Methodology The central radiotherapy prescribing system at a single institution was interrogated to identify patients with locally advanced cervical cancer who received SBRT boost to cervix in addition to or as a replacement for IBGT, from 1st July 2017 to 31st January 2021.
Results 17 patients were identified; median age was 68 years (range 32–77) and median follow up was 17 months. FIGO 2009 stage distribution was II (8/17), III (7/17), and IV (2/17). Mean tumour size was 4.5 cm. Indication for SBRT consisted of: medical contra-indication (9/17), unfavourable anatomy (5/17), and patient refusal (3/17). Median dose of external beam was 45Gy in 25 fractions (range 43–50Gy). SBRT boost PTV was delineated on CT (cervix and gross residual disease with a 4–5 mm margin), aiming for 24–28Gy in 4 fractions (range 7–28Gy). Median cumulative EQD_2 (a/β= 10) was 75.2Gy (range 58–91), and median SBRT PTV size was 54 cm^3 (range 12–126). Local control rate was 15/17 (88.2%). G3 toxicity occurred in 2/17 (11.8%); one rectovaginal-vaginal and one vesico-vaginal fistula (the latter had progressive disease). No G4–5 toxicity was reported.
Conclusion SBRT boost was effective and tolerable in this cohort, but EQD_2 of 85–90Gy was not achieved in majority of cases. MRI based planning may improve target delineation and a consensus guideline on appropriate constraints would be advantageous.

2022-RA-729-ESGO STRENGTHENING OF PELVIC FLOOR MUSCLES FOR INCONTINENCE IN CERVICAL CANCER

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Introduction/Background Objective to analyze the effect of pelvic floor muscle strengthening exercises on urinary incontinence in patients with cervical cancer.
Methodology This study included 45 cervical cancer patients undergoing radiation therapy by using non-probability -convenience sampling technique and design as quasi-experimental one-group pre-post design. Intervention- consisted of four pelvic floor exercises The patient was assessed for urinary incontinence by using the ICIQ UI-SF tool and perineometer on the 8th and 12th weeks. The statistical evaluation plan was the demographic and clinical data summarized with descriptive statistics and primary objectives evaluated with Friedman test, one-way ANOVA test and secondary objectives were evaluated with frequency distribution and chi-square t-test
Results In this study 45 women received the intervention . The result showed the frequency, quantity of urinary incontinence significantly reduced from the patient's baseline parameters. Participant's ICIQ UI SF total score was observed that on pre-test mean 12.56 (SD±3.74),8 weeks of intervention mean 11.33 (SD±3.48) and 12 weeks of intervention mean 8.86 (SD±2.97) and P-value was statistically significant ($p < 0.001$). There was a significant ($P < 0.001$) improvement in the quality of life of participants. The research hypothesis was accepted. There was significant ($p < 0.001$) alleviation in urinary incontinence after pelvic floor muscle strengthening exercises in a patient with cervical cancer undergoing radiation therapy. The pelvic floor muscle contractility on perineometer on pre-intervention mean was 21.63 (SD±2.71), on post-intervention 8 weeks mean was 22.33(SD±2.65) and 12 weeks mean was 23.49 (SD±2.16). The pelvic floor muscle strengthening exercises were statistically significant ($p < 0.001$)
Conclusion Pelvic floor muscle strengthening exercises were effective for alleviating urinary incontinence which improved the quality of life of patients with cervical cancer undergoing radiation therapy. It is a statistically significant intervention.

2022-RA-733-ESGO DURATION OF HPV PERSISTENCE AND ITS RELATIONSHIP WITH RECURRENT CERVICAL DYSPLASIA

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Introduction/Background HPV persistence after conization represent one of the most important risk factors for disease recurrence. However, no data regarding the impact of duration of HPV persistence are still available. Here, we aim to evaluate the how duration of HPV persistence influence the risk of developing recurrent high-grade cervical dysplasia (CIN2+).
Methodology Data of patients with persistent HPV infection (at least at 6 months) after primary conization were extracted from a multi-institutional Italian database, retrospectively. Kaplan-Meier and Cox proportional hazards models were used to evaluate associations between duration of HPV persistence with the 5-year risk of developing recurrent CIN2+.
Results Overall, 545 patients met the inclusion criteria. Positive margins were detected in 160 (29.3%) patients. Overall, 247 (45.3%) and 123 (22.6%) patients had a documented infection from HPV16/18, and other HR-HPV types. 187 (34.3%), 73 (13.4%), and 40 (7.3%) were diagnosed with persistent HPV infection at 12-, 18-, and 24-month, respectively. Patients with HPV persistence at 6-month experienced a risk of recurrence of 7.46%. Twelve-month HPV persistence strongly correlates with the risk of developing the recurrent

