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Proteomic early detection of ovarian cancer

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Tudor Toma

Email: t.toma@ic.ac.uk

Over 80% of ovarian cancers are diagnosed when the disease is at a late stage, with a consequent five-year survival rate of only around 35%. New technologies for the detection of early-stage ovarian cancer would therefore be of great benefit. In February 8 online edition of [The Lancet](#), Emanuel Petricoin III and colleagues from the US [Food and Drug Administration](#), Bethesda, show that computer-assisted detection of proteomic patterns could help in screening for ovarian cancer.

Petricoin *et al.* analysed blood proteins of women with ovarian cancer using mass spectroscopy and a novel computer-searching algorithm. They found a discriminatory proteomic pattern that correctly identified all 50 ovarian cancer cases and 63 of the 66 non-cancer cases from a set of 116 masked serum samples (sensitivity 100%; specificity 95%; positive predictive value 94%; *Lancet* 2002, **359**:572-577).

"These findings justify a prospective population-based assessment of proteomic pattern technology, as a screening tool for all stages of ovarian cancer in high-risk and general populations," commented Emanuel Petricoin III.

References

1. Petricoin III EF, Ardekani AM, Hitt BA, Levine PJ, Fusaro VA, Steinberg SM, Simone GS, Fishman DA, Kohn EC, Liotta LA: Use of proteomic patterns in serum to identify ovarian cancer. *Lancet* 2002, 359:572-577. , [<http://www.thelancet.com>]
2. Food and Drug Administration, [<http://www.fda.gov>]