

# Methods and Markers for Ovarian Cancer Diagnosis and Stratification

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## **Diagnostics for ovarian cancer can be insufficient for early detection and otherwise**

The problem with current diagnostic methods for ovarian cancer, such as CA125, HE4 tests, and transvaginal ultrasound, is their insufficient sensitivity and specificity, particularly for early detection. This limitation hinders effective treatment and patient outcomes.

This innovative technology employs advanced machine learning algorithms and lipid panels to accurately distinguish high-grade serous ovarian cancer from other reproductive system cancers, like uterine cancer. It significantly enhances diagnostic accuracy and can be used as a standalone tool or alongside existing tests. Additionally, it aids in guiding treatment decisions and monitoring high-risk patients with specific genetic mutations, improving early detection and patient outcomes.

## **Novel technology uses machine learning and lipid panels to improve diagnostic accuracy**

This technology leverages advanced machine learning algorithms and a set of lipid panels to distinguish between high-grade serous ovarian cancer and other types of reproductive system cancers, such as uterine cancer. It offers a significant improvement in diagnostic accuracy, especially in the early detection of ovarian cancer, which is crucial for effective treatment and improving patient outcomes.

## **Summary Bullets**

- This technology utilizes advanced machine learning algorithms and lipid panels to distinguish high-grade serous ovarian cancer from other reproductive system cancers, enhancing diagnostic accuracy and early detection capabilities.
- The prototype improves treatment decision-making and patient monitoring, particularly for individuals with genetic predispositions to ovarian cancer.
- It serves as a diagnostic tool for ovarian cancer detection, either standalone or alongside existing tests like CA125 and HE4, offering precise diagnosis and aiding in treatment planning.

Solution Advantages

- First-of-its-kind technology capable of differentiating ovarian cancer from other reproductive system cancers.
- Potentially improves treatment decision-making and patient monitoring, especially for those with genetic predispositions to ovarian cancer
- Enhances the precision of ovarian cancer diagnosis when used alongside existing tests.

#### Potential Commercial Applications

- Diagnostic tool in ovarian cancer detection, both as a standalone solution and in conjunction with existing tests like CA125, HE4, or transvaginal ultrasound.
- Useful in treatment planning and monitoring for patients at increased risk of ovarian cancer due to specific genetic mutations.

#### Inventors

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#### IP Status

<p>The patent application has been filed</p>:

#### Publications

[Ovarian cancer detection from metabolomic liquid chromatography/mass spectrometry data by support vector machines](#), BMC Bioinformatics - 2009

#### Images

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