disease (risk of recurrence: 13.1%). While, having HPV persistence >12 months did not correlate with an increased risk of recurrence (HR: 1.34 (95%CI: 0.78, 2.32); p=0.336, log-rank test).

Conclusion HPV persistence is one of the most important factor predicting the risk of CIN2+ recurrence. The risk of CIN2+ recurrence increased by the increase of HPV persistence up to one year. The persistence of HPV after the first year does not appear as a risk factor

2022-RA-743-ESGO IMPROVING RISK STRATIFICATION FOR CERVICAL CANCER IN PATIENTS TREATED WITH CONCURRENT CHEMORADIATION AND MRI-IMAGE GUIDED ADAPTIVE BRACHYTHERAPY IN EMBRACE STUDY: RESULTS FROM AN INTERNATIONAL COLLABORATIVE TRANSLATIONAL RESEARCH STUDY (BIOEMBRACE-I)

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Introduction/Background BIOEMBRACE-I is a translational sub-study of EMBRACE-I, initiated to improve risk stratification for cervical cancer patients treated with chemoradiation and MRI-guided brachytherapy

Methodology Between 2018–2021, patients were included from EMBRACE study sites. Prognostic factors at baseline and brachytherapy (FIGO stage, nodal involvement, histology, necrosis on MR, poor response indicated by high risk clinical target volume at brachytherapy (HRCTV-BT> 40 cc) were included. In the first phase, immunohistochemistry for p16 and L1CAM was performed. p16 was categorized as 'positive' or 'negative' and L1CAM was categorized as '0–10%', 10–50% or 50% overexpression. Response to EBRT and disease outcomes were tested after including p16 and L1CAM along with other prognostic factors. Univariate and multivariable analysis (MVA) was performed.

Results Eight EMBRACE sites included 264 patients with a median follow up of 50 months (21–67). Distribution of prognostic factors, including p16 and L1CAM expression is summarized in Table 1.The median HRCTV-BT and D-90 was 30 cm^3 (IQR 22–44) and 89 Gy (IQR 86–95 Gy). p-16 positive patients had higher nodal positivity (96% vs. 3%, p=0.0001) or necrosis on MRI (73% vs. 26%, p=0.01) and proportion of HRCTV-BT < 40cc (72.8% vs. 54.5%, p=0.03). The 5-year pelvic, disease control and disease free survival (DFS) was 87.3%,72.6% and 66.7% respectively. On MVA, FIGO stage (HR=5.4, p<0.0001), necrosis on MR (HR =2.6, p=0.005) and p-16 negative status (HR=2.1, p=0.07) predicted for HRCTV-BT > 40cc. For pelvic and disease control HRCTV-BT> 40cc and LICAM > 50% were independent predictors, though reduced pelvic control was also observed at L1CAM >10% on univariate analysis. For DFS, nodal status and HRCTV-BT> 40cc were independent predictors (table 1).

