**Introduction** Somatic molecular profiling is more important than ever, as precision treatment for ovarian cancer advances. Tumour material for profiling can be accessed via malignant ascites, however cancer cells are often sparse in ascites and cell-free DNA (cfDNA) is not well studied.

**Methods** Ascites-derived cfDNA from 14 patients (36–82 years), including 11 patients with sequential samples, was sequenced with the Illumina TSO-500 panel. Matched DNA from ascites-derived tumour cells (n=5) and archived FFPE-tissue from surgery (n=4) was sequenced using the same panel. cfDNA from one patient was additionally sequenced using an Oxford Nanopore Technology R9.4.1 MinION.

**Results** Abundant cfDNA was identified in all ascites samples (up to 660 ng/mL), achieving similar read alignment and improved coverage compared to cell or FFPE-derived DNA. Somatic driver mutations were detected in 100% of cfDNA samples at mutation fractions of up to 79%. All clinically known variants were identified in ascites cfDNA (including 6 in BRCA1 or BRCA2), except for one case, where a TP53 mutation identified in FFPE-DNA was absent in ascites due to the clonal loss of chromosome 17 p-arm in tumour evolution; indicated by a decrease in Oxford Nanopore sequencing reads per kilobase over 17p relative to 17q (p=0.0015). Tumour evolution was also indicated by an increase in tumour mutational burden in samples collected subsequent to multiple cycles of chemotherapy (p=0.043).

**Conclusion/Implications** We demonstrate the reliability of sequencing cfDNA from ascites for molecular profiling. This approach provides opportunistic access to tumour DNA, allowing a liquid biopsy of ovarian cancer in lieu of a traditional biopsy.

**AS03. Cervical cancer

**PR005/#410 OUTCOMES OF NEOADJUVANT CHEMOTHERAPY AND RADICAL HYSTERECTOMY FOR LOCALLY ADVANCED CERVICAL CANCER AT KIGALI UNIVERSITY TEACHING HOSPITAL, RWANDA

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**Introduction** To evaluate the clinical and surgical response of neoadjuvant(NACT) followed by radical hysterectomy, as well as recurrence rates and overall survival, in patients with locally advanced cervical cancer treated at Kigali University Teaching Hospital in Rwanda.

**Methods** Retrospective descriptive study: data collected from eligible patients FIGO stage IB2-HA2, some exceptional stage IIB. Patients treated with neoadjuvant carboplatin/paclitaxel chemotherapy every 3 weeks for 3–4 cycles before radical hysterectomy. Clinical response, recurrence and survival rates were determined.

**Results** Between May 2016 and October 2018, 57 patients underwent NACT and 43 (75.4%) were candidates for radical hysterectomy after clinical assessment. Median age was 56 years. 39 (90.7%) patients received 4 cycles of NACT, 4 (9.3%) received 4 cycles. Only 14% were HIV positive. FIGO stages were IB2 (32.6%), IIA1 (27.9%), IIA2 (30.2%) and IIB (9.3%). Mean tumor size before and after NACT was 5.9 cm and 2.07 cm, respectively. Thirty-eight (84.4%) patients underwent radical hysterectomy as planned. 5 (11.6%) had surgery aborted due to metastatic disease, four (10.5%) had microscopic metastasis at final pathology. These nine (20.9%) patients were referred for adjuvant chemoradiation. Five (13.1%) patients showed no residual disease on final pathology. Mean time for follow up was 34.4 months. 32/41 (78%) patients showed no evidence of recurrence, 8/41 (19.5%) had documented recurrence and 2/43 (4.7%) were lost to follow up. One and 2-year overall survival rates were 95.1% and 87%, respectively.

**Conclusion/Implications** Neoadjuvant chemotherapy with radical hysterectomy is a feasible treatment option for locally advanced cervical cancer in limited resource settings. It can be an alternative treatment option in countries without radiation facilities if gynecologists skilled at radical surgery are available.

**TEN-YEAR OUTCOMES FOLLOWING LAPAROSCOPIC AND OPEN ABDOMINAL RADICAL HYSTERECTOMY FOR ‘LOW-RISK’ EARLY-STAGE CERVICAL CANCER: A PROPENSITY-SCORE BASED ANALYSIS

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**Introduction** Accumulating evidence suggested the detrimental effects of adopting minimally invasive surgery in the management of early-stage cervical cancer. However, long-term evidence on the role of minimally invasive radical hysterectomy in ‘low-risk’ patients exists.

**Methods** This multi-institutional retrospective study compared minimally invasive and open radical hysterectomies in low-risk early-stage cervical cancer patients. A propensity-score matching algorithm (1:2) was used to allocate patients into the study groups. Kaplan-Meir model was used to estimate 10-year progression-free and overall survival.

**Results** Charts of 224 ‘low-risk’ patients were retrieved. Overall, 50 patients undergoing radical hysterectomy were matched with 100 patients undergoing open radical hysterectomy. Minimally invasive radical hysterectomy was associated with a longer median operative time (224 (range, 100–310) vs. 184 (range, 150–240) minutes; p<0.001), lower estimated blood loss (10 (10–100) vs. 200 (100–1000) ml, p<0.001), and shorter length of hospital stay (3.8 (3–6) vs. 5.1 (4–12); p<0.001). The surgical approach did not influence the risk of having intra-operative (4% vs. 1%; p=0.257) and 90-day severe (grade 3+) postoperative complication rates (4% vs.