

index (CI) using Chou-Talalay method. Clinical information was extracted for correlation.

**Results** 62.5% (5/8) of serous EC PDX tumors had  $GIS \geq 42$  while only 19.2% (5/26) of non-serous ones did. Synergy ( $CI < 1.0$ ) between rucaparib and SN38 was demonstrated in 85.7% (6/7) of serous EC PDX ex vivo 3D cell culture experiments, but only 62.5% (10/16) of non-serous ones. 66.7% (6/9) of serous EC primary patient 3D cell culture experiments also showed synergy.

**Conclusion/Implications** Most serous EC PDX tumors had high GIS, consistent with HRD, compared to a minority of non-serous histologies. Combination therapy demonstrated synergy in almost all serous and most non-serous EC PDX models. Additional studies including more tumors and in vivo correlation are needed to assess the predictive value of GIS on synergy between rucaparib and SN38.

PR046/#280

### THE GENOMIC LANDSCAPE OF DISTANT METASTATIC ENDOMETRIAL CANCER

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**Introduction** While the genomic landscape of untreated primary endometrial carcinoma (EC) is well characterized, the molecular underpinnings of distant metastatic EC are poorly understood. We sought to define genomic alterations associated with distant metastatic EC.

**Methods** We obtained sequencing data from distant metastatic ECs from a total of 1888 ECs subjected to a clinical tumor-normal sequencing panel between 8/2013 and 6/2020; these metastatic ECs were compared against 711 primary ECs using appropriate statistical analyses.

**Results** One hundred thirty-seven ECs met the study inclusion criteria, with distant metastases in the lung (n=66, 48%), liver (n=21, 15%), soft tissue (n=15, 11%), distant lymph nodes (n=15, 11%), gastrointestinal tract (n=10, 7%), central nervous system (n=5, 4%), bone (n=4, 3%), and renal system (n=1, 1%). The majority of distant metastases were of copy number (CN)-high (42%) or CN-low (39%) molecular subtype; 18% were microsatellite instability (MSI)-high and 1% were of POLE molecular subtype. Distant EC metastases were significantly more chromosomally unstable compared with primary ECs ( $p < 0.0001$ ) and were enriched in AKT1, CTNBN1, ANKRD11, and ZFH3 mutations. Clinically actionable alterations, particularly tumor mutational burden (TMB)  $\geq 10$  mut/Mb and MSI-high status, were significantly less common in metastatic compared with primary ECs (4% vs 29%;  $p = 0.017$ ). Epigenetic, PI3K, and TP53 pathways were the most commonly altered pathways among all anatomic sites.

**Conclusion/Implications** Compared with primary tumors, distant metastatic ECs exhibited increased chromosomal instability but decreased hypermutator phenotypes. Exploitation of genetic differences to understand the pathogenesis of

metastatic EC is necessary to develop biomarkers for targeted therapy.

## AS05. Fertility/Pregnancy

PR047/#570

### UTERINE TRANSPOSITION IN THE TREATMENT OF INVASIVE CERVICAL CANCER FOR PRESERVE FERTILITY

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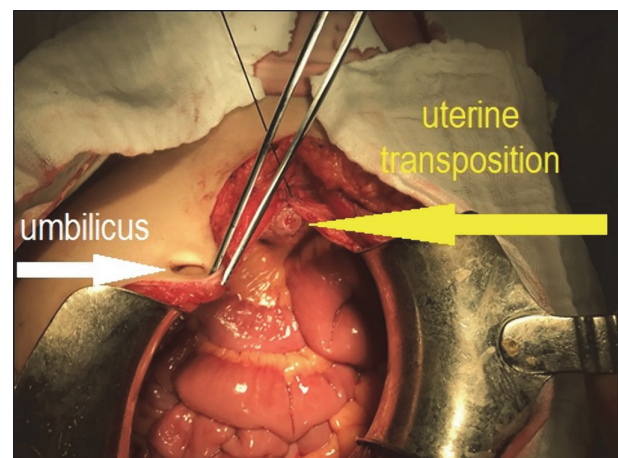
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**Introduction** Indications for a radical trachelectomy can be significantly expanded if an adjuvant concurrent chemoradiotherapy can be provided. These conditions can be achieved by the uterine transposition which must be done during the period of radiotherapy. When the radiation treatment is completed, the uterus can be repositioned back to the pelvic.

**Methods** Our research has included 11 patients with stage Ib1-IIb cervical cancer. Median of their age is 29 year old. At the first step of treatment, 2–3 courses of chemotherapy were carried out. At the second step radical trachelectomy (Piver type III) with uterine and ovarian transposition were done (photo 1). The oncological stages of operation corresponded to a routine radical trachelectomy. Paraumbilically uterine transposition created conditions for performing the radiotherapy. The third step included a concurrent chemoradiotherapy. On the next step of treatment uterine reposition with utero-vaginal anastomosis was conducted (photo 2). Today all the patients has no sign of recurrence and may start to realize the pregnancy.

**Results** The median observation is 23,4 months so far. All our patient's menses have been recovered. No one has any signs of recurrence. Three of them are preparing to the in vitro fertilization.

**Conclusion/Implications** The uterine transposition enhanced limits of treatment for patients with stage Ib1-IIb cervical cancer and makes feasible to provide a radiotherapy according to



Abstract PR047/#570 Figure 1