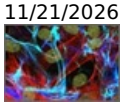
Arming cancer-killing viruses with enzyme from bacteria improves anti-cancer activity.

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Viruses have become one of the more surprising combatants against cancer. Although people often think of viruses as agents that make them sick, researchers have been developing viruses that attack cancer cells and spare healthy cells. These viruses are called oncolytic viruses, and the specificity of this approach allows for a unique, targeted treatment of cancer.

Human glioblastoma, the most common and most fatal type of brain cancer, has been shown to respond to oncolytic viral therapy. The structure of brain tumors, however, poses a significant barrier to the virus's effectiveness. Tumor cells embedded in a dense net of sugary proteins, which limit the virus’s capacity to move. Researchers at Ohio State University Medical Center buit a new oncolytic virus that produces an enzyme that allows it to overcome this barrier. Chondroitinase is a naturally occurring bacterial enzyme that removes sugar chains, a function that helps break down the physical blocks in brain tumors. The new activity allowed the oncolytic viruses to maximize their tumor-fighting potential.

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