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.

### Introduction/Background

BIOEMBRACE-I is a translational sub-study of EMBRACE-I, initiated to improve risk stratification for cervical cancer patients treated with concomitant chemoradiation and MRI-guided adaptive brachytherapy in EMBRACE study: Results from an international collaborative translational research study (BIOEMBRACE-I)

### 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 cm³ (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 < 40 cc (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<0.001), 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 LICAM >10% on univariate analysis. For DFS, nodal status and HRCTV-BT> 40cc were independent predictors (table 1).

### Conclusion

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