Conclusion The two irradiation regimens used in HDR utero-vaginal brachytherapy in 3 or 5 fractions give similar oncological results with a comparable late toxicity.

Disclosures HR CTV= high-risk clinical target volume
EQD2= Equivalent dose in 2Gy fractions

#870 RADIOMIC PROFILES IMPROVE PROGNOSTICATION AND REVEAL TARGETS FOR THERAPY IN CERVICAL CANCER

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Introduction/Background Pelvic magnetic resonance imaging (MRI) is an important part of primary diagnostic workup in cervical cancer (CC), with MRI-assessed tumour size and pelvic tumour extent routinely guiding treatment decisions. Extraction of MRI-derived radiomic tumour features could improve cancer prognostics and may also reveal novel targets for treatment.

Methodology We manually segmented 3D volumes in 132 primary CC tumours and extracted 293 whole-volume radiomic MRI features. Unsupervised hierarchical clustering yielded three distinct patient clusters (Cluster 1 [n=52]; 2 [n=46]; and 3 [n=34]). Overlapping clinicopathologic, genomic (whole exome sequencing, n=65), transcriptomic (L1000 arrays, n=73) and molecular biomarker (n=84) data were utilized to characterize each cluster.

Results Patients in Cluster 2 and 3 had significantly reduced disease-specific survival (DSS) (hazard rate [HR]: 3.33; p=0.008) compared with patients in Clusters 1, even after adjusting for International Federation of Gynecology and Obstetrics (FIGO) 2018 stage and age (adjusted HR: 2.51; p=0.045). Cluster 3 tumours associate with high stage (p<0.001), large tumours (p<0.001), squamous histology (p=0.015), p53 negative or -overexpressing tumours (p=0.04) and aberrant TP53, -MYC and -MTORC1 signalling. The intermediate-risk Cluster 2 associates with increased and aberrant cell cycle- and Hippo signalling, suggesting CDK2/4 and YAP-TEAD inhibitors as plausible treatment options. The low-risk Cluster 1 associates with increased immune cell signalling.

Conclusion This study links radiomic signatures to distinct genomic profiles that may potentially aid in prognostication and tailoring of treatments and follow-up plans for cervical cancer patients.

Disclosures The authors declare no conflict interests.

#874 LOCALLY ADVANCED CERVICAL CANCER IN YOUNG WOMEN

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Introduction/Background The incidence of cervical cancer in young women is increasing. This study aims to analyze the clinicopathological characteristics, treatment, and prognoses of women aged ≤40 years with locally advanced cervical cancer.

Methodology Medical record data of 25 locally advanced cervical cancer patients aged ≤40 years treated at Salah Azaiez Institute of Oncology between January 2010 and December 2020 were reviewed. The overall survival rate was estimated using the Kaplan–Meier method. Prognosis-related risk factors were analyzed using univariate analyses.

Results The median age at diagnosis in our study was 35.8 years ± 3.13. Among 25 patients, 24 (96%) were diagnosed with squamous cell carcinoma and 1 (4%) with adenocarcinoma. In 12 cases (48%), the FIGO stage was ≤ IIB and in 13 cases (52%) FIGO stage was >IIB. The median tumor size at diagnosis was 54.6mm ± 17.37. 24% of patients had multiple sexual partners. Only 15 patients were treated with curative intentions. 3 patients presented locoregional recurrence. No patient presented metastatic recurrence. 7 patients presented progression during treatment. 17 cases of death during follow-up were noticed among 25 cases.

One-year disease-free survival (DFS) was 67.2%. lymphovascular space involvement (LVSI) (p=0.010) was a prognostic factor that affected disease-free survival. DFS was not significantly different for tumor size (p=0.0179), cell type (p=0.5) histological grade (p=0.45), parametrial involvement (p=0.068), and pelvic lymph node metastases (p=0.155).

One-year overall survival (OS) was 46.7%. Parametrial involvement (p=0.001), FIGO stage (p=0.028), and histological grade were risk factors for poor prognosis for these patients. Os survival was not significantly different for tumor size, LVSI, and pelvic lymph node metastases.

Conclusion Locally advanced cervical cancer in young women presents an overall prognosis worse than in older patients.

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#878 DEFINITIVE RADIOTHERAPY/CHEMORADIOTHERAPY RESULTS IN GERIATRIC PATIENTS WITH CERVICAL CANCER

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