Methodology Retrospective analysis of women under 45 years old diagnosed of epithelial and non-epithelial ovarian cancer during the last 10 years.

Result(s)* 25 women under 45 years with OC were reviewed. Mean age at diagnosis was 36.27 years (SD 5.77; min:21, max: 43). Most of the tumors (52% N:13) were epithelial serous OC (Clear cells: 20.0% N:5; Endometrioid: 12.0 N:3; Mucinous: 8.0% N:2; Endodermal sinus: 4.0% N:1; Granulosa cell: 4.0% N: 1). Most of the patients were diagnosed in advanced tumoral stages (III-IV: 68.0%, N:17). Only 24.0% of patients were asymptomatic (N:6) at the time of diagnosis. Abdominal pain (44.0% N:11) or abdominal distension (40.0% N:10) were the most frequent complain. Other clinical aspects included: intestinal obstruction (N:4), dyspnoea (N:4), deep venous thrombosis (N:2), fever (N:1) or cerebellar degeneration (N:1). US study revealed an extended abdominal mass in most cases with a mean diameter of 10.09 cm (5.72 SD, max: 20 cm; min:4 cm). US suspicion of malignancy was high or intermediate in 77.27% (N:17%). Ascites was found in 26.09% (N:6). CT imaging completed the preoperative study detecting extrapelvic affectation in 50.0% of cases (N: 12) with liver extension in 29.17% (N:7), retroperitoneal dissemination in 45.83% (N:11) and supradiaphragmatic disease in 6 patients (25.0%). Serum Ca125 was normal in 5 patients (22.72%): 1 high grade epithelial serous OC, 2 clear cell OC, 1 endometrioid carcinoma, 1 granulosa cell OC.

Conclusion* Early diagnosis of OC in premenopausal women is difficult. Clinical aspects were inespecific. Ultrasound features showed a big pelvic mass in most cases with high grade of suspicion of malignancy. CT imaging completed the preoperative study. Ca 125 is not always a good marker for the diagnosis in this group of patients.

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MINIMALLY INVASIVE SECONDARY CYTOREDUCTIVE SURGERY FOR CELIAC AND CARDIOPHRENIC ISOLATED NODAL RECURRENCE OF OVARIAN CANCER

¹V Gallotta, ¹M Loverro*, ¹R Ergasti, ²D Nachira, ¹C Conte, ¹V Gallitelli, ³G Scaglione, ¹A Fagotti, ¹G Scambia. ¹Università Cattolica del Sacro Cuore, Fondazione Policlinico Universitario A. Gemelli IRCCS, Department of Woman and Child Health and Public Health, Rome, Italy; ²Fondazione Policlinico Universitario A. Gemelli IRCCS, Roma, Italy; ³Università Cattolica del Sacro Cuore Sede di Roma, Roma, Italy, Department of Thoracic Surgery, Rome, Italy; ³Fondazione Policlinico Universitario A. Gemelli IRCCS, Roma, Italy, Gynecopathology and Breast Pathology Unit, Rome, Italy

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Introduction/Background* Despite the advances in cytoreductive efforts and frontline chemotherapy in advanced ovarian cancer (OC), recurrence is a common event, with >70% of women experiencing relapse within two years of from diagnosis. The standard treatment for recurrent ovarian cancer (ROC) patients has been traditionally represented by systemic chemotherapy; however, this concept has been recently recognized as presenting a greater level of complexity given the influence of histotype, status of BRCA genes, previous antiangiogenic treatment and pattern of relapse presentation. Several retrospective studies, as well as randomized prospective trials suggested that secondary cytoreductive surgery (SCS) could provide better oncological outcomes in platinum-sensitive ROC patients, in case of complete cytoreduction, which has to be considered the goal to be achieved.

Methodology As far as lymph node relapse is concerned, some biological and clinical lines of evidence suggest that lymph

node recurrences from OC would be better managed with SCS than medical treatment alone, given a relatively more indolent clinical behaviour compared to parenchymal and peritoneal disease. However, the documentation of lymph nodes metastasis in the hepatoceliac and cardiophrenic region at the time of SCS might be considered as a challenging clinical and surgical scenario.

Although surgical management by minimally invasive surgery (MIS) could be expected to represent a demanding task in SCS, this video provides a step-by-step description of the surgical technique adopted for hepatoceliac and cardiophrenic lymph nodes resection.

Result(s)* No perioperative complications occurred. Blood loss was 50 mL. The patient was discharged on day 4 and resumed chemotherapy less than a month after surgery.

Conclusion* MIS is feasible and could be a viable option for selected cases of ROC, minimizing the intra- and post-operative complications.

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EVALUATING THE FEASIBILITY, MORBIDITY AND BENEFIT OF DIAPHRAGMATIC SURGERY IN ADVANCED OVARIAN CANCER. 74 CONSECUTIVE CASES OVER A 7 YEAR PERIOD

S Addley*, A Lechi, A Bali, V Asher, S Abdul, A Phillips. University Hospitals of Derby and Burton NHS Foundation Trust, Gynaecology Oncology

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Introduction/Background* Diaphragmatic disease may be present in 90% of patients with stage IIIc/IV ovarian cancer. Whilst diaphragmatic involvement previously represented a potential obstacle to complete cytoreduction, techniques and surgeon experience – and hence feasibility of diaphragmatic debulking – have evolved since first described in 1989. With the most important prognostic indicator being achievement of R0 status, a preparedness to undertake diaphragmatic procedures demonstrates maximal cytoreductive effort for optimal patient outcome.

