodies](#) against MCPyV and the rare skin [cancer](#).

Denise A. Galloway, Ph.D. and Paul Nghiem, M.D., Ph.D., of Fred Hutchinson Cancer Research Center in Seattle, and colleagues investigated the levels of antibodies against all five human polyomaviruses in plasma from 41 patients with Merkel cell carcinoma and 76 matched control subjects. Seroprevalence of polyomavirus-specific antibodies for MCPyV and the other four polyomaviruses—BK, JC, WU, and KI—was also determined in another 451 control subjects, who represented the general population. MCPyV DNA was determined in tumor tissue specimens.

The authors found that 36 (88%) of 41 patients with Merkel cell carcinoma carried antibodies against MCPyV compared with 40 (53%) of the 76 control subjects. MCPyV DNA was detectable in 24 (77%) of the 31 Merkel cell carcinoma tumors available, with 22 (92%) of these 24 patients also carrying antibodies against MCPyV. Among the 451 control subjects, prevalence of antibodies against the five human

polyomaviruses was 92% for BK virus, 45% for JC virus, 98% for WU polyomavirus, 90% for KI polyomavirus, and 59% for MCPyV.

Although infection with MCPyV is common in the general population, MCPyV, but not the other four human polyomaviruses, appears to be associated with Merkel cell carcinoma.

"It should be remembered that Merkel cell cancer is rare...", the authors write. "Thus, although antibody reactivity against MCPyV was associated with an increased risk of developing cell cancer, the absolute risk of cancer development in antibody-positive individuals is exceeding low."

More information: *JNCI*: jnci.oxfordjournals.org

Source: [Journal of the National Cancer Institute](#) (news : web)

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