

Several therapeutic sequences were applied in our study series, the most frequent was surgery associated with radiotherapy and chemotherapy (60.1%). The direct annual cost of treatment was estimated at 1268502 DT (~ 465000 \$). Radiotherapy represented the largest item of expenditure (37.4% of the cost of treatment).

Conclusions The control infectious origin's pathology necessarily involves the implementation of national screening program, but also public awareness campaigns and mass vaccination against HPV of young virgin girls.

EPV075/#455 INTRAOPERATIVE LYMPH NODE FROZEN SECTION EXAMINATION (FSE) IN EARLY STAGE CERVICAL CANCER – A RISK STRATIFICATION ALGORITHM

¹S Smyth*, ¹E Jackson, ²N Sadeghi, ³C Pinelli, ¹N Ghanbarzadeh, ¹C Pappa, ¹H Jiang, ⁴Z Traill, ⁵S Dhar, ¹H Soleymani Majd, ¹M Alazzam. ¹Oxford University Hospitals NHS Foundation Trust, Gynaecological Oncology, Oxford, UK; ²Oxford University Hospitals NHS Foundation Trust, Obstetrics and Gynaecology, Oxford, UK; ³Del Ponte Hospital, University of Insubria, Obstetrics and Gynaecology, Varese, Italy; ⁴Oxford University Hospitals NHS Foundation Trust, Radiology, Oxford, UK; ⁵Oxford University Hospitals NHS Foundation Trust, Histopathology, Oxford, UK

10.1136/ijgc-2021-IGCS.143

Objectives To evaluate pre-operative radiology and histopathology findings in cervical cancer lymphadenopathy detection, allowing targeted FSE.

Methods A retrospective analysis was conducted of 203 early stage cervical cancer patients between 2010 and 2019 in a tertiary centre. All patients had histologically confirmed cervical cancer and underwent MRI prior to intraoperative FSE.

Results 19 patients were found to have lymph node metastases (LNM) (9.36%) at FSE. Patients were at increased risk of LNM by 6-fold with positive LVSI, 3-fold with MRI lymphadenopathy and 3.5-fold with MRI visible disease. The presence of lymphadenopathy on MRI and positive LVSI in combination increased the risk of LNM by 19-fold.

Abstract EPV075/#455 Table 1 Pre-operative risk stratification algorithm

Pre-operative risk stratification algorithm			
	Odds Ratio	95% CI	P value
LVSI positive	6.25	1.25-31.12	0.02
MRI lymphadenopathy	2.94	1.02-8.43	0.04
MRI visible disease	3.51	1.12-10.99	0.03
MRI lymphadenopathy and LVSI positive	19.00	3.45-104.51	0.0007

Conclusions We believe that intraoperative FSE has a role in the surgical management of early cervical cancer. However, we acknowledge that it is expensive and unpredictably time intensive, exposing patients to increased surgery duration and associated risk. We also recognise that it may not be feasible for all patients. By application of the preoperative risk stratification algorithm we demonstrate that FSE can be a useful tool to reduce surgical morbidity and avoid ineffective radical surgery or multimodal treatment in a cost effective manner in high-risk patients.

EPV076/#456 BEAU BIDEN CANCER MOONSHOT PROGRESS REPORT ON ADVANCED CERVICAL CANCER: PILOT PROJECT ON DNA/RNA EXTRACTION FROM RECURRENT AND METASTATIC CARCINOMA SPECIMENS

¹A Hari*, ²M Sill, ³B Monk, ⁴M Birrer, ²H Lankes, ²V Filiaci, ⁵N Ramirez, ⁶L Wei, ¹K Tewari. ¹UC Irvine, Gynecologic Oncology, Orange, USA; ²NRG, Oncology, Bethesda, USA; ³Arizona Oncology (US Oncology Network), Gynecologic Oncology, Obstetrics and Gynecology, Phoenix, USA; ⁴Rockefeller Cancer Institute, Gynecologic Oncology, Little Rock, Arkansas, USA; ⁵Nationwide Children's Hospital, Pathology, Columbus, Ohio, USA; ⁶Roswell Park Cancer Institute, Computational Biology, Buffalo, New York, USA

