

# Engineered measles vaccine wipes out woman's cancer

May 15 2014

---

A potent dose of engineered measles virus has been shown for the first time to have completely wiped out a woman's cancer, US scientists reported this week.

"Here we have got a therapy that you give once, and the outcome can be long-term remission of cancer," said lead author Stephen Russell, a hematologist who co-developed the therapy described Wednesday in the *Mayo Clinic Proceedings* journal.

"We believe it can become a single shot cure."

The 49-year-old patient was diagnosed with a kind of [bone marrow](#) cancer called [multiple myeloma](#). She had a tumor on her forehead and the cancer had spread through her bone marrow.

She was given an intravenous dose of [measles virus](#), known as MV-NIS, that is selectively toxic to myeloma plasma cells.

A normal dose of [measles vaccine](#) contains 10,000 infectious units of the measles virus. The dose in this study was 100 billion infectious units.

"She had a remarkable response," said Russell.

Despite some side effects early on, including a severe headache, the tumor on her forehead soon disappeared and her bone marrow cleared.

Russell said her remission lasted for nine months. When the tumor on her forehead began to reappear, doctors treated it with local radiotherapy.

A report in the Minneapolis Star Tribune said the woman, now 50, continues to be in good health and hopes her doctor's visit next month will show that she is still [cancer](#)-free.

A second patient in the study did not fare as well. She had large tumors in her legs and the therapy did not eradicate them.

However, using advanced imaging studies, doctors were able to track the path of the measles virus in her body and found it was indeed attacking the areas where tumors were growing.

Both patients were the first two studied at the highest possible dose of the therapy, which had not worked at lower doses.

The women also had limited exposure to measles in the past. Both their cancers had spread to the point where they had no other treatment options.

An accompanying editorial by John Bell of the Center for Innovative Cancer Research at the Ottawa Hospital Research Institute, said the evidence was "compelling."

"These are exciting results that finally validate the clinical potential of this class of therapeutics. However, there is much research to be done," Bell wrote.

© 2014 AFP

Citation: Engineered measles vaccine wipes out woman's cancer (2014, May 15) retrieved 18

April 2024 from <https://medicalxpress.com/news/2014-05-measles-vaccine-woman-cancer.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.