

Detecting Ovarian Cancer and Risk

Published date: March 14, 2017

Technology description

Ovarian cancer is the most fatal gynecological cancer, killing 15,000 women in the United States every year. The overall five-year relative survival rate for women with ovarian cancer is 46 percent. The survival rate improves to 93 percent if the cancer is diagnosed early. Sadly, a fraction of cases are diagnosed at this curable stage.

Early diagnosis of ovarian cancer can be accomplished by measuring biomarkers in blood or urine. The most widely studied serum marker for ovarian cancer is CA125. Unfortunately, CA125 levels are elevated in only half of women with stage 1 disease. Also, screening is expensive and can lead to false positives and unnecessary surgeries.

There is great interest in finding new biomarkers that could help detect ovarian cancer at a curable stage. A UW–Madison researcher and others have developed a new ovarian cancer screening method that measures total or ionized serum calcium levels in blood samples. Women exhibiting elevated levels may be up to three times more likely to be diagnosed with ovarian cancer.

Serum calcium can be detected and quantified using standard techniques, including absorption spectrometry, ion selective electrode, fluorescent detection, etc. The measured levels can be incorporated into an overall risk score, identifying women who should undergo further CA125 and ultrasound screening.

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing methods of screening serum calcium levels in women to identify and monitor those at higher risk for ovarian cancer.

Application area

Detecting ovarian cancer and possibly recurrence
Calculating an ovarian cancer risk score

Advantages

Method is simple and effective.

Supports earlier diagnosis

Flags women who should undergo further, more intensive testing

Institution

[Wisconsin Alumni Research Foundation](#)

Inventors

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