

## GAP 2016 Conference

Down-regulated expression of microRNAs in high grade serous ovarian cancer of patients with different clinical outcomes

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**BACKGROUND:** High grade serous ovarian cancer (HGSOC) is one of the most common and aggressive histology from the ovarian cancer. The bad prognosis of HGSOC is due to late diagnosis and drug resistance. Less than 30% of the patients have disease-free survival of 5 years due to the progressive development of drug resistance (1). The miRNAs are small non-coding molecules involved in regulating gene expression and evidences show the role of miRNAs in progression and resistance of ovarian cancer. **HYPOTHESIS:** There are differentially expressed miRNAs comparing patients sensitive and not sensitive to chemotherapy. **METHODS:** We elected 28 homogeneous samples according to the histology, staging and surgery. All cases were reviewed by a pathologist. miRNAs expression profile was carried out using Agilent miRNA microarray (G4870A – ID 031181; 8x60K, Agilent Technologies). The comparison between the platinum sensitive (20 patients that had relapsed after 12 months of treatment) and the not sensitive group (8 patients that had relapsed up to 12 months of treatment) was performed using the software BRB-Array Tools. **RESULTS:** 53 miRNAs were differentially expressed in the non-sensitive group (p value lower than 0.005 and FDR (False discovery rate) less than 10% and fold-change more than 2). The group of non-sensitive patients presented all miRNAs down-regulated in comparison to the group of sensitive patients. Studies have shown that miRNAs present decreased expression in chemo-resistant ovarian cancer epithelial serous (2). It is well known that miRNA biogenesis pathway changed in some tumors, as for example in Wilms tumour (3). Levels of Dicer and Drosha mRNA in ovarian-cancer cells have been associated with poor outcome in patients with ovarian cancer (4). So far, we still do not know the reason for the non-sensitive patients present miRNAs down-expression and further analysis will be performed.

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### References

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