Conclusion A high rate of clinical responses (complete/partial) to (CT)RT was registered. Post-operative complications resulted acceptable compared to literature data. pCR is associated with excellent survival also in these tumors as demonstrated in other neoplasms. The multidisciplinary approach is crucial to complete the combined treatment planned [(CT)RT+/− surgery]. In the future, predictive models could allow to select patients on the basis of their foreseen response.

### Abstract 2022-RA-1268-ESGO Table 1

<table>
<thead>
<tr>
<th></th>
<th>Radical surgery (n=5)</th>
<th>Ultra-radical surgery (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient experiencing any complication, n (%)</td>
<td>5 (100)</td>
<td>12 (85.7)</td>
</tr>
<tr>
<td>Patient experiencing grade 3 complications, n (%)</td>
<td>2 (40)</td>
<td>5 (35.7)</td>
</tr>
<tr>
<td>Patients experiencing more than one complication, n (%)</td>
<td>1 (20)</td>
<td>7 (50)</td>
</tr>
</tbody>
</table>

### HOW TO PREDICT PREOPERATIVE RISK OF LYMPH NODE METASTASIS IN VULVAR CANCER PATIENTS THE MORPHONODE PREDICTIVE MODEL

1Simona Maria Fragomeni, 2Francesca Moro, 2Fernando Palluzzi, 1Alex Federico, 3Sonia Bove, 3Floriana Mascilini, Federica Pozzati, 2Giovanni Scambia, 1Antonina Carla Testa, 2Gorgia Garganese, 1Unità di Ginecologia Oncologica, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy; 2Bioinformatics Facility, Gemelli Science and Technology Park (GSTeP), Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy; 3Gynecology and Breast Care Center, Mater Olbia Hospital, Olbia, Italy; 4Dipartimento Universitario Scienze della Vita e Sanità Pubblica Sezione di Ginecologia ed Ostetrica, Università Cattolica del Sacro Cuore, Rome, Italy

**Introduction/Background** Preoperative evaluation of inguinal lymph nodes in vulvar cancer patients is still a challenge. Our aim was to build a robust, multi-modal ultrasound model based on artificial intelligence.

**Methodology** From March 2017 to April 2020, 127 women were included at our center and 237 inguinal regions were studied before surgery by ultrasound experienced examiners. Ultrasound features defined in previous studies were prospectively collected. Histopathology was considered the reference standard. Fourteen informative features were used to train and test the machine, in order to obtain a diagnostic model. The following data classifiers were integrated into the predictive model: 1) random forest classifiers (RFC); 2) decisional tree (DT); 3) regression binomial model (RBM); 4) similarity profiling (SP). A predictive tool was implemented in the open-source R package, available on line as ‘Morphonode Predictive Model’ at https://github.com/Morphonodepredictivemodel.

**Results** The tool provides four output modules: 1) the binary malignancy prediction (Morphonode-RFC), distinguishing between malignant and benign lymph nodes with an accuracy of 93.3% and a negative predictive value of 97.1% (95%CI 83.8–100.0); 2) the risk signature (Morphonode-DT), identifying 4 specific signatures correlated with the risk of metastases: metastatic signature (MET), high metastatic risk (HMR), moderate metastatic risk (MMR) and low metastatic risk (LMR); the point risk of metastasis for each signature is 100%, 81%, 16% and 4% respectively; MET signature correlates with higher risk for multiple metastatic nodes (frequency of 45.7%); 3) the point malignancy risk, providing a point risk estimate in each specific lymph node described (Morphonode-RBM); 4) a selection of the top-5 similar profiles in the
study series, supporting the clinician to integrate output analysis (Morphonode-SP).

Conclusion Our findings indicate that Morphonode Predictive Model is a simple and observer-independent tool. It could be easily integrated in the clinical routine for preoperative stratification of vulvar cancer patients.

Introduction/Background Melanoma of the vulva is a rare disease, often burdened by a poor prognosis. It is essential to define the optimal treatment in early stage disease. This multicenter retrospective study investigates the role of preoperative lymphoscintigraphy and sentinel node biopsy (SNB) and the impact of SNB on loco-regional control and survival in vulvar melanoma patients with clinically negative nodes (cN0).

Methodology All women treated between July 2013 and March 2021 were evaluated. Inclusion criteria consisted in: (i) histologically proven vulvar invasive melanoma, (iii) a Breslow tumor thickness of 1–4 mm and (ii) cN0 at preoperative evaluation. Patients selected underwent a preoperative lymphoscintigraphy followed by SNB with or without inguinofemoral lymphadenectomy. DFS and OS were assessed by the Kaplan-Meier method.

Results Eighteen women were included for a total of 28 groins studied. Planar images showed 51 sentinel nodes (SNs) in the enrolled inguinal regions. SNs were identified in all cases. Metastatic SNs were found in 5 patients (27.7%) for a total of 8 metastatic nodes in 7 groins (25%). Recurrent disease was diagnosed in 10 (55,5%) patients at 3 to 30 months: 7 were SN-negative, among which no specific groin recurrence was observed; 3 were SN-positive, among which 2 patients died of disease after 26.2 and 33.8 months, respectively. The overall mortality rate was 0% for SN negative and 40% in SN positive patients. OS and DFS at 36 months were 62.5% and 19.2%, respectively. The median DFS was 18.0 months (95% CI, 10.3–30.0).

Conclusion Lymphoscintigraphy followed by sentinel lymph node biopsy in patients with vulvar melanoma is feasible and allows adequate assessment of the stage of disease. Negative SNB is associated with low risk of groin relapse and good survival rate. Further prospective multicenter studies are needed to evaluate the criteria for clinical application.

Introduction/Background The objective the analysis of patients with V-Y technique vulvar reconstruction in the treatment of malignant vulvar diseases between 02.2020 and 04. 2022 in the Department of Oncological Gynecology.

Methodology The surgical treatment was performed in 25 patients: 21 with squamous cell carcinoma and 4 with vulvar Paget disease. 18 women underwent complete radical vulvectomy and 7 partial radical vulvectomy (hemivulvec- tomy or wide tumor resection). In the group with complete radical vulvectomy 6 patients were qualified to the V-Y technique vulvar reconstruction. In 12 patients the systemic inguinal lymphadenectomy (uni- or bilateral) was performed, of which 5 was diagnosed with node metastases. In 4 patients the SLN procedure was performed, with positive results (lymph node metastases) in 2 patients. 2 patients after the simultaneous reconstruction group required secondary wound suturing in the postoperative period. In the group of patients after partial or complete radical vulvectomy without the reconstruction 6 patients needed secondary surgical intervention.

Results The average operating time without the simultaneous reconstruction was 160 min. and with the reconstruction was 205 min. The average healing time without the reconstruction was 30 days and with the reconstruction 23 days. The mean satisfaction index without the reconstruction was 6/10 and with the reconstruction 8/10.

Conclusion 1. The surgical procedures in the vulvar malignant diseases with simultaneous reconstruction are more time-consuming but more effective for the patient’s quality of life than the procedures without reconstruction. 2. Secondary wound suturing in the postoperative period had no impact on the patient’s final treatment assessment. 3. The number of patients treated with reconstructive procedures is an obvious limitation of this analysis, but it should be considered as a pilot study. The number of patients enrolled will be growing and more detailed meta-analysis is planned for the following years.

Introduction/Background Surgery for vulvar cancer (VC) is associated with high morbidity. Design of ‘care bundle’ of...