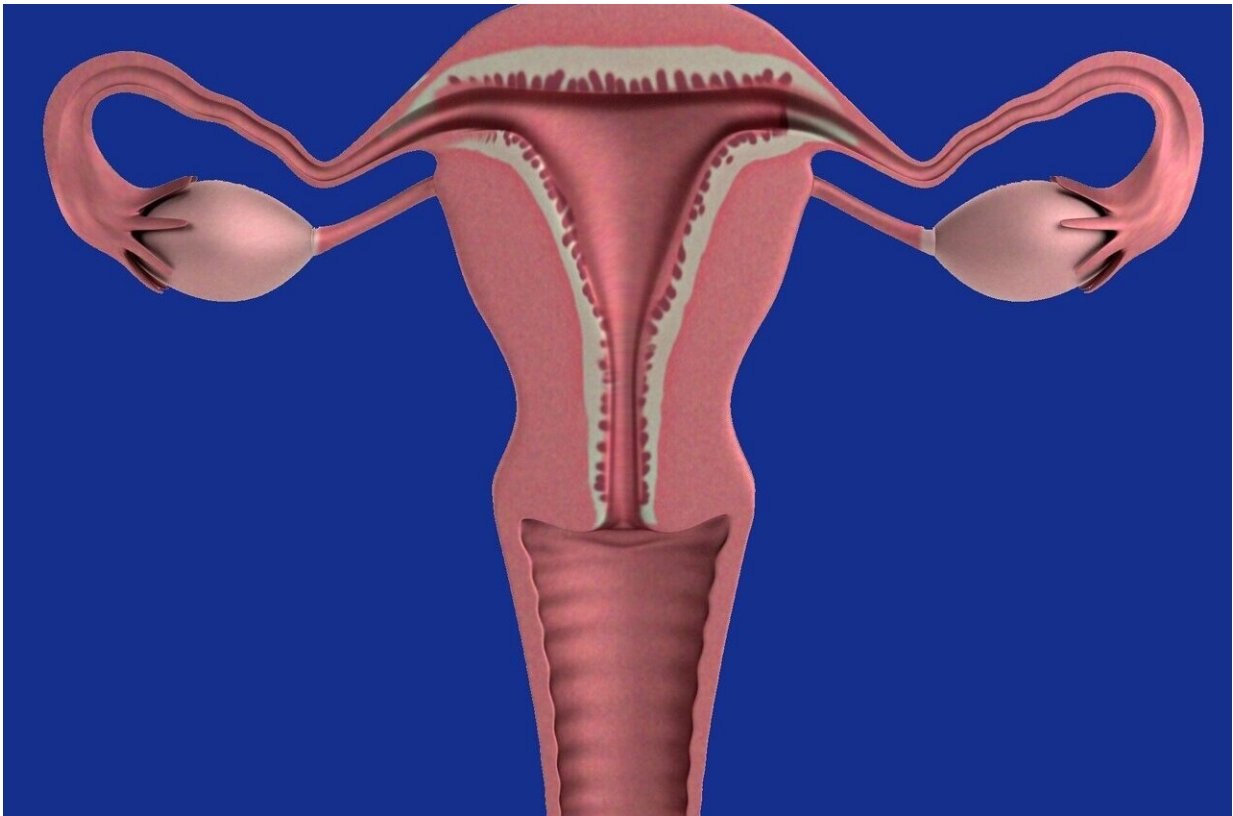# Entering the golden age for antibody-drug conjugates in gynecologic cancer

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Credit: Pixabay/CC0 Public Domain

In an editorial, published in *Oncoscience* titled, "Entering the golden age for antibody-drug conjugates in gynecologic cancer," researchers Michelle Greenman, Blair McNamara, Levent Mutlu, and Alessandro D.

Santin from Yale University School of Medicine discuss gynecologic cancers.

Biologically-aggressive tumors such as [uterine](#) serous carcinoma (USC) and carcinosarcoma (CS) are aggressive subtypes of endometrial cancer with a [poor prognosis](#) and a disproportionately high mortality rate.

"Cytoreductive surgery along with [chemotherapy](#) is critical in treatment," note the researchers.

However, recurrence is common, requiring multiple lines and combinations of chemotherapy. Use of immunotherapy in combination with gold standard chemotherapy regimens and targeted drugs represent novel modalities in treatment endowed with a remarkable potential in endometrial cancer patients.

In another recent publication, titled ["In Vivo and In Vitro Efficacy of Trastuzumab Deruxtecan in Uterine Serous Carcinoma"](#) the researchers evaluated trastuzumab-deruxtecan (T-DXd), a HER2-directed antibody drug conjugate (ADC) against biologically aggressive uterine tumors.

One key step in salvage radiation therapy planning is the delineation of lesions on the 18F-fluciclovine PET/CT images, a task currently undertaken manually by physicians. This practice, while meticulous, is labor-intensive and prone to inter- and intra-observer variations. With the recent explosion of using artificial intelligence (AI) algorithms in medical image processing, automatic segmentation of lesions using deep learning (DL)-based lesion delineation methods demonstrate promising potential to improve treatment quality, as opposed to manual contouring.

"We demonstrated for the first time the remarkable preclinical activity of T-DXd against primary USC cells lines as well as USC xenografts overexpressing HER2/neu," the authors write.

"We are optimistic that the incorporation of ADCs into the treatment of aggressive tumors and treatment refractory gynecologic cancers will improve quality of life and survival outcomes in our patients."

More information: Michelle Greenman et al, Entering the golden age for antibody-drug conjugates in gynecologic cancer, *Oncoscience* (2024). DOI: 10.18632/oncoscience.604

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