Objective Carcinosarcomas (CS) are highly aggressive gynecologic malignancies containing both carcinomatous and sarcomatous elements. Sacituzumab govitecan (SG) is a novel antibody-drug conjugate (ADC) targeting trophoblast antigen 2 (Trop-2), a cell surface glycoprotein highly expressed in many epithelial tumors, to deliver SN-38, the active metabolite of irinotecan. This study aimed to evaluate the efficacy of SG in primary CS cell lines and xenografts.

Methods Trop-2 expression in primary tumor cell lines and cell viability after exposure to SG, non-targeting control ADC (h679-CL2A-SN-38), and naked parental antibody hRS7 IgG were evaluated using flow-cytometry-based assays. Antibody-dependent-cell-cytotoxicity (ADCC) against Trop-2+ and Trop-2- CS cell lines was evaluated in vitro using 4-h Chromium-release-assays. In vivo activity of SG was tested against Trop-2+ CS xenografts.

Results High expression of Trop-2 was detected in 55.5% (5 of 9) of primary CS cell lines. Primary tumors overexpressing Trop-2 were significantly more sensitive to SG when compared to control ADC (p<0.05). Both SG and parental hRS7 mediated high level of ADCC against Trop2+ CS cell lines while no cytotoxicity was detected against Trop-2 negative tumors. In vivo experiments with SG demonstrated significantly greater antitumor effects and increased survival compared to control ADC (p<0.05). SG therapy was well tolerated by the animals.

Conclusions SG demonstrated remarkable antitumor activity against biologically aggressive CS overexpressing Trop-2 and due to its hydrolizable linker may cause a significant bystander killing effect in CS with heterogeneous TROP-2 expression. Clinical trials are warranted.

Objectives To analyze if simple hysterectomy does not have less efficacy and safety compared to radical hysterectomy in treatment of early stage cervical cancer.

Methods An open label non-inferiority prospective randomized controlled trial included 40 patients with stages IA2 to IB1 (≤2cm) cervical cancer. The patients were randomized 1:1 in simple hysterectomy or modified radical hysterectomy and pelvic lymphadenectomy between May 2015 and April 2018. Health-related quality of life was assessed (EORTC QLQ-C30). Primary endpoint was disease free survival in 3 years and secondary endpoints was overall survival, morbidity, and quality of life.

Results Clinical and pathological characteristics were well balanced between treatment groups. Thirty-two (80%) patients were squamous cell carcinomas and 3 (7.5%) cases had metastatic lymph node. The median surgical time was greater for the radical hysterectomy group (150 vs. 199.5 minutes; p=0.003). Postoperative bladder catheterization days were also higher after radical hysterectomy (p=0.043). There was no postoperative mortality and postoperative complication rate was not statistically different (15% and 20%;p=1.0). Global health, quality of life and physical functioning scores were not different between groups until 6 months of follow-up. There was no difference in adjuvant treatment between groups (30% and 20%;p=0.48). The median follow-up time was 16.2 months and the 2-year disease free survival was 95% and 100% for the simple hysterectomy and modified radical groups, respectively (p=0.405). There was only 1 death due to cancer in the simple hysterectomy arm.

Conclusions This interim analysis suggests low morbidity and safety for simple hysterectomy for early stage cervical cancer compared to radical hysterectomy.