According to our findings, abnormal uterine bleeding is considered the guiding symptom for the diagnosis of this oncological pathology, being to one of the most frequent reasons to demand a gynecological evaluation.

Endometrial polyps are the main observed lesions in our cohort, in both ultrasound exam and hysteroscopy.

424 LSR PROMOTES TUMOR PROGRESSION BY REGULATING SIGNAL TRANSDUCTION OF APOPTOSIS AND FERROPTOSIS IN ENDOMETRIAL CANCER

[1]Y Nagase*, [1]K Hiramatsu, [2]M Funauchi, [1]S Nakagawa, [1]S Matsuzaki, [1]E Kobayashi, [1]T Kimura, [2]S Serada, [1]Y Ueda, [2]T Naka, [1]T Kimura. *[1]Osaka University Graduate School of Medicine, Department of Obstetrics and Gynecology, Osaka, Japan; [2]Iwate Medical University, Institute for Biomedical Sciences Molecular Pathophysiology*

10.1136/ijgc-2021-ESGO.144

Introduction/Background* Since advanced endometrial cancer (EC) remains a disease with a poor prognosis, the development of novel therapeutic agents are warranted. Previously, we identified lipolysis-stimulated lipoprotein receptor (LSR) as a highly expressed molecule in ovarian cancer (OC) cells and developed an anti-LSR monoclonal antibody. The antibody significantly suppressed tumor growth in EC as well as OC, however the mechanism is largely unclear, and the function of LSR in cancer cells needs to be elucidated. In this study, we focused on apoptosis and ferroptosis in programmed cell deaths and investigated the function of LSR using in vitro and bioinformatic analysis.

Methodology We evaluated LSR expression by immunohistochemistry and analyzed overall survival (OS) and clinicopathological features in 228 EC patients. To investigate the mechanism by which LSR affects the prognosis of EC patients, the pathway enrichment analysis was conducted using published proteomic data of EC. In vitro analyses were performed using two human EC cell lines (HEC1 and HEC116) and the activity of signaling pathways were examined by western blotting.

Result(s)* Patients were divided into two groups based on LSR expression; High (strongly stained in ≥25% of the lesion, n=153) and Low (strongly stained in <25% of the lesion, n=75) groups. 5-year OS rate in High group was significantly lower than Low group (hazard ratio: 3.53, 95% confidence interval: 1.35 – 9.24, p=0.01). The pathway analysis demonstrated that proteins correlated with high LSR expression were enriched in MAPK signaling pathway, glutathione metabolism, and cysteine and methionine metabolism. In vitro and western blot analyses showed that LSR-knockdown suppressed EC cell proliferation and the phosphorylation of MEK/ERK signaling pathway including MEK1/2, ERK1/2, and p90RSK. ERK1/2-knockdown also suppressed cell proliferation, suggesting that LSR contributed to EC cell proliferation through the MEK/ERK pathway, which is one of the apoptotic signaling pathway. In addition, LSR-knockdown suppressed the expression of cystine/glutamate antiporter (xCT) and GPX4, which inhibit ferroptosis by regulating cystine/glutamine metabolism, as determined by western blot analysis.

Conclusion* LSR contributes to tumor progression and poor prognosis by regulating apoptotic and ferroptotic signaling pathways in endometrial cancer. LSR may be a novel therapeutic target molecule in EC.

428 COMPARING CHARACTERISTICS OF ENDOMETRIAL CANCER IN SOUTH ASIAN AND WHITE ETHNICITY WOMEN IN ENGLAND

[1;2]S Mohammed, [1;3]K Polymeros, [3]R Wickham-Joseph, [3]I Luqman, [3]C Charadva, [3]T Morris, [1;3]E Moss*. *[1]Leicester Cancer Research Centre, Leicester, UK; [2]University of Leicester, Leicester Clinical Trials Unit, Leicester, UK; [3]University Hospitals of Leicester, Gynaecological Oncology, Leicester, UK*

10.1136/ijgc-2021-ESGO.145

Introduction/Background* It is not known whether differences exist in the patient and endometrial cancer (EC) characteristics of South Asian patients currently living in England compared to women of White ethnicity.

Methodology A retrospective study of EC cases diagnosed at the University Hospitals of Leicester, UK between 2003-2018 was undertaken. Additional information on a subset of patients was available for patients recruited between January 2016 and January 2020.

