PROTEOMIC BIOMARKERS FOR OVARIAN CANCER RISK IN WOMEN WITH POLYCYSTIC OVARY SYNDROME (PCOS). A SYSTEMATIC REVIEW AND BIOMARKER DATABASE INTEGRATION

N. Galazis¹, S. Drymiotou², S.N. Thoukididou¹, W. Atiomo²
¹ North Central Thames Foundation School
² Nottingham University Medical School, UK

Introduction:
Polycystic ovary syndrome (PCOS) is associated with increased risk of ovarian cancer (OC). The objective of this study was to review and identify possible biomarkers for OC in women with PCOS.

Methods:
Systematic literature searches of MEDLINE, EMBASE, Cochrane using the search terms “proteomics”, “proteomic” and “ovarian cancer” or “ovarian carcinoma”. Proteomic biomarkers for OC were then integrated with an updated previously published database of all proteomic biomarkers identified so far in PCOS patients.

Results:
A panel of six biomarkers was over-expressed both in women with OC and PCOS. These biomarkers include: Calreticulin, Fibrinogen gamma, Superoxide dismutase, Vimentin, Malate Dehydrogenase and Lamin B2.

Conclusions:
These biomarkers could help improve our understanding of the links between PCOS and OC and could potentially be used to identify subgroups of women with PCOS at increased risk of OC. More studies are required to further evaluate the role these biomarkers play in women with PCOS and OC.