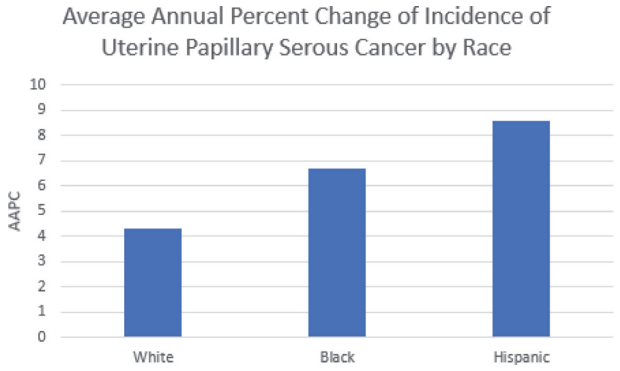

Abstract 41 Figure 2

hysterectomy prevalence based on Behavioral Risk Factor Surveillance System data. SEER*Stat and Joinpoint regression were used to calculate incidence (per 100,000) and average annual percent change (AAPC).

Results Of 720,984 patients (78% White, 10% Black, 8% Hispanic, 3% Asian/Pacific-Islander), the proportion of endometrioid, uterine serous carcinoma (USC), clear-cell, and sarcoma were 73.7%, 5.9%, 1.3%, and 2.0% respectively. In 2016, incidence of endometrioid was approximately 10-fold higher than USC (30.6 vs. 3.6). Of USC patients, the age group with the highest incidence was 75–79 year olds (24.7). Of note, Blacks had the highest incidence of USC at 9.1 compared to 3.0 in Whites.

Over the 15 year study period, there was a 4.6% increase in USC per year compared to no increase in endometrioid cancer ($p<0.05$).

Of USC patients, the highest increase was in ages 70–74 (AAPC 5.7%). Blacks, Hispanics, and Whites had an annual increase of +6.7%, +8.6%, and +4.3%, respectively. The intersectionality of age 70–74 and Black with USC had an AAPC of +7.3%. A predictive model shows USC incidence would surpass endometrioid in Blacks within 15 years.

Conclusion Compared to Whites, Blacks have a 3-fold higher overall incidence of uterine serous cancer and is increasing at 6.7% per year. For Black women, this aggressive histology is projected to surpass endometrioid cancer in 15 years.

IGCS20_1450

42 CLINICOPATHOLOGIC PREDICTORS OF EARLY RELAPSE IN ADVANCED EPITHELIAL OVARIAN CANCER; DEVELOPMENT OF PREDICTION MODELS USING NATIONWIDE DATA

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Objective To identify clinicopathologic factors predictive of early relapse (i.e. a platinum-free interval (PFI) of ≤6 months) in advanced epithelial ovarian cancer (EOC) in first-line treatment, and to develop and internally validate risk prediction models for early relapse.

Methods All consecutive patients diagnosed with advanced EOC between 01-01-2008 and 31-12-2015 were identified from the Netherlands Cancer Registry. Patients who underwent debulking and platinum-based chemotherapy as initial EOC treatment were selected. Two prediction models, a pretreatment and postoperative model, were developed. Candidate predictors of early relapse were fitted into multivariable logistic regression models. Model selection was performed using backward selection (p-value<0.20). Model performance was assessed on calibration and discrimination. Internal validation was performed through bootstrapping to correct for model optimism.

Results A total of 4,557 advanced EOC patients were identified, including 3,171 late or non-relapsers and 1,302 early relapsers. Early relapsers were more likely to have FIGO stage IV, mucinous or clear cell type EOC, ascites, >1 cm residual disease, and to have undergone interval debulking. The final pretreatment model demonstrated subpar model performance (AUC=0.65 [95%-CI 0.64–0.67]). The final postoperative model based on FIGO stage, histologic subtype, presence of ascites, type of debulking, and residual disease after debulking, demonstrated good model performance (AUC=0.72 [95%-CI 0.71–0.74]). Bootstrap validation revealed minimal optimism of the final postoperative model.

Conclusion A good (postoperative) discriminative model has been developed and presented online that predicts the risk of early relapse in advanced EOC patients. Although external validation is still required, this prediction model can support treatment decision-making in daily clinical practice.

Poster

IGCS20_1001

43 HYPERPROGRESSION OF CHORIOCARCINOMA AFTER TREATMENT WITH PEMBROLIZUMAB

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Objectives We describe the case of a woman with non-gestational, extra-gonadal, choriocarcinoma who developed hyperprogression on pembrolizumab and review the literature regarding this phenomenon in gynecologic cancers.