10.1136/ijgc-2021-IGCS.144

Objectives Genomic and downstream signaling data informing tumor angiogenesis, DNA repair, and immunologic tolerance are required to develop targeted therapy against cervical cancer. The Cervical Cancer Genome Atlas (TCGA) is derived primarily from pre-invasive and early-stage disease, with under-representation of recurrent/metastatic specimens. NRG/GOG-0240 is the phase 3 randomized trial that demonstrated a survival benefit with anti-angiogenesis therapy. Patients enrolled on this study provided tumor samples for whole genome sequencing and whole exome sequencing (to be performed at the New York Genomic Center (NYGC)), as well as RNA-seq and microRNA-seq (University of North Carolina (UNC)), and bioinformatics modeling (Roswell Park Cancer Institute). To determine the feasibility of DNA/RNA extraction from these relatively small, formalin-fixed paraffin-embedded (FFPE) specimens, we conducted a pilot study.

Methods Following pathology review at the NRG Biospecimen Bank at Nationwide Children's Hospital, DNA/RNA were co-extracted using established protocols. All samples were required to contain at least 50% tumor content for somatic mutation detection.

Results Forty-four out of 107 FFPE samples (41%) underwent successful extraction. 36 were sent in the pilot study including 27 (75%) squamous-cell and 9 (25%) adenocarcinomas. Prior to transfer to NYGC, most samples were noted to have high genomic quality number with few having lower than 10,000 base pairs. Two were flagged for low quality secondary to degradation. One out of 36 samples sent to UNC did not provide sufficient RNA. Five samples were high risk for low DV200 (RNA fragment sizes < 200 base pairs).

Conclusions DNA/RNA extraction can be performed using recurrent/metastatic cervical cancer FFPE specimens.

EPV077/#472 CLINICAL IMPLICATIONS OF COMPUTED TOMOGRAPHY-BASED, ARTIFICIAL INTELLIGENCE-DRIVEN SARCOPENIA AND BODY COMPOSITION CHANGE DURING PRIMARY TREATMENT IN EARLY CERVICAL CANCER

SI Kim*, Q Han, M Lee, J-W Kim. Seoul National University College of Medicine, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of

10.1136/ijgc-2021-IGCS.145

Objectives To investigate the impact of sarcopenia and body composition on survival outcomes in patients with early-stage cervical cancer.

Methods We retrospectively analyzed patients diagnosed with 2009 FIGO stage IB1-IIA2 cervical cancer who underwent primary radical hysterectomy between 2007 and 2019. Using an artificial intelligence-based tool, the skeletal muscle area (cm²) at the third lumbar vertebra (L3) and the skeletal muscle volume (cm³) at the waist level were measured from pre-treatment CT scans. These were converted to the L3 and volumetric skeletal muscle indices (SMIs) by normalization. We defined L3 and volumetric sarcopenia using 39.0 cm²/m² and the first quartile value, respectively. Patients' survival outcomes were compared according to the presence of sarcopenia.

Results A total of 306 patients were included. Between the L3 sarcopenia and non-sarcopenia groups, no differences in progression-free survival (PFS) and overall survival (OS) were observed. In contrast, the volumetric sarcopenia (n=76) showed significantly worse PFS (P=0.039) and OS (P=0.031) than did the volumetric non-sarcopenia group (n=230). In multivariate analyses, volumetric sarcopenia was identified as a poor prognostic factor for PFS (aHR, 1.872; 95% CI, 1.026–3.415; P=0.041) and OS (aHR, 3.172; 95% CI, 1.058–9.512; P=0.039). Regarding changes in body composition, initial volumetric sarcopenia with total fat gain during primary treatment was associated with worse PFS (aHR, 3.015; 95% CI, 1.314–6.919; P=0.009), but not OS (P=0.070).

Conclusions Volumetric sarcopenia increased the recurrence and mortality rates in patients with early cervical cancer. Patients with initial volumetric sarcopenia and total fat gain during primary treatment were at a high risk of disease recurrence.

