

Mayo Clinic News Network

Title: Measles as a Cancer Fighter

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Intro: A medical first – a woman with an incurable form of cancer has had all signs of living cancer cells eradicated from her body for at least 6-months. What’s more, it was accomplished in a single treatment. And the magic potion – was the measles virus. Here’s Dennis Douda for the Mayo Clinic News Network.

Video	Audio
Total running time [0:00]	
Stacy Erholtz speaking	“It was very exciting!”
Dennis Douda speaking	Stacy Erholtz has good reason to be amazed. For 10 years she’s battled multiple myeloma, an incurable cancer of the blood. But, she’s about to undergo a high tech test that could confirm she’s in remission.
Stacy Erholtz speaking	“I think it’s just remarkable. I -- who would have thought?”
Dennis Douda speaking	Stacy has endured virtually every suitable chemotherapy drug and two stem cell transplants, only to relapse again and again. Then, just as she had run out of treatment options, her doctors at Mayo Clinic tried something radical. A single high-dose injection of the measles virus.
C.G. Stephen Russell, M.D., Ph.D. Mayo Clinic Molecular Medicine	“Well, it’s a very simple concept. Viruses naturally come into the body and they destroy tissue.”
C.G. Stacy Erholtz Clinical Trial Volunteer	“Right. And I received enough apparently to vaccinate a hundred million people, which was alarming and I was happy to hear that after the fact.”
Dennis Douda speaking	In very simple terms, Mayo Clinic’s Dr. Angela Dispenzieri says, the measles virus makes cancer cells join together and essentially – explode. It then apparently triggers another lasting benefit.
C.G. Angela Dispenzieri, M.D. Multiple Myeloma Expert	“There’s some suggestion that it may be stimulating the patient’s immune system to further recognize the cancer cells or the myeloma cells and help mop that up more effectively than otherwise.”
Dennis Douda speaking	After more than a decade of work on the concept, researchers say the final breakthrough came in the Mayo Clinic

	Cancer Center's Gene and Virus Therapy lab, where Dr. Mark Federspiel figured out how to make highly concentrated doses of the virus, virtually the same strain of virus used safely as a vaccine.
C.G. Mark Federspiel, PhD Mayo Clinic Gene & Virus Therapy Lab	“ We’ve gone in collaboration with the FDA to try to figure out a safe way to do that. That’s their mandate is to actually support these kinds of trials and applications, but to try to do it safely.”
Dennis Douda speaking	Multiple myeloma patients were chosen to test the concept - because they tend to be immune-compromised, meaning they can’t fight off the measles virus before it has time to attack cancer cells. And because the disease is incurable, in need of an equally tenacious weapon to fight it.
Dr. Angela Dispenzieri speaking	“It really needs to go in throughout the whole bloodstream and circulate to the whole body wherever the cancer cells are hiding.”
Dennis Douda speaking The learn more about Clinical Trials: http://www.mayo.edu/research/clinical-trials	Particularly in the bone marrow of the skull, ribs, spine, arm and leg bones, and the pelvis. Other than the reappearance of an isolated soft tissue tumor under her skin, Stacy’s multiple Myeloma remains in check. Dr. Russell says the results are completely changing the game.
Dr. Stephen Russell speaking	“We recently have begun to think about the idea of a single shot cure for cancer and that’s our goal with this therapy.”

Anchor tag: Mayo researchers say this proves the concept that the measles virus has potential as a cancer fighting tool. They are moving immediately into a phase two clinical trial involving more patients. They are also testing the measles virus’s effectiveness at fighting ovarian, brain, head and neck cancers and mesothelioma. In addition they are developing other viruses that seem to have potential to kill cancer cells.