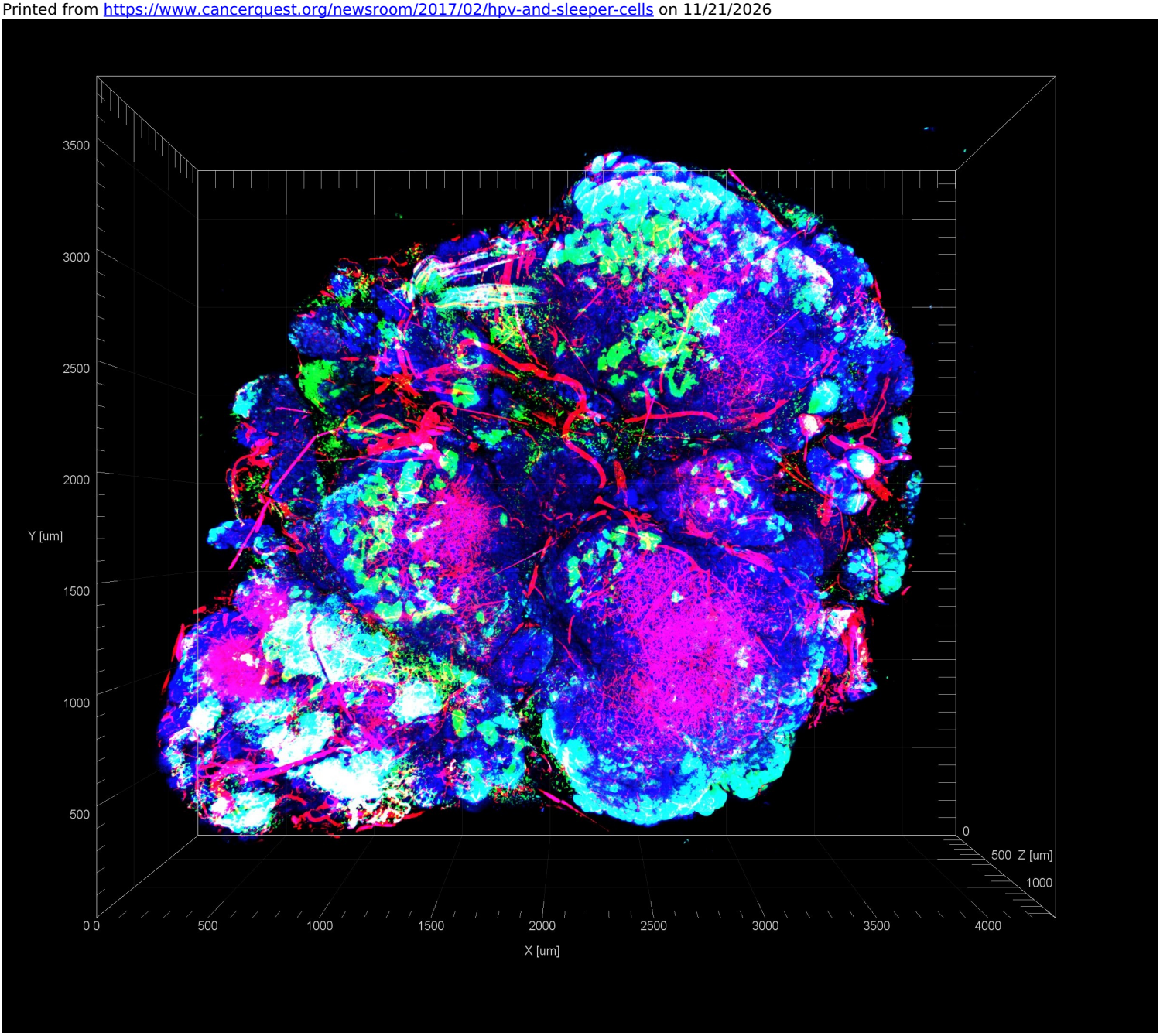
HPV and Sleeper Cells

Printed from https://www.cancerquest.org/newsroom/2017/02/hpv-and-sleeper-cells on 11/21/2026



Infection with human papillomaviruses (HPV) is the cause of about 5% of all cancers worldwide and is the second leading

HPV hijacks cells using 2 main proteins, E6 and E7. Many people have worked to develop drugs targeting these proteins, thinking that this would be an effective treatment for cancers caused by HPV. Now there is reason to re-think the strategy.

In many tumors, the environment is very toxic, low in oxygen and acidic. When scientists lowered the oxygen levels surrounding HPV-induced cancer cells, they noticed that levels of E6 and E7 went down. But...the cells did not die! Instead, the cells entered a dormant, or sleep-like, state. When the scientists raised the oxygen levels again, E6 and E7 activity returned. The results suggest that drugs targeted at E6 and E7 would not be able to eliminate these “sleeper cells”. Also, because they are not actively dividing, chemotherapy drugs are also unlikely to kill these cells.

Source
Read the full article here.
Learn More
Check out more information about HPV on Cancerquest.