Biomarker may predict endometrial cancer recurrences

May 18 2016, by Aliki Vrohidis

Endometrial cancer is the most common gynecologic cancer in the U.S. Most cases are diagnosed at early stage and have good prognosis. Unfortunately, some patients with early stage and low grade endometrial cancer experience recurrence - and the reasons are not entirely clear. When recurrence happens, the cancer is often resistant to chemotherapy and has a high rate of mortality.

New research from the lab of Martina Bazzaro, Ph.D., of the Masonic Cancer Center, University of Minnesota and Department of Obstetrics, Gynecology, and Women's Health, suggests the deubiquitinating enzyme (DUB) USP14 as a promising biomarker for identifying risk of recurrence in endometrial cancer patients. DUBs have been linked to cancer progression, initiation and the resistance of chemotherapy. Thus, the inhibition of certain DUBs have been proposed as a targeted therapy for cancer. However this is the first time where DUBs are used as a cancer biomarker.

"We have discovered that women with high levels of USP14 are seven time more likely to recur than women with low levels of it," says Bazzaro, a medicinal chemist and cancer biologist who leads this investigation and holds a patent for this biomarker. She adds that: "knowing a patient's status with regards to USP14 positivity could make a tremendous difference in terms of how a patients is treated and ultimately save her life".

Bazzaro is currently leading an international effort to validate the

findings is a larger cohort of low risk endometrial cancer patients. "Our next step is a clinical trial. Patients with low risk endometrial cancer will be given the diagnostic exam, utilizing USP14 to gauge the levels of the cancer," said Bazzaro. "Those with high amounts - a positive test - will be treated more aggressively than current treatments to help prevent potential recurrence. Knowing more about their individual cancers can help us as clinicians to tailor a care plan specifically for them."

Provided by University of Minnesota

Citation: Biomarker may predict endometrial cancer recurrences (2016, May 18) retrieved 19 November 2023 from
https://medicalxpress.com/news/2016-05-biomarker-endometrial-cancer-recurrences.html