EPV078/#473

EFFECTS OF PREOPERATIVE CERVICAL CONIZATION ON SURVIVAL OUTCOMES IN PATIENTS WITH EARLY-STAGE CERVICAL CANCER WHO UNDERGO PRIMARY RADICAL HYSTERECTOMY: A PROPENSITY SCORE MATCHING STUDY

SI Kim*, HS Kim, HH Chung, J-W Kim, NH Park, Y-S Song, M Lee. *Seoul National University College of Medicine, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of*

10.1136/ijgc-2021-IGCS.146

Objectives To ascertain whether preoperative cervical conization decreases disease recurrence and mortality rates in patients with early cervical cancer who undergo radical hysterectomy (RH).

Methods We retrospectively identified 2014 FIGO stage IB cervical cancer who received primary RH by either minimally invasive surgery (MIS) or open surgery between 2005 and 2020. To adjust for confounders, we conducted a 1:2 propensity score matching for stage, histology, cervical mass size, and surgical approach. Then, survival outcomes were compared between the matched conization and non-conization groups.

Results A total of 429 patients were included: 96 (22.4%) received preoperative conization. Overall, the conization group had significantly less cervical mass size (median, 24.0 vs. 30.0 mm; P=0.020) and lower incidence rates of

parametrial invasion (4.2% vs. 15.0%; P=0.005), compared to the non-conization group. The conization group had a trend towards MIS RH (54.2% vs. 43.2%; P=0.058). After matching, the conization group showed significantly better progression-free survival (PFS) than the non-conization group (n=192) (3-year: 96.8% vs. 86.5%; P=0.011), but no difference in overall survival (OS). Excluding 15 patients who had parametrial invasion, lymph node metastasis, and both, we conducted another matching process and also found that the conization group had significantly better PFS (3-year: 86.1% vs. 98.8%; P=0.008), but the similar OS. Consistent results were also observed in the subgroup of MIS RH (n=150).

Conclusions Despite the retrospective design, our matched cohort study suggests that preoperative conization might be preferable for the surgical treatment of FIGO stage IB cervical cancer, especially for those who are planning to undergo MIS RH.

EPV079/#495

ACCURACY OF MAGNETIC RESONANCE IMAGING FOR PREOPERATIVE PREDICTION OF PATHOLOGIC TUMOR SIZE AND THE NEED OF ADJUVANT RADIOTHERAPY IN EARLY-STAGE CERVICAL CANCER

D Kim*, U Kim, SJ Park, M Lee, HS Kim, HH Chung, J-W Kim, NH Park, Y-S Song. *Seoul National University Hospital, Gynecology, Seoul, Korea, Republic of*

10.1136/ijgc-2021-IGCS.147

Objectives To evaluate the accuracy of magnetic resonance imaging (MRI) for preoperative prediction of pathologic tumor size and the need of adjuvant radiotherapy in early-stage cervical cancer.

Methods We included patients with the following criteria: stage IB1-IIA2 cervical cancer; no diagnostic conization; visible tumors on MRI; no risk factors such as lympho-vascular space invasion, parametrial invasion, positive resection margin and lymph node metastasis. Adjuvant radiotherapy was applied in those with tumor size ≥ 4 cm and stromal invasion $> 1/2$.

Results We collected data of 102 patients with the criteria mentioned above between 2000 and 2019. In TNM staging system, stage IB1, IB2, IB3, IIA1 and IIA2 disease were found in 32 (31.4%), 50 (49%), 12 (11.8%), 6 (5.9%) and 2 patients (2%), whereas 48 (47.1%) showed different stage by tumor size measured by MRI. In terms of pathologic tumor size ≥ 4 cm, MRI had sensitivity of 30.8% (4/9), specificity of 95.5% (85/89), positive predictive value (PPV) of 50% (4/4) and negative predictive value of 90.4% (85/94), showing accuracy of 91.1%. In regard to the need of adjuvant radiotherapy, MRI showed sensitivity of 40% (2/5), specificity of 96.9% (94/97), positive predictive value (PPV) of 40% (2/5) and negative predictive value (NPV) of 96.9% (94/97), showing accuracy of 93.1%.

Conclusions The accuracy of MRI for predicting TMN stage may not be effective. However, MRI may have high specificity and NPV for preoperative prediction of pathologic tumor size ≥ 4 cm and the need of adjuvant radiotherapy in early-stage cervical cancer.