Results A total of 155 patients were evaluable; 41.9% carcinosarcoma, 36.8% serous, 17.4% G3 and 3.9% CC; 67.1% received chemoradiation, 25.8% received chemotherapy-alone and 7.1% received RT-alone. Adjuvant therapy regimens were well-balanced between different histologies (p=0.351). There was no difference in the frequency of treatment delays between regimens (p=0.571). G3 tumors recurred less frequently (66.7%) versus serous (80.7%), CC (83.3%) and carcinosarcoma (84.6%)(p=0.269). Abdominal recurrence occurred most often in CC and serous. Carcinosarcoma was most likely to recur in the lung. There was a trend towards greater retroperitoneal recurrence with chemotherapy-alone (25.9%) versus chemoradiation (8.4%) and RT-alone (7.7%) (p=0.252). G3 tumors demonstrated improved PFS and OS (26 and 42-months, respectively) versus serous (17 and 30-months, respectively), carcinosarcoma (14 and 24-months, respectively) and CC (24 and 30-months respectively) (p=0.002, p<0.001). Chemoradiation was superior to chemotherapy-alone and RT-alone in PFS (p<0.001) and OS (p<0.001).

Conclusion The majority of stage IIIC HGEC recurs. Chemoradiation was associated with improved survival and less retroperitoneal recurrence versus chemotherapy-alone. G3 tumors demonstrated improved survival compared other histologies regardless of adjuvant treatment modality.

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262 **PRE-OPERATIVE WAIT TIMES IN HIGH RISK ENDOMETRIAL CANCER: DO SURGICAL DELAYS IMPACT PATIENT SURVIVAL?**

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Objectives Practice guidelines advocating for the regionalization of endometrial cancer surgery to gynecologic oncologists (GO) practicing in designated gynecologic oncology centres were released by Cancer Care Ontario in June 2013. We sought to determine the impact this policy had on contemporary surgical wait times, and whether longer wait time to surgery is a predictor of survival in patients with high risk endometrial cancer.

Study Methods This was a retrospective cohort study, which included patients diagnosed with non-endometrioid high-risk endometrial cancer (serous, carcinosarcoma, clear cell, and undifferentiated) between 2003 and 2017. A cut point of January 2014 was chosen to allow 6 months for knowledge translation and define 2 regionalization periods.

Results We identified 3518 patients with high risk endometrial cancer. Patients who had surgery with a GO had a median surgical wait time from diagnosis to hysterectomy of 55 days compared to 59 days pre-regionalization (p=0.0002), and from first GO consultation to hysterectomy of 29 days compared to 32 days pre-regionalization (p=0.0006). Survival was worst for patients who had surgery within 14 days of diagnosis (HR death 1.94, 95%CI 1.48–2.54), indicating disease severity. Decreased survival occurred with surgical wait times of more than 45 days from the patient's first GO appointment (HR death 1.19, 95%CI 1.04–1.36).

Conclusion Regionalization of surgery for high risk endometrial cancer has not had a negative impact on surgical wait times. Impact on survival is seen with patients who have surgery more than 45 days after surgical consultation.

IGCS20_1275

263 **DISCORDANT MISMATCH REPAIR PROTEIN EXPRESSION IN SYNCHRONOUS ENDOMETRIAL AND OVARIAN CANCERS**

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Abstract 263 Table 1 Concordance of mismatch repair (MMR) immunohistochemistry (IHC) and microsatellite instability (MSI) results between ovary and endometrium for five cases with Lynch syndrome

Case	Germline Mutation	MMR IHC in Ovary	MMR IHC in Endometrium	MSI in Ovary	MSI in Endometrium	MMR IHC Concordance between Ovary and Endometrium	MSI Concordance between Ovary and Endometrium
1	MSH6	MSH6 deficient	MSH6 deficient	MSI-H	MSS	Y	N
2	MSH6	MSH6 deficient	MSH6 deficient	MSI-H	MSS	Y	N
3	MLH1	MLH1/PMS2 deficient	MLH1/PMS2 deficient	MSI-H	MSI-H	Y	Y
4	PMS2	Intact	Intact	MSS	MSS	Y	Y
5	MSH6	MSH6 equivocal	MSH6 deficient	MSI-H	MSI-H	N	Y

Abbreviations: MSI-H, microsatellite instable; MSS, microsatellite stable

Objectives There is no established screening strategy for Lynch syndrome (LS) in synchronous endometrial (EC) and ovarian cancers (OC). Most centers use mismatch repair (MMR) immunohistochemistry (IHC) on endometrium only. We aim to examine the concordance in MMR expression between tumor sites in synchronous EC/OC.

Methods Thirty women with newly diagnosed synchronous EC/OC were prospectively recruited from three cancer centers in Ontario, Canada. Tumor sites were assessed for MMR deficiency by IHC and MSI testing. All women underwent germline testing for MMR mutations.

