Medical Xpress

Study seeks earlier ovarian cancer detection

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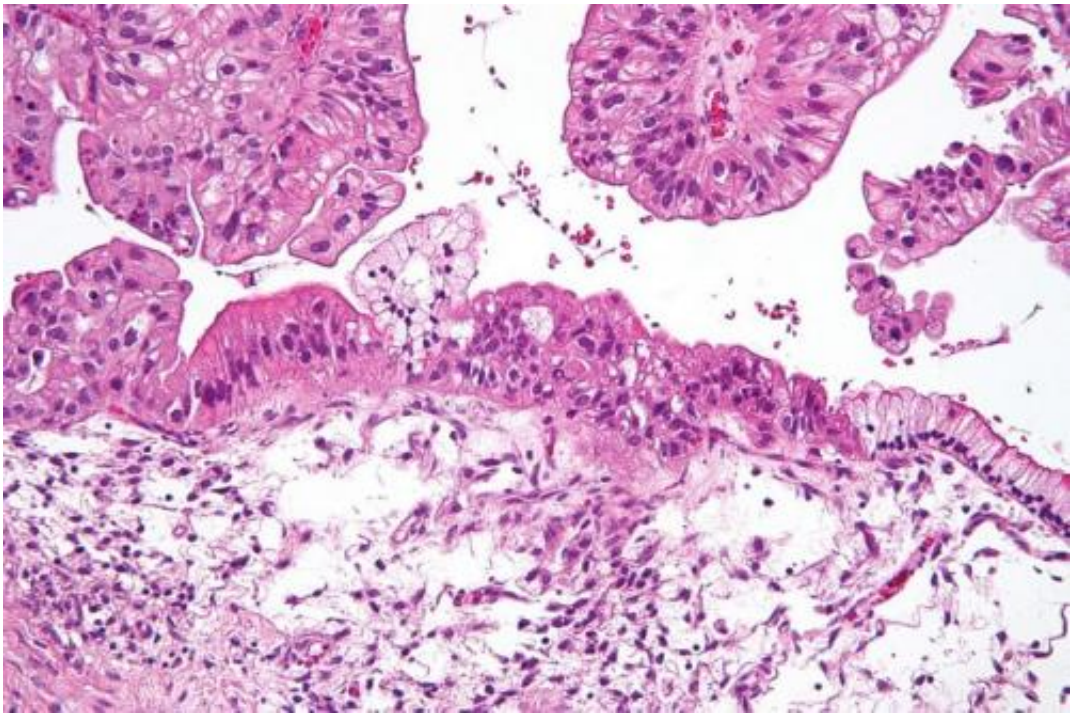

Intermediate magnification micrograph of a low malignant potential (LMP) mucinous ovarian tumour. H&E stain. The micrograph shows: Simple mucinous epithelium (right) and mucinous epithelium that pseudo-stratifies (left - diagnostic of a LMP tumour). Epithelium in a frond-like architecture is seen at the top of image. Credit: Nephron /Wikipedia. CC BY-SA 3.0

Successful ovarian cancer treatment often relies on catching it early. A study at The University of Texas MD Anderson Cancer Center may help point to a new method for women at risk.

"Most attempts to use serum biomarkers for early detection of ovarian cancer have focused on the protein CA125," said Robert Bast Jr., M.D., vice president, Translational Research. "As CA125 is expressed by only 80 percent of ovarian cancers, multiple biomarkers will be required to detect those cancers that fail to express this antigen."

No biomarker has been consistently elevated prior to CA125 in prior studies. Detecting a patient's own immune response to tumor-associated antigens might permit earlier detection, said Bast.

Bast obtained annual blood samples from ovarian cancer patients up to seven years before diagnosis through a collaboration with Drs. Usha Menon and Ian Jacobs in the United Kingdom Collaborative Trial of Ovarian Cancer Screening.

The study looked at antibodies produced by patients against the tumor gene TP53 which is mutated and overexpressed in the majority of ovarian cancers to see whether their presence would improve the ability of CA125 to detect ovarian cancer in an earlier stage.

"Anti-TP53 autoantibodies were detected an average of 13 months prior to rising CA125 levels and 33 months prior to diagnosis in patients who did not have a rising CA125," said Bast. "While only a quarter of cases are associated with anti-TP53 autoantibodies, when present, these antibodies promise to detect ovarian cancer at an earlier interval than CA125."

The data was presented on April 20 at the 2015 American Association for Cancer Research (AACR) Annual Meeting in Philadelphia.

Provided by University of Texas M. D. Anderson Cancer Center