

Understanding the role of human polyomaviruses in cancer

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Human polyomaviruses are commonly found in the population and generally do not produce noticeable symptoms. However, one type of human polyomavirus, the Merkel cell polyomavirus, is known to cause a rare form of skin cancer called Merkel cell carcinoma, and other members of the polyomavirus family can induce non-cancer related diseases in people with compromised immune systems. To determine whether other members of the polyomavirus might be associated with cancer development, Yuan Chang and colleagues at the University of Pittsburgh Medical Center developed a new method to screen tumor samples for the presence of any human polyomavirus.

As reported in this month's issue of *JCI Insight*, the researcher's screening protocol relied on a cocktail of antibodies that can recognize a specific protein expressed by all polyomaviruses. They screened over 1,000 tumor samples, including cases of [lung carcinoma](#), bladder carcinoma, brain tumors, colon cancer, breast cancer, and malignant melanoma.

Their study found no evidence for the involvement of human polyomaviruses in the development of these cancers and helps to resolve questions in the field about whether viruses related to Merkel cell polyomavirus contribute to cancer.

Their technique will also be valuable in studying other diseases in which polyomaviruses are suspected to play a role.

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