Researchers at the University of South Florida have developed a diagnostic and screening method to identify ovarian cancer and classification of the early stage. This may improve chances of patient survival dramatically.

The National Cancer Institute states that there is no current standard screening method for ovarian cancer. Current methods include ultrasound, patient examination and assays of the cancer antigen 125 (CA125). This biomarker only provides a 50% chance of detection amongst cases in the first stage of ovarian cancer. If caught in this stage, the patient has the best chance for survival.

In order to meet this challenge, researchers investigated lysophospholipids (LPL) as biomarkers for ovarian cancer. Using a technique based on electrospray ionization mass spectrometry, USF researchers were able to diagnose cancer in preoperative patients at various stages of ovarian cancer. Other researchers obtained similar results while confirming the sensitivity of LPL species (in low pmol range) to this technique.

This technology could enhance clinicians’ capacity to institute curative measures at earlier stages of ovarian cancer. The technique is also useful postoperatively to detect recurrences or to evaluate other interventions. Correct results are: 93.1% correct classification, 91.1% sensitivity and 96.3% specificity when screening for ovarian cancer.

This portfolio includes two granted patents as well as pending applications covering a variety of LPL species.

**Advantages:**
- Higher specificity, classification and sensitivity
- Potential to be used with standard laboratory equipment
- Detect cancer at earlier stage for better clinical intervention opportunities
- Usages in diverse settings: surgery, bedside areas, doctors’ offices and local clinics.

**Detect Ovarian Cancer in Earlier Stages!**

![Graph showing Total LPA levels (µmol/L) in preoperative and control samples](Image here)

**Total LPA levels (µmol/L) in preoperative and control samples**

Ref: Inventor Initial Disclosure Form

**US Patents 7,964,408 and 8,133,736**