

CIHR STAGE

*Strategic Training
for Advanced Genetic
Epidemiology*



The **Ontario Institute for Cancer Research** is a proud partner of **CIHR STAGE** and jointly presents:



Dr. Ellen L. Goode
Professor of Epidemiology
Health Sciences Research
Mayo Clinic

Integrative Molecular Epidemiology of Ovarian Cancer

Friday
May 5, 2017
12:15 – 1:15 pm

The Hospital for Sick Children
Daniels Hollywood Theatre
Room 1246, 1st Floor, Black Wing
555 University Avenue, Toronto, ON

Abstract

Epithelial ovarian cancer is a significant cause of women's gynecologic morbidity and mortality. It comprises five histotypes (high-grade serous, endometrial, clear cell, mucinous, low-grade serous) which arise from distinct pre-neoplastic lesions with varied somatic mutation spectrums. While high-penetrance genes (e.g., BRCA1, BRCA2, MLH1, MSH2) are known to contribute to risk, the residual risk associated with family history that is attributable other particular inherited factors remains to be refined. Genome-wide association studies (GWAS) within large consortia have identified more than thirty common variants associated with modest risk of this disease. This seminar will provide an overview of the methods and results from these studies, including the customized, genome-wide Illumina OncoArray panel. Another major advance of recent years is the detailed characterization of case subsets. In particular, tumor immunophenotyping, molecular subtyping, and DNA methylation profiling show promise for characterization of high-grade serous disease. As clinically relevant phenotypes may also be predicted by the genomic features of epithelial ovarian cancers, ideas for novel investigation will also be explored which demonstrate the potential of integrating tumor and germline features. In sum, recent progress in the molecular and genetic epidemiology of epithelial ovarian cancer can serve as a framework for integrative studies of other complex traits.

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