

for existing 1st-line treatment are not well understood in Europe.

Methodology Endometrial Cancer Health Outcomes-Europe-1st-Line (ECHO-EU-1L) is a multicenter, retrospective, chart review study in patients diagnosed with recurrent or aEC across the United Kingdom (UK), France, Germany, Italy, and Spain. Physicians extracted data from medical records of adult female patients diagnosed with recurrent or aEC (Stage III or IV) initiating 1st-line systemic therapy between July 1, 2016 – March 31, 2020. Data included patient demographics, clinical/treatment characteristics, and clinical outcomes. Data were de-identified before conducting analyses. Kaplan-Meier analyses were performed to estimate time-to-treatment discontinuation, real-world progression-free survival (rwPFS) and overall survival (OS). The study was IRB-approved in respective countries.

Results At 1st-line initiation, median age of 244 eligible patients was 69 years, 49.6% had endometrioid carcinoma histology, and 76.7% had an ECOG status of 0/1. For 1st-line therapy, 227 (93%) received chemotherapy-based regimen (carboplatin plus paclitaxel (CP) most common), while 7% received hormonal or other therapy. After a median of 3 months on 1st-line therapy, 163 (66.8%) patients reached an overall response; 70 (43%) eventually lost response. During the 19-month median follow-up, 233 (96%) discontinued after a median of 5 months. Median OS from 1st-line initiation was 21 months (95% CI:18.0–23.0) and median rwPFS was 12 months (95% CI:11.0–14.0).

Conclusion In Europe, CP is the standard 1st treatment for recurrent or aEC patients. A third of patients do not respond to CP therapy; patients had poor outcomes with median survival <2 years and median PFS of 1 year. Overall, there seems to be significant unmet medical need and novel therapies could improve outcomes in this patient population.

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VITAMIN D RECEPTOR AND CELLULAR RETINOL-BINDING PROTEIN-1 IMMUNOHISTOCHEMICAL EXPRESSION IN NORMAL, HYPERPLASTIC AND NEOPLASTIC ENDOMETRIUM: POSSIBLE DIAGNOSTIC AND THERAPEUTIC IMPLICATIONS

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Introduction/Background We conducted this study to assess the effect of VDR and CRBP-1 immunohistochemical expression on the endometrium and to explore their role in endometrial cancer carcinogenesis

Methodology This study comprised two hundred paraffin-embedded endometrial tissue samples diagnosed as 42 and 63 proliferative and secretory endometrium respectively, 45 endometrial hyperplasias with atypia and 50 endometrial carcinomas (25 low-grade and 25 high-grade endometrial carcinomas). The immunohistochemical method was done to determine the expression of VDR and CRBP-1.

Results VDR was strongly expressed in 8 (17.8%) cases with endometrial hyperplasia, 15 (60%) cases with low grade endometrial carcinoma, and 22 (88%) cases with high-grade endometrial carcinoma. While CRBP1 overexpression was noted in

cases with proliferative endometrium, secretory endometrium and endometrial hyperplasia with atypia, 37 (88.1%), 56 (88.9%) and 3 (6.7%) cases respectively and all malignant cases showed negative expression.

Conclusion Increased VDR expression and reduced CRBP-1 expression are associated with malignant features of the endometrium with a significant statistical difference of immunoreactivity between groups of normal endometrium, hyperplastic changes & carcinoma. Our data suggested that increased VDR expression is partly associated with endometrial cancers through a premalignant phase. Also, increased VDR and reduced CRBP-1 expression are associated with the progression of endometrial carcinoma with higher grades.

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REAL-WORLD PREVALENCE OF MICROSATELLITE INSTABILITY TESTING AND RELATED STATUS IN PATIENTS WITH RECURRENT OR ADVANCED ENDOMETRIAL CANCER INITIATING FIRST LINE OF THERAPY IN EUROPE

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Introduction/Background Recently approved therapies have proven clinical benefits for recurrent or advanced endometrial cancer (aEC) patients with known microsatellite instability (MSI) status, highlighting the prognostic significance of this biomarker. There is little information available on the prevalence of MSI/mismatch repair (MMR) testing in Europe. The objective of this study was to understand the real-world use of MSI/MMR testing in Europe.

