After decades of stumbles and mis-starts, a cure for many cancers is finally on the horizon: Injecting patients with a genetically engineered virus

Infecting a cancer patient with a virus — a procedure that once would have raised eyebrows, if not malpractice lawsuits — might soon be routine. It's taken more than a century of work, and a few hairraising experimental trials along the way, but a viral cure for cancer could be emerging.

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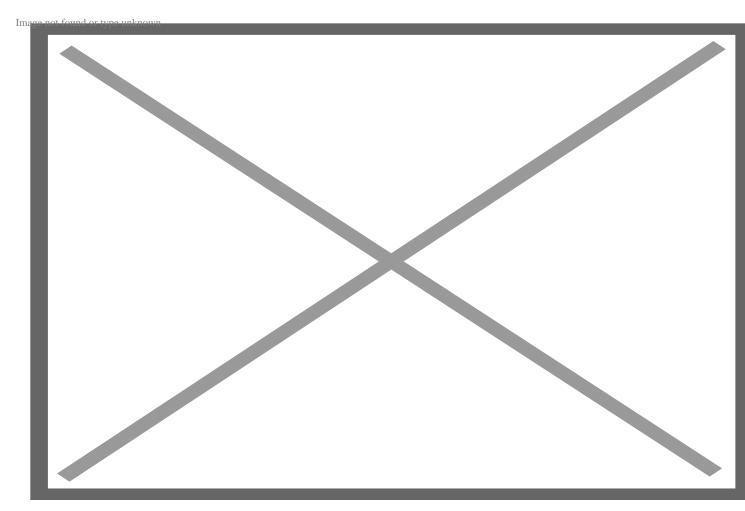
Cancer cells possess a few traits that viruses tend to like, including rapid reproduction and a high level of metabolic activity, [neuroscientist Samuel] Rabkin says. This can make a tumor cell an ideal home for a virus, until the virus destroys it and moves on to another cell.

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T-VEC, for example, has a genetic modification that allows it to express a compound that the body uses to stimulate the immune system. Like sharks to blood, immune cells mobilize at a whiff of these molecules. Engineering an oncolytic virus might guarantee it gets noticed, ensuring a strong immune response against the tumor.

Ultimately, the goal is to make it so that a patient's body is capable of recognizing and fighting cancers it has seen before, resulting in a kind of immunity to cancer.



Credit: Jay Smith

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