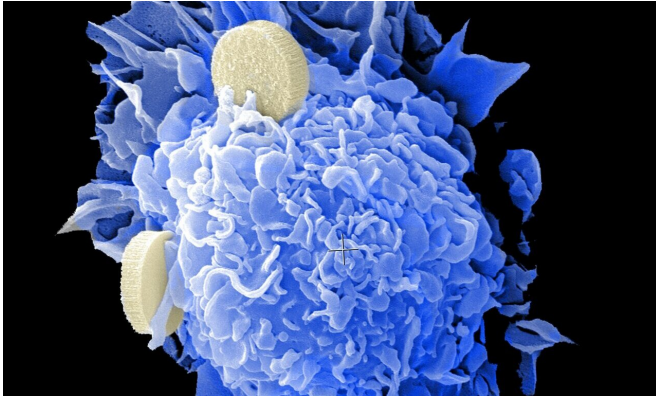# Researchers develop rapid test for ovarian cancer detection

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Credit: Unsplash/CC0 Public Domain

The CA125 antigen, a plasma membrane glycoprotein found in the tissues of the female reproductive tract, is commonly used for the detection of ovarian cancer but works poorly on its own in identifying early stage cancers. The cancer specificity can be improved significantly when CA125 detection is combined with targeting aberrant sugar structures in the tumor.

The goal of the research group led by Professor Kim Pettersson at the University of Turku, Finland, is to develop novel tests that use the detection of modified sugar structures from the cancer tissue. The recently published article describes how the research group developed this rapid and sensitive point-of-care diagnostic test that can detect ovarian cancer from the patient's blood sample.

Aberrant sugar structures can be used in early cancer diagnostics

With the easy-to-run and rapid test developed in the study, ovarian cancer can be more accurately detected from a blood sample in 30 minutes. The technologies of the Biotechnology unit at the Department of Biochemistry, as well as their

expertise in label technology and rapid tests, were widely used in this study.

"When compared with the conventional CA125 diagnostics, the sensitivity of the new test was 4.5 times higher in detecting ovarian cancer," says Doctoral Candidate Sherif Bayoumy, the first author of the study.

The aim is to expand further on these promising results to cover a larger group of patients and other cancers. The goal is to develop rapid tests for clinical use to facilitate to proceed to further examinations and treatment options.

"The received results are extremely promising for early cancer diagnostics. We are currently studying the functionality of similar approaches in other cancers. Detecting the disease as early as possible is extremely important when it comes to, for example, pancreatic cancer," says Professor Kim Pettersson.

Provided by University of Turku

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