Result(s)* A total of 1884 cases were included, 13% of South Asian ethnicity. South Asian women were diagnosed at a significantly younger age, mean age 60.3 years, compared to women of White ethnicity, 66.9 years, mean difference = 6.6 years (95% CI 5.1 to 8.1), p < 0.001. Rising BMI in the White ethnicity group significantly correlated with younger age at diagnosis (p < 0.001), however this association was not seen in South Asian patients. Logistic regression analysis was performed. After adjusting for the diabetes status and BMI, South Asian patients were almost three time more likely to be diagnosed with EC below the age of 55 years, as compared to White ethnicity patients, odds ratio = 2.85 (95% CI 2.01 to 4.04), p < 0.001. Analysis of a subset of 216 cases (40 South Asian and 176 White ethnicity) identified that the number of South Asian patients who were pre-menopausal at diagnosis was more than double that in the White ethnicity group, 8 of 40 cases (20%) compared to 16 of 176 cases (9.1%), (p=0.048). For the patients who were postmenopausal there was no difference in the age of menopause, median age 51 years for both groups (p=0.408).

Conclusion* There are significant differences in the demographic characteristics between co-located South Asian and White ethnicity patients diagnosed with EC, in particular age at diagnosis and greater proportion of premenopausal cases seen in the South Asian ethnicity group. Further investigation is needed to explain these differences, including dietary and activity differences, and to determine their impact on suspected cancer referral criteria.

434 CYTOREDUCTIVE SURGERY IN STAGE IV ENDOMETRIAL CANCER: A RETROSPECTIVE MULTICENTRE COHORT STUDY

[1;2]L Nooij, [1]M Uijterwaal, [3]C Lok, [4]C De Kroon, [1]J Kasius, [5]R Zweemer, [6]N Horeweg, [7]T Bosse, [5]J Van der Marel*. *[1]Amsterdam University Medical Center, Amsterdam, Department of Gynaecology, Amsterdam, Netherlands; [2]Leiden University Medical Center, Department of Gynaecology, Leiden, Netherlands; [3]Antoni van Leeuwenhoek hospital, Department of Gynaecology, Amsterdam, Netherlands; [4]Leiden University Medical Center, Department of Gynaecology, Leiden; [5]University Medical Center Utrecht, Department of Gynaecology, Utrecht, Netherlands; [6]Leiden University Medical Center (LUMC), Department of Radiation Oncology, Leiden, Netherlands; [7]Leiden University Medical Center, Department of Pathology, Leiden, Netherlands*

10.1136/ijgc-2021-ESGO.146

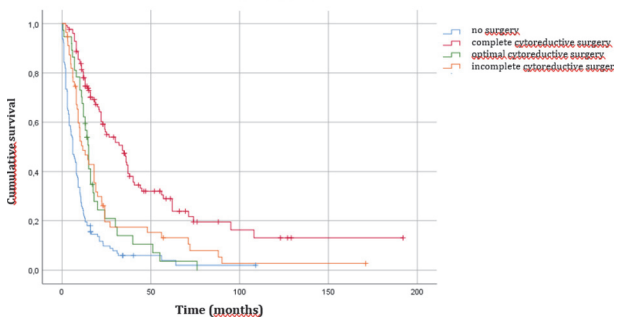
Introduction/Background* The most effective treatment strategy for FIGO stage IV endometrial cancer (EC) is currently unclear. Cytoreductive surgery is considered to improve overall survival, but this is based on small series. Further insight in the heterogeneity of this patient population's tumours and the impact of the completeness of surgery is lacking.

This study aimed to determine overall survival benefit of cytoreductive surgery in patients with FIGO stage IV endometrial cancer that underwent complete, optimal or incomplete cytoreduction compared to no surgery at all.

Methodology We performed a retrospective national multicenter cohort study analyzing retrospective data from Jan 1, 2000, to Dec 31, 2018, from patients with FIGO stage IV EC, treated in five different hospitals in The Netherlands. Patients who underwent surgery for recurrent EC or patients with a uterine sarcoma were excluded from the analysis. Kaplan Meier analysis was performed to estimate overall survival and multivariable analysis was performed with the Cox proportional hazard model. Molecular classification is currently being conducted to evaluate correlation between molecular EC class and outcome.

