

(\leq IIA/ \geq IIB). All patients were treated with chemotherapy. We used Cox models with the sporadic group as the reference to obtain hazard ratios (HR) with corresponding 95% confidence intervals (CI). Since BRCA1/2 mutation carriers who received a DNA test after EOC diagnosis survived at least until this DNA test, which may result in survival bias, we also performed prospective analyses including only BRCA1/2-associated EOC patients with a DNA test result before EOC diagnosis (n=82) and their matched sporadic controls.

Results The mean follow-up was 4.4 years (range 0.1–30.1). For the first 5 years after EOC diagnosis, the HRs for PFS (0.85, 95% CI 0.73–0.98) and OS (0.58, 95% CI 0.49–0.69) were in favor of the BRCA1/2 EOC patients. In the prospective analyses, survival benefit withstand for PFS (HR 0.66, 95% CI 0.45–0.98), and – to a lesser extent – for OS (HR 0.69, 95% CI 0.44–1.1).

Conclusions For EOC patients treated with chemotherapy, we confirmed survival benefit for BRCA1/2 mutation carriers. This may indicate higher sensitivity to chemotherapy, both in first line treatment and in the recurrent setting.

OP019/#123

CLEAR CELL OVARIAN CANCER IN NATIVE ASIANS COMPARED TO US ASIANS – IS THERE A DIFFERENCE?

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Objectives To study the incidence and trends of clear cell ovary cancer (CCOC) in the US and Taiwan.

Methods Data were obtained from the United States Cancer Statistics (USCS) Public Use Databases and Taiwan Cancer Registry of Taiwan Health and Welfare Data Center (HWDC) from 2001 to 2017. SEER*Stat 8.3.9, Joinpoint regression program 4.8.0.1, and Excel were used to calculate the incidence and trends.

Results Compared to Whites, Asians have nearly five-fold higher incidence of CCOC (2.44 vs 0.49 per 100,000). Native Asians have a 1.8 fold higher incidence vs. US Asians (1.58 vs. 0.86 per 100,000). The peak age range of CCOC diagnosis in Native Asians is younger compared to US women (50–54 vs. 65–69 years). From 2001 to 2017, there was an increase in CCOC in both NAs and US Asians at 6.2% per year vs 2.1% per year, respectively. In a projected model, by 2029, the incidence of CCOC in NAs will surpass that of serous cancer in US Whites.

Conclusions Over the last 17 years the rate of clear cell ovary cancer has increased for both Asians residing in Asia and the United States and may surpass other cell types in next decade. Further studies are needed to evaluate the genetic and environmental factors responsible for this disparity.

OP020/#524

HEALTH CARE RESOURCE AND COST IMPLICATIONS OF INTEGRATION OF MOLECULAR CLASSIFICATION IN THE MANAGEMENT OF ENDOMETRIAL CANCER

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Objectives Increasing incidence and morbidity of endometrial cancer (EC) has resulted in high systemic cost burdens associated with management. Molecular classification is now being integrated into routine pathologic reporting, providing objective biologically-relevant data to direct care. We assessed the cost implications of this integration in a modern cohort of women with ECs.

Methods 994 women diagnosed with EC across Canada (2016) underwent retrospective molecular classification enabling us to determine their eligibility for current molecular stratification trials and 2020 ESMO/ESTRO/ESP risk group assignment and treatment recommendations. We then calculated cost differences based on molecular subtype/ProMisE-directed change in surgical management, adjuvant therapy, clinic visits, pathology testing, and genetic counseling.

Results Total costs saved, even after correcting for cost of molecular testing for all 994 individuals (\$450–\$575 CAD/test) were \$570,744–\$747,042 CAD or \$574–\$752 CAD per capita. If we test MMR and p53 IHC for all patients but perform POLE sequencing only in women where treatment would be altered (e.g., NOT testing POLE in Stage IA Grade 1/2 endometrioid ECs who are usually untreated and stage III/IV ECs where ESMO/ESTRO/ESP recommendations are currently unchanged for POLEmut ECs) total costs saved increases to \$720,294–\$958,842 or \$725–\$965/capita. If costs of additional treatment directed by ProMisE are added, such as chemotherapy +/- radiation directed secondary to unveiling high risk molecular subtype, this would be expected to improve outcomes but at an additional cost of \$280,908–\$826,719 or \$282–\$832/capita.

Conclusions Molecular classification may tailor treatment with cost savings, while providing an opportunity to improve outcomes at reasonable cost for women with endometrial carcinoma.