

Scientists Solve Mystery Of Cervical Cancer Cellular Origin

Friday, June 15, 2012

<http://www.asianscientist.com/in-the-lab/cellular-origin-of-cervical-cancer-2012/>

AsianScientist (Jun. 15, 2012) - Scientists from Singapore, working with clinicians from the United States, have identified a unique population of cells in the cervix from which cancerous cells arise after infection with human papillomaviruses (HPV).

HPV infection is the most common cause of cervical cancer. For decades, however, clinicians have wondered why cancers caused by HPV arise only from a specific region of the cervix even though the virus is present throughout the genital tract.

In their study published online this week in the *Proceedings of the National Academy of Sciences (PNAS)*, the scientists finally pinpointed this unique set of cells located at the squamocolumnar junction of the cervix.

The cells were identified based on the presence of unique biomarkers that are seen in all forms of invasive cervical cancers linked to HPV. This set of signature markers can potentially be used to distinguish precancerous lesions that are likely to be malignant from those that are benign.

The team also showed that these cells do not regenerate when excised.

"This finding helps to explain the low rate of new HPV infections in the cervix after excisional therapy and also raises the distinct possibility that preemptive removal of these cells in young women could reduce their risk of cervical cancer," said Dr. Xian Wa, a co-senior author of the study.

This study further validates [previous work](#) by the research team, which showed for the first time that some cancers originate from just a small set of cells that are unique from the other cells that reside around them.

The article can be found at: [Herfsa et al. \(2012\) A Discrete Population Of Squamocolumnar Junction Cells Implicated In The Pathogenesis Of Cervical Cancer.](#)

Source: [A*STAR](#).

Disclaimer: This article does not necessarily reflect the views of AsianScientist or its staff.