Methodology Endometrial Cancer Health Outcomes-Europe-1st-Line (ECHO-EU5-1L) is a multicenter, retrospective, chart review study conducted in the United Kingdom (UK), France, Germany, Italy, and Spain. Physicians extracted data from medical records of female patients (≥18 years-old) diagnosed with recurrent or aEC (Stage III or IV) initiating 1st-line systemic therapy between July 1, 2016 – March 31, 2020. Data included patient demographics, MSI/MMR tumor status, and clinical/treatment characteristics. Data were de-identified before analyses. The study was IRB-approved in respective countries.

Results Of the 57 participating physicians, 94.7% were medical oncologists, 56% were in practice for ≥15 years, 96.5% practiced in urban settings, and 91.2% had hospital-based practices. The median age of 244 patients with recurrent or aEC at 1st-line therapy initiation was 69 years, 184 (75%) were White/Caucasian, and 121 (49.6%) had endometrioid carcinoma histology. A total of 88 patients (36.1%) underwent testing to determine MSI/MMR status. Prevalence of testing was 64%, 44%, 29%, 22%, and 20% in Spain, France, Germany, Italy, and the UK, respectively. Of those patients tested, 72 (81.8%) had non-MSI-high/MMR-proficient (pMMR) tumors, 13 (14.8%) had MSI-high/MMR-deficient (dMMR) tumors, and 3 (3.4%) had mixed results (table 1).

Abstract 2022-RA-712-ESGO Table 1 MSI/MMR testing prevalence in women with recurrent or aEC in Europe

Variable	Statistic or Category	All (N = 244)	UK (N = 49)	France (N = 50)	Germany (N = 48)	Italy (N = 49)	Spain (N = 48)
Any MSI/MMR testing (IHC or PCR), N (%)	Not tested	156 (63.9)	39 (79.6)	28 (56)	34 (70.8)	38 (77.6)	17 (35.4)
	Yes	88 (36.1)	10 (20.4)	22 (44)	14 (29.2)	11 (22.4)	31 (64.6)
PCR/IHC test administration among those tested, N (%)	Before treatment initiation	56 (63.6)	10 (100)	11 (50)	6 (42.9)	5 (45.5)	24 (77.4)
	After treatment initiation	32 (36.4)	0 (0)	11 (50)	8 (57.1)	6 (54.5)	7 (22.6)
	MSI/MMR Status among those tested, N (%)*						
	Non-MSI-H/pMMR	72 (81.8)	9 (90)	19 (86.4)	8 (57.1)	9 (81.8)	27 (87.1)
	MSI-H/dMMR	13 (14.8)	1 (10)	2 (9.1)	5 (35.7)	2 (18.2)	3 (9.7)
	Mixed	3 (3.4)	0 (0)	1 (4.5)	1 (7.1)	0 (0)	1 (3.2)

Abbreviations: aEC, advanced endometrial cancer; dMMR, mismatch repair protein deficient; IHC, immunohistochemistry; MMR, mismatch repair; MSI, microsatellite instability; MSI-H, high microsatellite instability; Non-MSI-H, non-high microsatellite instability; PCR, polymerase chain reaction; pMMR, mismatch repair proficient.

* Patients were categorized as either 1) Non-MSI-H/pMMR: Microsatellite stable (MSS), MSI-Low or MMR proficient (pMMR), 2) MSI-H/dMMR: MSI-High (MSI-H) or MMR deficient (dMMR), 3) Mixed results: patients with both IHC and PCR tests with results indicating overlapping tumor status (non-MSI-H with dMMR or MSI-H with pMMR).

Conclusion MSI/MMR testing rates among aEC patients in Europe are low and vary across countries. The majority of tested patients had non-MSI-high/pMMR tumors. Knowledge of MSI/MMR testing may be helpful for optimal utilization of targeted therapies in Europe.

