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## DETECTION OF EPITHELIAL OVARIAN CANCER USING C8 MAGNETIC BEAD SEPARATION AND MALDI-TOF PLASMA PROTEOME PROFILING IN EGYPTIAN FEMALES

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**Background:** Ovarian cancer is the seventh most common cancer in females with the highest mortality rate of all gynecological cancers due to its late discovery and ambiguous symptoms. Thus, there is a need for new promising strategies to diagnose ovarian cancer.

**Aim:** We aimed at finding a characteristic plasma proteome pattern that could be used for the detection of epithelial ovarian cancer.

**Methods:** The combination of MagSi-proteomics C8 beads, Ultraflex extreme MALDI-TOF and ClinProTools software was used to compare the plasma protein spectra from 50 patients with epithelial ovarian cancer, 20 patients with benign ovarian masses and 50 healthy females.

**Results:** Our study showed that a plasma profile of 21 differentiated peaks between patients with epithelial ovarian cancer and healthy controls with a sensitivity of 73 % and a specificity of 82.8% upon external validation, while a 5-peak differentiated profile of patients with epithelial ovarian cancer from patients with benign ovarian masses with a sensitivity of 81% and a specificity of 73.7%.

**Conclusion:** MALDI-TOF proteomic profiling represents a promising potential tool for diagnosing epithelial ovarian cancer.

### Biography

Mohamed Mostafa Rizk was the Director of the Alexandria University Hospital Labs, and Alexandria Medical Research Labs for 3 years. He was the Head of Department of Clinical and Chemical Pathology since 2014 till 2017. He has published more than 35 publications in reputed international journals. He has been serving as an Assessor of the projects introduced to Royan 6<sup>th</sup> international research award. He is a Member of Board of Directors of the Egyptian Society of Laboratory Medicine. In 1993 he was honoured by Ministry of Scientific Research and got the prize from Egypt Country for persons. In 2002, he got the 1<sup>st</sup> prize in accepted talks in the 18<sup>th</sup> International Congress of Clinical Chemistry and Laboratory Medicine IFCC, Kyoto, Japan. In 2009, he was selected as the Ideal Doctor by the Syndicate of Doctors of Egypt.

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