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

[1]Eugene Ngabonziza, [2]Rahel Ghebre, [3]Rebecca J Deboer, [1]Diomede Ntasumbumuyange, [4]Urania Magriples, [5]Jessica Marie George, [6]Surbhi Grover, [7]Lisa Bazzett-Matabele*. *[1]University of Rwanda, Obstetrics and Gynaecology, Kigali, Rwanda; [2]University of Minnesota, Obstetrics and Gynecology, Minneapolis, USA; [3]University of California San Francisco, Medical Oncology, San Francisco, USA; [4]Yale University, Obstetrics and Gynecology, New Haven, USA; [5]University of California Irvine, Information and Computer Science, Irvine, USA; [6]University of Pennsylvania, Radiation Oncology, Philadelphia, USA; [7]University of Botswana, Obstetrics and Gynaecology, Gaborone, Botswana*

10.1136/ijgc-2023-IGCS.48

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-IIA2, 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 3 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(88.4%) patients underwent radical hysterectomy as planned. 5 (11.6%) had surgery aborted due to metastatic disease, four (10.5%) had microscopic metastasis on 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.

PR006/#38 TEN-YEAR OUTCOMES FOLLOWING LAPAROSCOPIC AND OPEN ABDOMINAL RADICAL HYSTERECTOMY FOR 'LOW-RISK' EARLY-STAGE CERVICAL CANCER: A PROPENSITY-SCORE BASED ANALYSIS

[1]Giorgio Bogani*, [1]Francesco Raspagliesi, [2]Mario Malzoni, [1]Mariangela Longo, [3]Elisa Ervas, [4]Ivan Casarin, [5]Francesco Plotti, [5]Roberto Angioli, [6]Ilaria Cuccu, [6]Camilla Turetta, [6]Tullio Golia D'Auge, [7]Violante Di Donato. *[1]Fondazione IRCCS Istituto Nazionale dei Tumori di Milano, Gynecologic Oncology, Milano, Italy; [2]Malzoni Medical Center, Gynecology, Avellino, Italy; [3]National Cancer Institute, Gynecologic Oncology, Milano, Italy; [4]University of Insubria, Gynecologic Oncology Unit, Varese, Italy; [5]Campus Biomedico, Gynecology, Roma, RM, Italy; [6]University La Sapienza, Gynecologic Oncology Unit, Roma, RM, Italy; [7]University La Sapienza, Gynecologic Oncology Unit, Rome, Italy*

10.1136/ijgc-2023-IGCS.49

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.

8%; p=0.497). Ten-year disease-free survival was similar between groups (94% vs. 95%; p=0.812; HR:1.195; 95% CI:0.275, 5.18). Ten-year overall survival was similar between groups (98% vs. 96%; p=0.995; HR:0.994; 95%CI:0.182, 5.424).

Conclusion/Implications Our study appears to support emerging evidence suggesting that, for low-risk patients, laparoscopic radical hysterectomy does not result in worse 10-year outcomes compared to the open approach. However, further research is needed and open abdominal radical hysterectomy remains the standard treatment for cervical cancer patients.

