

Improving survival rates: development of a new test for ovarian cancer

Early diagnosis of ovarian cancer is strongly associated with improved patient survival. Researchers at Hudson Institute are trialling a new test for ovarian cancer, designed to detect disease at an early stage.

Summary

Ovarian cancer is the eighth most common cancer overall among women, and the most common cause of death from a gynaecological cancer. Each year, around 1600 Australian women are diagnosed with ovarian cancer, and nearly a quarter of a million women worldwide (OCRF). Early diagnosis is strongly associated with improved survival.

Considered a “silent killer”, ovarian cancer can progress from early to advanced stages of disease within a year. Symptoms at early stages are non-specific, and often not noticeable until disease has progressed. Patients and clinicians may attribute these symptoms to other causes, resulting in delayed testing and treatment.

As a result, over 70% of women diagnosed with ovarian cancer have later-stage, metastatic disease. By this time, prognosis is poor with a five-year survival rate at stage III of 30% and at stage IV of just 17%. By contrast, if found at stage II, this rate is 70% and up to 90% at stage I.

There is an urgent and unmet need for improved diagnosis and for a simple and routine screening test for ovarian cancer. At present, physical examination, imaging, and CA-125 blood testing may be used to detect abnormalities indicative of ovarian cancer, but definitive diagnosis requires surgery and biopsy. There is currently no screening test available.

Hudson Institute researchers have developed a new test for the detection of ovarian cancer, the Active Ratio Test. Implementation of a test such as this one has the potential to greatly impact upon survival rates, providing patients with an improved diagnosis and hopefully enabling earlier access to treatment.

Supporting data

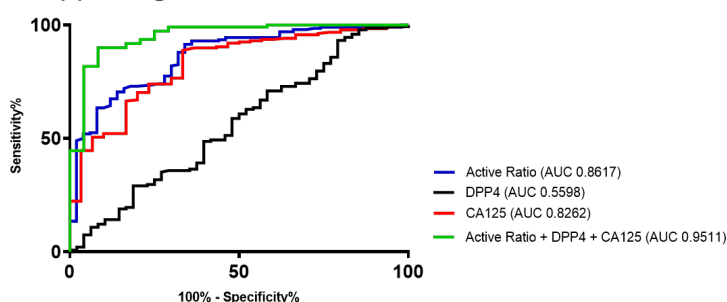


Figure 1. Receiver-operator-curve (ROC) analysis demonstrates superior AUC for Active Ratio vs other markers (DPP4, CA125) in patient ascites samples. Combining Active Ratio, DPP4 and plasma CA125 shows enhanced diagnostic efficacy, with good PPV (87-94%) and NPV (93-95%) for discrimination between benign and malignant disease.

Team

Our team is led by Dr Andrew Stephens, an Ovarian Cancer Research Foundation (OCRF) Research Fellow and head of Hudson's Ovarian Cancer Biomarkers research group. A leading authority on the application of proteomics technologies and a Senior Research Affiliate (Honorary) with Epworth Healthcare, Dr Stephens is one of Australia's foremost experts in the field of ovarian cancer research.

Development pathway

Our team are currently seeking opportunities for co-investment, licensing or collaboration to further develop this program.

IP position

Provisional patent application filed.

Hudson Institute of Medical Research

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