Abstract 2022-RA-743-ESGO Table 1

N=264*	HRCTV≥40 cc at Brachytherapy (Crude Incidence)	Pelvic Control (5 yr) (Time to Event)	Disease Control (5yr) (Time to Event)	Disease Free Survival (5 yr) (Time to event)
Histological Subtype Squamous vs. Adeno (214 (81%) vs. 50 (19%))	32.7% vs. 28.6% p=0.57	89% vs. 79% P=0.18	74% vs. 64% P=0.38	68.4% vs. 54.6% P=0.25
FIGO stage I-II vs. III-IV (171 (64.8%) vs. 93 (35.2%))	17% vs. 52% P<0.0001	86.6% vs. 88.9% P=0.78	71.5% vs. 75% P=0.62	65.5% vs. 62.5% P=0.27
Node Positive vs. Negative (151 (57.2%) vs. 113 (42.8%))	32.7% vs. 25% P=0.17	85% vs. 90% P=0.22	68.6% vs. 77.6% P=0.07	59.5% vs. 74.4% P=0.01
HRCTV BT≥40 cc vs. HRCTV<40 cc (77 (29%) vs. 185. (70.1%))	NA	76.6% vs. 91.6% P<0.0001	61.9% vs. 76.7% P=0.004	54.5% vs. 71.7% P<0.0001
P16- positive vs. P16-Negative (211 (81.4%) vs. 33 (12.5%)	27.2% vs. 45.5% P=0.03	86.5% vs. 89.6% P=0.60	71.8% vs. 74% p=0.59	64.1% vs. 69.6% P=0.77
LICAM ≤ 10% vs. > 10% (209 (79%) vs. 46 (17.4%)	29% vs. 26.7% P=0.74	89% vs. 77% P=0.04	73.4% vs. 67.2% P=0.23	67% vs. 55% P=0.37
LICAM<50% vs.≥50% (252 (95.5%) vs. 5 (1.9%)	28.4% vs. 40% P=0.57	87.6% vs. 53.3% P=0.008	72.9% vs. 40% P=0.02	66.3% vs. 40.2% P=0.06
Necrosis on MRI Yes vs. No (65 (24.1%) vs. 199 (75%))	46.2% vs.23.9% P<0.001	88% vs. 87% P=0.88	72.3% vs. 73% P=0.99	64.8% vs. 65.9% P=0.70
Multivariable Analysis				
*= All 264 patients included in analysis.	FIGO (HR=5.4, p<0.0001)	HRCTV BT≥40 cc (HR 5.7, P<0.001)	HRCTV BT≥ 40 cc (HR=2, p=0.0005)	HRCTV BT≥40 cc (HR=2, p<0.001)
Missing values handled as missing at random.	P16 Negative (HR=2.1, p=0.07)	LICAM >50% (HR=3.6, p=0.01)	LICAM≥50% (HR=3.8, p=0.02)	Nodal involvement (HR=1.6, p= 0.03)
	Necrosis on MR (HR =2.6, p=0.005)			

Conclusion FIGO stage, necrosis on MR and p16 negative status predicted for HRCTV-BT > 40 cc. HRCTV-BT > 40 cc and L1CAM are prognostic for pelvic and disease control. PDL-1 analysis is ongoing.

2022-RA-755-ESGO COMPARISON OF PD-L1 STATUS BETWEEN PRIMARY AND PAIRED RECURRENT/ METASTATIC CERVICAL CANCER

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Introduction/Background Randomized trials established the clinical benefit of PD-1-inhibitors in recurrent/metastatic cervical cancer (CC). However, this benefit seems to be restricted mainly to PD-L1-positiv CC. The purpose of this study was to compare the PD-L1-status in primary CC with a paired sample at the time of recurrent/metastatic disease.

Methodology PD-L1-scoring was analyzed by immunohistochemistry (Ventana PD-L1 (SP263) in archived tumor tissue of primary CC and paired recurrent/metastatic CC (n= 24). PD-L1-positivity was defined as CPS (combined positive score) ≥1.

Results 50% (12/24) of patients were in FIGO stage IB1-IIA2 at primary diagnosis and the majority had squamous cell histology (87.5%; 21/24). Median PFS was 8.9 (95% CI: 7.8–10.0) months.PD-L1-CPS ≥1 was found in 96% (23/24) of primary and 92% (22/24) of paired recurrent/metastatic CC. The median CPS was 22 (range 0–80) in primary and 20 (range 0–90) in recurrent/metastatic CC. Correlation between primary and recurrent/metastatic CC was high (0.79). Only in one case a shift from a CPS-positive primary to CPS-negative relapsed disease was detected.

Conclusion Comparing PD-L1-status (CPS) between primary and recurrent/metastatic CC demonstrated a high concordance. Our data indicate, that PD-L1 testing in archival material from primary tumor is sufficient, if a fresh sample at relapse or of metastases is not available.