Methodology All women undergoing diaphragmatic surgery for advanced tubo-ovarian or primary peritoneal carcinoma in a tertiary-referral cancer centre between 2014-2020 were identified and data collected retrospectively.

Result(s)* 74 patients were identified. Mean age was 63.7years. 78.4% (n=58) of cancers were tubo-ovarian and 21.6% (n=16) primary peritoneal. 51.4% (n=38) of patients had radiologically stage III disease; and the remainder (n=36) stage IV.

The frequency of diaphragmatic procedures increased from 3/year in 2014 to 19/year by 2020. 40.5% (n=30) of surgeries were undertaken as primary debulking and 59.5% (n=44) as delayed primary surgery. 95.9% (n=71) were undertaken in addition to other ultra-radical procedures – 97.3% (n=72) of cases being assigned high or intermediate surgical complexity scores. The majority of patients had right-sided diaphragmatic disease. In 74.3% (n=55) of case, diaphragmatic peritoneal stripping was performed; resection in 50% (n=37); and in 5.4% (n=4) ablation. R0 was achieved in 91.9% (n=68). No procedure-specific intra-operative complications occurred. Mean surgery time was 433minutes and blood loss 1242 millilitres.

All patients had planned post-operative admission to HDU/ITU. Mean length of in-hospital stay was 13.9days. 21

pulmonary complications occurred: 13.5% (n=10) developed pleural effusion requiring chest drain; 9.5% (n=7) pneumonia; 4.1% (n=3) pulmonary embolus and 1.4% (n=1) sub-splenic

Abstract 530 Figure 1

Abstract 530 Figure 2

haematoma. Median overall survival was 55 months (95% CI 33.4-77.6)

Conclusion* Surgeons should anticipate diaphragmatic disease in advanced ovarian or peritoneal cancer – and regard debulking of such an important prognostic factor. Diaphragmatic procedures appear feasible, without significantly increasing peri-operative morbidity in the context of ultra-radical surgery.

534 BRCA STATUS AND PLATINUM-SENSITIVITY IN ADVANCED OVARIAN CANCER: A PATHOLOGICAL EVALUATION AFTER NEOADJUVANT CHEMOTHERAPY

¹R Ergasti*, ¹R Tudisco, ¹C Marchetti, ²A Iervolino, ^{1,2}A Fagotti, ^{1,2}G Scambia. ¹Fondazione Policlinico Universitario Agostino Gemelli, IRCCS, Department of Woman, Child, and Public Health, Rome, Italy; ²Catholic University of Sacred Heart, Rome, Italy

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Introduction/Background* To investigate the association between the presence of BRCA1/2 mutations and the chemotherapy response score (CRS) in patients with advanced stage high-grade serous ovarian cancer (HGSOC) undergoing neoadjuvant chemotherapy (NACT) and interval debulking surgery (IDS).

Methodology We retrospectively collected patients with unresectable HGSOC, who were assessed for BRCA1/2 mutational status and underwent 3 or 4 cycles of NACT, in our Institution from 2016 to 2020. All patients received germline test on peripheral blood sampling or somatic test at diagnostic biopsy. In all patients, the omental specimen obtained at IDS was evaluated according to Bohm's CRS System.

Result(s)* Of 184 patients analyzed, 69 were BRCA1/2 mutation carriers (37.5%) and 115 were *wild type* (62.5%). In the *wild type* patients group, 80 patients had a CRS 1/2 (69.6%) and 35 patients had a CRS 3 (30.4%). In the BRCA1/2 mutation carriers group, 38 patients had a CRS 1/2 (55.1%) and 31 had a CRS 3 (44.9%), (p=0.034).

Conclusion* BRCA1/2 mutational status is significantly associated with a different response rate to chemotherapy, as assessed according to Bohm's CRS System. Whereas in BRCA1/2 mutation carriers there does not appear to be a greater predisposition to achieve a CRS 3 than a CRS 1/2, *wild type* patients appear to be more likely to have a CRS 1/2.

538 IDENTIFICATION OF MIRNA PANEL IN DIFFERENT TYPES OF ENDOMETRIOSIS AND OVARIAN CANCER

¹M Szubert*, ¹A Nowak, ¹JR Wilczynski, ²B Szymanska, ³D Domanska-Senderowska. ¹Medical University of Lodz, Poland, ¹Department of Gynecology and Obstetrics, Clinic of Surgical and Oncologic Gynecology, Lodz, Poland; ²The Central Scientific Laboratory (CoreLab) Medical University of Lodz, Lodz, Poland; ³Zakład Biomedycyny i Genetyki, Lodz, Poland

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Introduction/Background* Development of EAO (Endometriosis associated ovarian cancer) has been intensively studied in the last few years. Epigenetic regulation of genes could play an important role in this process. The objective of this study was to identify miRNAs which expression was dysregulated both in EAO and different types of endometriosis.