Results Out of 30 cases, twelve cases (40%) were either MMRd or MSI-H, with 5 (17%) confirmed to have a pathogenic germline mutation: 3 MSH6, 1 MLH1 and 1 PMS2. MMR testing by IHC took place in both ovary and endometrium in 27 cases and results were discordant between two sites in 2 cases (7%). MSI testing in both sites took place in 24 cases, and results were discordant in 2 cases (8%). Out of the 5 cases with confirmed LS, performing IHC alone on endometrium would have missed the diagnosis in 1 case, and performing MSI testing alone on endometrium would have missed the diagnosis in 3 cases, which all had a MSH6 mutation. One case of LS was missed by both IHC and MSI testing.

Conclusions The incidence of LS was high in women with synchronous EC/OC (17%). Given the discordance in IHC and MSI results at the two tumor sites, consideration should be given to direct germline testing in all cases of synchronous EC/OC.

IGCS20_1277

265 IMPACT OF MISMATCH REPAIR PROTEIN AND PD-L1 EXPRESSION FOR THERAPEUTIC STRATIFICATION IN JAPANESE OVARIAN CLEAR CELL CARCINOMA

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Objective Ovarian clear cell carcinoma (OCCC) is a rare type of epithelial ovarian cancer that behaves comparable to a distinct entity. Novel genomic and immunological profiling-based strategies targeting OCCC remain unavailable. ARID1A, which is one of the most frequently mutated genes in OCCC, could be a druggable target as well as a regulator of mismatch repair (MMR). Most of the mutated neoantigens in MMR-deficient cancers sensitize them to immune checkpoint blockade. However, the role and frequency of MMR deficiency in OCCC are still poorly understood. We aimed to evaluate the abnormal expression frequency of MMR and PD-L1 proteins in OCCC for identifying the effective OCCC population with immune checkpoint blockade.

Methods The study cohort comprised 113 patients with OCCC treated at a single institution. Protein expression levels in ARID1A, MLH1, PMS2, MSH2, MSH6, and PD-L1 were evaluated by immunohistochemistry (IHC). We investigated the correlations between immunoreactivity for MMR/PD-L1 and clinicopathological parameters including ARID1A status.

Results MMR proteins disappeared in two cases (1.8%), specifically those who had synchronous double cancer with endometrial carcinoma and a family history of Lynch syndrome-related tumor. PD-L1 expression was diffused in 17 cases (15.0%). The diffused PD-L1 expression was significantly associated with ARID1A expression loss ($p = 0.003$), but no other correlations existed between PD-L1 expression and clinical parameter.

Conclusions Although only few Japanese OCCC cases showed MMR deficiency as evaluated by IHC, immune checkpoint signals were activated even in MMR-intact OCCC, possibly through ARID1A interaction.

IGCS20_1278

266 INTRA-EPITHELIAL SPREADING OF CERVICAL SQUAMOUS CELL CARCINOMA TO THE UPPER GENITAL TRACT

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Abstract 266 Table 1 Clinical characteristics of cervical squamous cell carcinoma involving the upper genital tract

Case No.	Age	Menopause	Clinical presentation	TCT	Cervix tumor size (cm)	Clinical Stage	Treatment	Post operation treatment	Follow up (months)	Prognosis	Uterine apoxesis	Pre operation condition
1	72	Y	bleeding	NA	NED	IA1	TAH+BSO	NO	48	AOD	Y	
2	53	Y	NA	HSIL	NED	IA2	TAH+BSO	R	96	AOD	N	
3	41	N	bleeding	NA	2	IB1	TAH+BSO+LN	C+R	39	AOD	N	chemotherapy
4	63	Y	NA	NA	1	IB1	TAH+BSO+LN	NA	NA	AOD	NA	NA
5	59	Y	discharge	HSIL	2.2	IB1	TAH+BSO+LN	C+R	72	AOD	N	
6	60	Y	bleeding	NA	3.5	IB1	TAH+BSO+LN	C+R	75	AOD	Y	thyroid hypo function
7	59	Y	bleeding	HSIL	1.5	IB1	TAH+BSO+LN	C+R	75	AOD	N	PTC
8	48	N	bleeding	HSIL	2.5	IIA	TAH+BSO+LN	C+R	86	AOD	N	
9	55	Y	bleeding	ASC-H	NA	IIA	TAH+BSO+LN	C+R	22	DOD	N	chemotherapy
10	52	Y	bleeding	NA	5	IIIB	TAH+BSO+LN	C+R	71	AOD	Y	Immune deficiency
11	46	N	bleeding	ASC-H	4	IIIB	TAH+BSO+LN	C+R	62	AOD	N	chemotherapy
12	56	Y	Bleeding	NEG	1.5	IB1	TAH+BSO+LN	C+R	1	AOD	Y	N
13	54	Y	bleeding	HSIL	1	IB1	TAH+BSO+LN	C+R	12	AOD	N	
14	58	Y	bleeding	NA	NA	IA1	TAH+BSO	C+R	20	AOD	N	
15	50	Y	NO	HSIL	NED	0	TAH+BSO	C+R	54	AOD	Y	

NA, not available; HSIL, high-grade squamous intraepithelial lesion; ASC-H, atypical squamous cells–cannot exclude high grade squamous intraepithelial lesion; TAH, total pelvic hysterectomy; BSO, bilateral salpingooophorectomy; LN, lymphoadectomy; C, chemotherapy; R, radiation therapy; AOD, alive without disease; AWD, alive with disease; PTC, papillary thyroid carcinoma.