

## **CPH Seminar in Precision Medicine**

## Integrated Analysis of TCGA Genomic Data Reveals Clinically important Subtypes in Ovarian and Endometrial Cancer

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Cancer heterogeneity presents great challenges to cancer management. Molecular classification of patients into different subtypes based on genetic or epigenetic characteristics coupled by targeted therapy has shown promising potential to revolutionize the clinical cancer care as well as enhance our mechanistic understanding of cancers. Molecular biomarkers are increasingly used in clinical practice to stratify patients based on difference in survival or response to chemotherapy. Identification of these markers represents an important step towards the clinical goal of personalized medicine. In this presentation, I will report some of my recent work on identifying molecular biomarkers in gynecologic cancer by systematically interrogating the multi-dimensional data sets from the TCGA as well as independent MDACC cohort. The first part of my presentation will focus on our recent identification of a BRCAness-like biomarker, ADAMTS mutation that is complementary with *BRCA1/2* mutations to predict response to platinum-based chemotherapy in ovarian cancer. The second part will focus on the discovery of a novel subtype of poor prognostic endometrioid endometrial cancer that is characterized by frequent mutation in exon 3 of gene encoding beta-catenin.

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