Result(s)* Characteristics of the 347 patients included are shown in table 1. The most common histological subtype was endometrioid adenocarcinoma (146 of 347, 42,1%). Complete cytoreductive surgery was achieved in 126 of 347 patients (36.3%), while in 37 patients (10.7%) optimal cytoreductive surgery was achieved and in 56 patients (16,1%) incomplete cytoreductive surgery. 128 patients (36,9%) did not receive surgical treatment. Median overall survival was 13 months (figure 1). Complete cytoreductive surgery led to an OS of 34 months (p=0.00, HR 0.34, 95% CI: 0.26-0.45%) compared to 15 months for patients who underwent optimal cytoreductive surgery and 11.6 months for patients who underwent incomplete cytoreductive surgery. Patients who did not receive surgical treatment had a median OS of 6 months. If possible, the molecular EC classification data will be presented at the ESGO congress.

Conclusion* Complete cytoreductive surgery leads to an extended overall survival in patients with FIGO stage IV EC in comparison to optimal or incomplete cytoreductive surgery or to no surgery at all. Our data support omission of surgical treatment when complete cytoreduction cannot be achieved.



Abstract 434 Figure 1 Kaplan-Meier plots showing the overall survival curves of patients with stage IV endometrial cancer that underwent complete, optimal or incomplete cytoreductive surgery or no surgery at all

Abstract 434 Table 1 Patient characteristics

Patient characteristics (n=347)	
Age at diagnosis (years)	67 (33-93)
Histological subtype	146 (42.1%)
Endometrioid adenocarcinoma	96 (27.7%)
Serous carcinoma	15 (4.3%)
Clear cell carcinoma	90 (25.9%)
Other	
Result of surgery	126 (36.3%)
Complete cytoreductive surgery	37 (10.7%)
Optimal cytoreductive surgery	56 (16.1%)
Incomplete cytoreductive surgery	128 (36.9%)
No surgery	
Overall survival in months (median)	13 (11.1 – 14.9)

441 NEOADJUVANT RADIOTHERAPY FOLLOWED BY SIMPLE HYSTERECTOMY IN LOCALLY ADVANCED ENDOMETRIAL CANCER, STAGE II

M Laseca Modrego*, O Arencibia Sanchez, D González García-Cano, AF Rave Ramirez, A Martín Martínez. *Maternal Child Hospital of the Canary Islands, Oncology Gynecology Department, Las Palmas de Gran Canaria, Spain*

10.1136/ijgc-2021-ESGO.147

Introduction/Background* Locally advanced endometrial cancer extending to the cervix is a rare presentation of uterine cancer (10-15%). Most of them, are stage II hidden with cervical microscopic extension discovered at the time of the pathological results. A lower percentage of stage II are diagnosed preoperatively. For the latter there, are two action plans: a) radical surgery (radical hysterectomy with bilateral salpingo-oophorectomy, pelvic lavage and lymphadenectomy), b) neoadjuvant radiotherapy followed by simple surgery (Simple hysterectomy with bilateral salpingo-oophorectomy).

The main objective was to know the overall survival, analyzed at 3 and 5 years, and the disease-free survival between those patients with a preoperative diagnosis of endometrial cancer stage II versus those patients with postoperative diagnosis.

Methodology Longitudinal cohort study with retrospective analysis was carried out in a third level hospital. Patients diagnosed with endometrial cancer stage II, FIGO 2009, were included. Study period 1998 to 2018.

Two cohorts were formed; women who initially received neoadjuvant radiation therapy followed by hysterectomy (preoperative diagnosis stage II) and women who received primary surgical followed by radiation (postoperative diagnosis stage II).

The overall survival, 3 and 5 years, and disease-free survival were analyzed.

Result(s)* 125 patients were included in the study. 29 patients received neoadjuvant treatment with radiotherapy and 96 patients did not receive neoadjuvant treatment. The rate of overall survival at 3 and 5 years was 78.6% in the 'neoadjuvant' cohort and 86.3% and 77.9% respectively in the 'no neoadjuvant' cohort, not finding differences statistically significant between both groups (p= 0,761).

No differences were in terms of disease relapses, local and distance, and in terms of disease-free survival.

Conclusion* The application of neoadjuvant radiotherapy (brachytherapy plus external radiotherapy) followed simple hysterectomy in our study population, allows to match the prognosis of patients with clinical endometrial cancer stage II, initially considered less favorable.