Killer viruses and immune-boosting drugs attack tumors near and far

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Video Byte

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Abstract

Researchers are combining tumor-killing viruses with immune-boosting drugs to mark otherwise stealthy tumors for death In their recent study, the researchers grafted human melanoma tumors onto the left and right flanks of mice Right-side tumors were injected with ONCOS-102, viruses genetically modified to eradicate melanoma cells Left-side tumors were left untreated The team then injected mice with pembrolizumab, a checkpoint inhibitor Checkpoint inhibitors block cloaking proteins on tumor or T cells that normally let them slip past immune cells These powerful drugs turn “cold” tumors “hot” on immune cells’ radar Shrunk left-side tumors proved that this 1-2 combination could cripple tumors at a distance — an effect amplified by delivering ONCOS-102 and pembrolizumab at the same time Now, in order to prove the efficacy of ONCOS-102 combined with pembrolizumab in humans, a Phase I clinical study is ongoing (NCT03003676) Researchers are exploring how to make this killer combination even more powerful Kuryk et al. "Abscopal effect when combining oncolytic adenovirus and checkpoint inhibitor in a humanized NOG mouse model of melanoma" J Med Virol (2019)