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ENDOMETRIAL CANCER ORGANOID CAN RELIABLY BE USED AS REPLICAS OF PRIMARY TUMOUR IN ENDOMETRIAL CANCER RESEARCH

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Introduction/Background Organoids are increasingly being used as complex, multi-dimensional, multi-cell structures resembling entire organs and have now been derived from a variety of tissues.

Methodology We established endometrial organoid cultures from pipelle biopsies of 11 patients with endometrial cancer (EC) (7 endometrioid, 3 serous, 1 clear cell) and 3 patients with benign conditions. Organoids were grown in Matrigel and medium supplemented with growth factors, Rspodn-1, Noggin, A83-01 and nicotinamide. The genomic and epigenomic features of organoids and parent tissue were compared in pairs and by histological type using targeted gene sequencing and whole-genome DNA methylation profiling.

Results The genetic variations and mutations in seven genes (*PTEN*, *ARID1A*, *PIK3CA*, *POLE*, *CTNBNB1*, *KRAS*, *TP53*) were largely shared by primary tumours and EC-derived organoids and exhibited histological type-specific characteristics. Similarly, the DNA methylation fingerprint was preserved in cultured endometrial cancer organoids with only few differentially methylated positions (DMPs) compared to tumour tissue. EC epigenetic profiles were distinct to benign endometrial organoids and clustered together according to histotype.

Conclusion Endometrial cancer organoids can reliably be used as replicas of primary tumour in endometrial cancer research.

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PELVIC SENTINEL LYMPH NODE DISSECTION IN ENDOMETRIAL CANCER

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Introduction/Background Sentinel lymph node (SLN) biopsy is an alternative staging approach in women with early-stage endometrial carcinoma. The SLN approach is introducing 'precision medicine' to the surgical management of gynaecological cancers, providing a comprehensive evaluation of high-yield lymph nodes. This approach improves our ability to detect small-volume metastatic disease whilst reducing intra-operative and post-operative morbidity associated with systematic lymphadenectomy. Although the majority of clinicians in Europe/USA have recognised the value of SLN biopsy in endometrial carcinoma and introduced this as part of clinical practice, there is ongoing debate regarding its role in very low-risk patients and patients at high risk of nodal metastasis. The significance of low-volume metastasis is not fully understood, and there is no consensus in regard to how the presence of isolated tumour cells should guide adjuvant therapy.

Methodology We present a case of a forty-seven year old woman presenting with grade III, radiological stage IIIc1 endometrioid endometrial carcinoma. A pre-operative MRI have revealed a suspicious 9 mm left external iliac lymph node. She underwent a total laparoscopic hysterectomy, right sentinel lymph node biopsy and systematic left pelvic lymph node dissection.

Results Final histopathology revealed a grade III, stage IA endometrioid endometrial carcinoma, ER+, P53 wild type, MMR proficient. She underwent an uneventful post-operative recovery. Following counselling, she declined vault brachytherapy.

Conclusion SLN biopsy is increasingly used as an alternative to systematic lymphadenectomy in surgical staging in endometrial carcinoma, has gained significant acceptance and is applied in many centres. Robust data exists regarding the accuracy of SLN biopsy for nodal staging in all risk-categories of endometrial carcinoma, but prospective data on oncological outcomes are lacking.

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IS LAPAROSCOPY A SAFE APPROACH FOR TREATMENT OF STAGE II ENDOMETRIAL CANCER? A SINGLE CENTRE 10 YEARS EXPERIENCE

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Introduction/Background Although minimal invasive approach has been established as the standard surgical treatment in early stage endometrial cancer, the oncological safety of laparoscopy when cervix is involved is not based on strong evidence. Our retrospective analysis aims to investigate whether there is any difference on overall and cancer specific survival between patients treated by laparoscopy and laparotomy for stage II endometrial cancer in a single Cancer Centre over a decade.

Methodology Our cohort consisted of all patients operated in Oxford University Hospitals Trust between 2010 and 2020 with microscopically proven stage II endometrial cancer. The audit was registered according to the local requirements with registration number 5832. Categorical variables were compared using chi-square test and continuous variables with independent samples t-test. Survival rates were determined from