Methods The medical record was reviewed with close attention to β-hCG trends associated with multiple lines of therapy. A literature review was done to summarize the potential mechanisms behind hyperprogression in response to immune checkpoint blockade.

Results A 49-year old, G2P2 woman with no history of molar pregnancy presented with high-grade fevers, persistent cough and right upper quadrant pain. β-hCG was elevated at 79,000 IU/L and a liver biopsy revealed choriocarcinoma but imaging did not identify a primary tumor. She was initially managed as gestational trophoblastic tumor (GTD) and achieved a brief complete radiographic and biomarker response with EMA-CO chemotherapy. Subsequently, she received TPE and later 5FU. Eventually, molecular analysis was consistent with non-

gestational choriocarcinoma and IHC showed 22% PD-L1 positivity (tumor proportion score). She received pembrolizumab but β-hCG levels rose abruptly and uncharacteristically through all three cycles. The patient developed dyspnea on exertion, cough, and right flank pain. CT imaging demonstrated marked progression of liver metastases and innumerable new pulmonary metastases. She died 10 weeks after starting pembrolizumab.

Conclusions Non-gestational choriocarcinoma is an exceedingly rare and aggressive primary germ cell tumor. Treatment depends on proper diagnosis and management. Few cases of hyperprogression have been described in gynecologic cancers treated with immune checkpoint inhibitors. Mutations in pathways affecting immune-activation and p53 regulation may account for hyperprogression after pembrolizumab in this patient.

IGCS20_1002

44 MINIMALLY INVASIVE SURGICAL STAGING FOR EARLY STAGE OVARIAN CANCER: A LONG TERM FOLLOW UP

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Introduction The standard treatment for epithelial early stage ovarian cancer (eEOC) patients includes laparotomic surgical staging, according to FIGO classification. In the last decade, many investigators have assessed the safety, adequacy and feasibility of minimally invasive surgery (MIS) staging of eEOC in properly selected patients, but survival data related to different surgical approaches (open versus MIS) are extremely limited. The aim of this study is to analyze the long-term oncological outcomes in eEOC patients treated with MIS.

Methods This is a multicenter observational retrospective study conducted in two tertiary oncological centers. We selected all consecutive women (N=254) who underwent a MIS staging for clinical eEOC from January 2008 until 31st December 2016, in order to have an adequate length of median follow-up.

Results Most women had serous histotype (39.0%) and poorly differentiated tumors (53.0%). The rate of upstaged patients (final pathological FIGO stage >IIA) was 18.1%.

The median duration of follow-up was 61 months (range:13–118). Eleven patients were lost to follow-up and excluded from survival analysis. Overall, 39 (16.0%) patients experienced recurrence. The 5-years disease-free survival and the 5-years overall survival rate was 84.0% and 92.5%, respectively.

In the multivariate analysis the grading 1–2, FIGO stage IA-IB, and delayed surgical staging (vs. immediate staging) played a statistically significant favorable prognostic value.

Conclusion This study represents the longest follow-up of eEOC patients managed by MIS. We confirmed that MIS will continue to be a valuable therapeutic option in appropriately selected patients.

Abstract 44 Table 1 Univariate and multivariate analysis of predictive factors influencing disease-free

	Univariate analysis*		Multivariate analysis*	
Variable	**HR (95% CI)**	**p-value**	**HR (95% CI)**	**P-value**
Age, years				
≤ 45	0.45 (0.21-0.92)		1.25 (0.55-2.83)	
> 45	1	**0.029**	1	0.590
Tumour Histotype				
Serous	1		1	
Endometrioid/Clear cell	0.27 (0.08-0.89)		0.59 (0.12-2.75)	
Other epithelial	0.42 (0.21-0.85)	**0.009**	0.70 (0.32-1.51)	0.599
FIGO grade				
1-2	1		1	
3	3.91 (1.71-8.93)	**<0.001**	3.19 (1.36-7.51)	**0.008**
FIGO stage				
IA/IB	1		1	
IC/IIA	1.98 (0.80-4.92)		1.29 (0.49-3.37)	
> IIA	6.19 (2.58-14.82)	**<0.001**	3.02 (1.12-8.12)	**0.038**
FSS				
No	2.29 (0.72-12.45)			
Yes	1	0.112		
Time of surgical staging				
I-MS	4.05 (2.01-8.16)		3.46 (1.55-7.70)	
D-MS	1	**<0.001**	1	**0.002**

FSS= fertility sparing surgery; I-MS= immediate MIS staging; D-MS= delayed MIS staging.
*Cox regression.