

Towards precision medicine in ovarian cancer

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Chemotherapy resistance is one of the greatest contributors to cancer mortality. High-grade serous ovarian cancer (HGSC), which is the most common subtype of epithelial ovarian cancer, is a prime example of the consequences of resistance to chemotherapy. While 90% of HGSOC patients show no clinically detectable signs of cancer after surgery and chemotherapy, only 43% of the patients are alive five years after diagnosis because of chemoresistant cancer.

HGSC is a copy-number driven disease with extraordinarily high intra-tumor heterogeneity, which poses several challenges for effective personalized medicine approaches. In this presentation, I focus on whole-genome sequencing and circulating tumor DNA data analysis challenges and results based on multi-regional and longitudinal samples from HGSC patients. Our results provide a framework for identifying effective therapy targets for HGSC patients.