P07.09: Sonographic, clinicopathologic features and genetic characteristics of epithelial ovarian cancers among Filipinos: a pilot study
Erlidia F. Llamas-Clark, MD, PhD1, Ana Joy P. Padua1, Jose Nevado, Jr. MD, PhD2, Itaru Yanagihara, MD, PhD1
1College of Medicine, University of the Philippines – Manila; 2Institute of Human Genetics, UP Manila– National Institute of Health; 3Department of Obstetrics and Gynecology, Philippine General Hospital; 4Department of Developmental Medicine, Osaka Medical Center for Maternal and Child Health

Objectives
To determine the sonographic, clinicopathologic and genetic characteristics of chemo-resistant and chemo-sensitive epithelial ovarian tumors in the Philippines.

Method
We performed a review of the clinical charts and ultrasound reports of 16 women (8 chemotherapy-sensitive and 8 resistant) with epithelial ovarian new growths who underwent ultrasound Sassone, Lerner and IOTA assessment and surgery at the Philippine General Hospital from January 2014 to December 2016. Socio-demographic variables and sonographic features were collected. Next-generation sequencing platform was used to determine mutation status of large panel of known cancer genes. Ion AmpliSeq™ Cancer Hotspot Panel v2 was used to evaluate the genomic DNA isolated from formalin-fixed, paraffin embedded tumors.

Results
Patients were from 23-62 years of age, with secondary and college education and mostly multigravidas with normal BMI. Sonographic parameters using Sassone, Lerner and IOTA suggested malignancy preoperatively. Both sensitive and resistant masses ranged from 6.5-25 cm, mostly unilocular with solid areas. All received Carboplatin-Paclitaxel. Both chemo-sensitive (CS) and chemoresistant (CR) women had an average age of 47. Half of the CS ones were Stage I-II and Stage II-IV. Most of CR were advanced stage. Those with pre-operation CA 125 showed higher values in CR than CS. Most of the resistant tumors were the serous cystadenocarcinomas. The KDR gene is the most common mutation (12.86%) with 17 mutations from CS and 23 from CR out of total of 311 detected mutations. Multiple novel genetic mutations were also detected from KDR gene.

Conclusion
KDR alterations are implicated in epithelial ovarian tumors for the first time and addresses the gap in Filipino patients. Larger follow-up series is needed to determine if any of the sonographic and clinicopathologic similarities and differences and genetic mutations are biologically relevant and useful for treatment and prognostication.