Report: New test for breast cancer

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An international research group led by Professor Jasminka Godovac-Zimmermann, UCL Medicine, has developed an ultra-sensitive blood test for breast cancer that could help to detect cancer at a very early stage and improve screening for the disease in younger women, for whom mammography is less sensitive.

The group, which also included scientists from the University of Pennsylvania, the University of Pittsburgh and BioTraces, Inc, a company based in Herndon, Virginia, developed an immunoassay that was 200–1,000 times more sensitive than existing tests, according to their report in the latest issue of the American Chemical Society's *Journal of Proteome Research*.

In 'High-sensitivity blood-based detection of breast cancer by multi-photon detection diagnostic proteomics', the group gives details of tests on 250 breast cancer patients and 95 controls. The results showed that the test had sensitivity and specificity of about 95 per cent. This high figure is an important consideration in determining the false-positive and false-negative results of a diagnostic test.

Breast cancer originates in epithelial (surface) cells, and the researchers cited pilot studies suggesting that the test could also work for other epithelial cancers, such as prostate cancer, ovarian cancer and melanoma.

Professor Godovac-Zimmermann said: "Our pilot studies show that using blood samples, breast cancer and several other types of epithelial

cancers can be detected with much better sensitivity and specificity. This may allow new, less intrusive, safer and much less expensive approaches for the early diagnosis of cancer, for distinguishing malignant and benign cancers, and for monitoring cancer therapy."

Source: University College London