PR007/#569

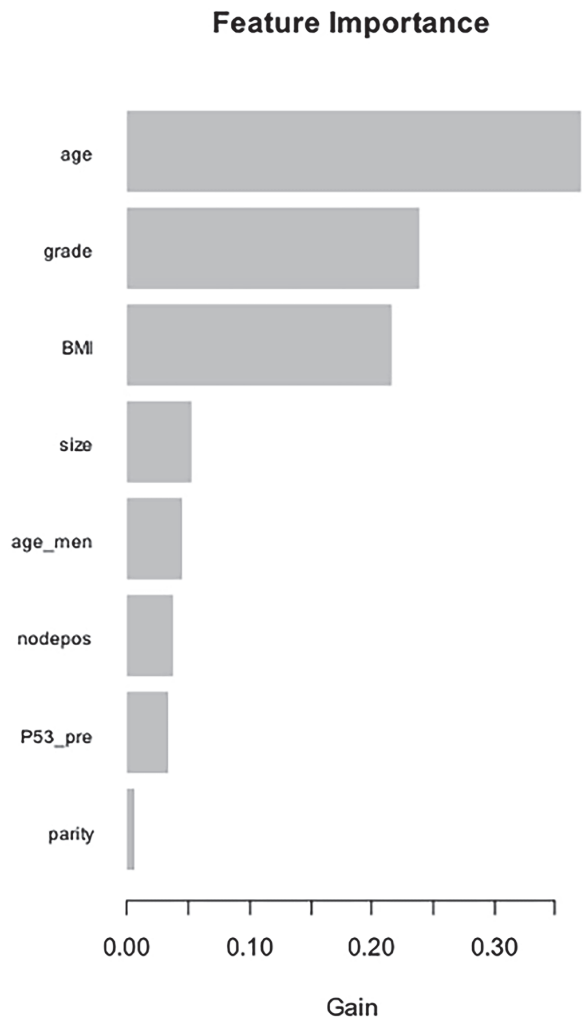
NEOADJUVANT CHEMOTHERAPY FOR LOCALLY ADVANCED CERVICAL CANCER. CAN CLINICAL-PATHOLOGIC FACTORS AND BIOMARKERS EXPRESSION COMBINED MODEL PREDICT THE CHEMORESPONSIVITY?

[1]Antonino Ditto, [2]Mariangela Longo, [1]Umberto Leone Roberti Maggiore, [3]Giulia Chiarello, [1]Giorgio Bogani*, [1]Valentina Chiappa, [1]Fabio Martinelli, [1]Francesco Raspagliesi. *[1]Fondazione IRCCS Istituto Nazionale dei Tumori, Gynecological Oncology Unit, Milan, Italy; [2]Filippo Del Ponte Hospital, University of Insubria, Department of Obstetrics and Gynecology, Varese, Italy; [3]University of Bari, Department of Biomedical Sciences and Human Oncology, Bari, Italy*

10.1136/ijgc-2023-IGCS.50

Introduction To evaluate the prognostic outcomes of NACT (neoadjuvant chemotherapy) in LACC (locally advanced cervical cancer) patients describing the predictive potential of biomarkers (p53, Bcl1 and Bcl2) and clinical-pathologic factors on chemoresponsivity.

Methods Clinical-pathologic data of 88 consecutive patients with LACC who underwent NACT followed by nerve-sparing surgery with retroperitoneal lymphadenectomy at National Cancer Institute of Milan, between January 2000 and June 2013 were retrieved from the institutional database. Biomarkers were evaluated before and after NACT in the specimen. To investigate their role as predictors of response, we tried several statistical machine learning algorithms.



Abstract PR007/#569 Figure 1 Combined model. Importance of Clinical factors plus biomarkers pre-treatment as predictors of response to NACT at the tree based boosting analysis. Area under the curve (crude estimate): 0.8676

Abstract PR007/#569 Table 1 Variables of importance with logistic regression model. Model including important clinical variables (age, grade, BMI) and P53

Model including important clinical variables (age, grade, BMI) and P53

Coefficients	Estimate	Std. Error	z value	Pr(>|z|)	
Intercept	-4.617930	1.477627	-3.125	0.00178 **	
(Age, 2)1	-2.389034	2.556175	-0.935	0.34999	
(Age, 2)2	4.584633	2.477788	1.850	0.06427 .	
Grade	1.650186	0.527809	3.126	0.00177 **	
(BMI, 2)1	-3.859540	2.503281	-1.542	0.12312	
(BMI, 2)2	4.275325	2.511159	1.703	0.08866	
P53	-0.007895	0.536679	-0.015	0.98826	
	Df	Deviance Resid.	Df	Resid. Dev	Pr(>Chi)
NULL			87	120.855	
(Age, 2)	2	8.1077	85	112.747	0.0173550
Grade	1	11.8158	84	100.931	0.0005873 ***
(BMI, 2)	2	5.0863	82	95.845	0.0786192
P53_pre	1	0.0002	81	95.845	0.9882643

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1