

Antibody offers new hope against ovarian cancer

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Austrian researchers have found an antibody that could be used to step up the fight against ovarian cancer -- a major killer for women.

The AD5-10 antibody helps to weaken the resistance of [cancer cells](#) in the body's immune system, according to the University of Vienna researchers whose work was published Monday.

The antibody reduced the resistance of tumour cells to a natural resistance mechanism known as Tumour Necrosis Factor Related Apoptosis Inducing Ligand (TRAIL). The TRAIL protein induces [cancerous cells](#) to commit suicide.

Some of the tumour cells fail to react to the suicide signal however, making ovarian cancer the most fatal form of disease affecting the female sexual and reproductive organs. The American Cancer Society estimates that about 21,550 new cases of ovarian cancer were diagnosed in the United States in 2009.

The Austrian team's work offers new hope of improved treatment.

"We were able to show in both cell cultures and animal models that TRAIL resistant [ovarian cancer](#) tumour cells become sensitive to TRAIL again if TRAIL and AD5-10 are both present at the same time", said Michael Krainer, who led study at the university's Faculty of Medicine.

The AD5-10 antibody attaches itself to a different part of the cancer cell

than the TRAIL protein, which could explain its effect, said the Austrian team.

In other tests, they found AD5-10 made several drugs used in chemotherapy more effective.

"We were able to show in cell cultures that the combined effect of AD5-10 and carboplatin (a common chemotherapy agent) was greater than the sum of their effects when administered individually," said Krainer.

"Moreover, tests on animal models showed that AD5-10 can eliminate resistance to carboplatin."

The antibody only reacted in this way when lymphocytes NK -- so-called 'cell killers' -- were present in the tumour at the same time, the researchers said.

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