Methods Women with non-serous/mucinous OC were prospectively recruited from three cancer centers in Ontario, Canada. Tumors were assessed for defects in MMR by IHC and MSI testing. All women completed a family history assessment and underwent germline testing for LS. The performance characteristics were compared between the screening strategies compared to germline result.

Results Of 215 women, 185 had OC alone (86%) and 30 had synchronous OC and endometrial cancers (14%). Germline data was available for 189 women (88%). Twenty-eight were MMR deficient (MMRd) by IHC (13%; N = 215), one (0.5%) IHC equivocal and 19 (12%; N=162) were MSI-high (MSI-H). Of those with MMRd, 11 had germline mutation (39%; N=28). In total, thirteen women (7%); N = 189) had germline mutations: 3 MLH1, 7 MSH6, 1 MSH2 and 2 PMS2. Combined IHC and MSI testing after excluding MLH1 hypermethylated cases was the best screening strategy with sensitivity of 92.3%, specificity of 97.7%, PPV of 75% and NPV of 99.4%. Family history had the lowest performance characteristics with sensitivity of 55%.

Conclusions The most superior screening strategy to identify women with LS in this population is combined IHC and MSI testing after MLH1 hypermethylation testing and should be considered as standard of care.

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341 SURGICAL MORBIDITY OF LAPAROSCOPIC VS. OPEN SURGERY FOR BORDERLINE OVARIAN TUMORS: A SINGLE CENTER ANALYSIS

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Objective To evaluate the short-term morbidity in Borderline Ovarian Tumor (BOT) patients who underwent laparoscopic (LPS) vs. open abdominal laparotomic (LPT) surgery.

Methods We retrospectively analyzed data of consecutive patients treated for primary diagnosis of apparent early stage BOT at Del Ponte Hospital (Varese–Italy) between January 2004 and December 2019. Both radical and fertility-sparing treatments were included in our investigation. Demographic characteristics, operative outcomes and 30-day complications were evaluated and compared between the two surgical approaches.

Results We included data of 128 patients, 84 LPS and 44 LPT. Fifty-seven patients underwent fertility sparing surgery (LPS=31, LPT=26) while 71 patients underwent radical treatment (LPS=53, LPT=18, p=0.17). When comparing LPS vs LPT, median age at surgery was 45.5 vs 59 years old (p < 0.001), with 38.09% vs 59.9% patients in menopausal status, respectively (p=0.02). Ten (11.9%) and 14 (31.81%) patients had previous open abdominal/pelvic surgery in the LPS and LPT groups, respectively (p=0.0061). Charlson Comorbidity Index >3 was found in 5 (5.95%) vs. 15 (34.1%) patients (p=0.002). No significant differences were found in terms of parity, previous Caesarean section, previous minimally invasive abdominal/pelvic surgery, and race. Regarding the short-term morbidity, LPS was associated with less blood loss (50 ml vs 200 ml, p=0.01), need for perioperative blood transfusions (0% vs. 6.82%, p=0.005) and in-hospital complications (0% vs. 4.55%, p=0.04).

Conclusions Because of the favorable surgical outcomes, LPS should be considered the standard surgical approach for the treatment of patients with primary diagnosis of early stage BOT.

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342 COMPARATIVE ASSESSMENT OF SURVIVAL RATE IN ENDOMETRIAL CANCER INTERMEDIATE RISK

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Background To evaluate the long-term results of surgical (ST) and combined treatment (CT) techniques for endometrial cancer (EC) of intermediate risk in a prospective randomized study.

Methods 117 patients with an intermediate risk of EC received treatment at N.N. National cancer centre of Belarus. Patients were randomized for 3 groups.

The first group - patients who underwent ST (simple hysterectomy with bilateral salpingo-oophorectomy (H-BSO) and pelvic lymphadenectomy).

The second group - patients who underwent ST (the same volume of operation) with preoperative brachytherapy (PBT).

The third group - patients who underwent ST (the same level of operation) with adjuvant endovaginal brachytherapy (EBT).

Result We evaluate 5-year overall (OS), cancer-specified (CSS) and disease-free (DFS) survival rate in entire groups. In each group, OS, CSS and DFS survival rate was 87.8% (95% CI 80.7–93.3%), 91.4% (95% CI 84.8–95.8%) and 86.1% (95% CI 78.7–91.9%), respectively. Between all three groups, we don’t find any statistically significant differences in terms of OS, CSS, and DFS.

Between ST and CT statistically significant differences in OS parameters (p=0.568), CSS (p=0.483) and DFS (p=0.846) also weren’t obtained. There weren’t statistically significant differences between the endometrioid carcinoma Ib G1-2 and Ib G3 in terms of OS, CSS and DFS. There weren’t statistically significant differences between tumors with or without lymphovascular space invasion in terms of OS, CSS, DFS.

Conclusion Statistically significant differences in survival in ST and CT were not obtained for intermediate risk. Despite this, CT appears to be a more appropriate method of treatment, which allows strengthening local control.