

LAST YEAR'S VIRUS

THIS YEAR'S CANCER TREATMENT

MEASLES

A LOOK INTO ONCOLYTIC VIRUSES

THE GOAL

WHY IS THIS TREATMENT BETTER?

CANCER IS RESPONSIBLE FOR **1** IN **6** DEATHS¹



- A new mindset on fighting cancer has entered the research world
- It focuses on modifying deadly viruses to target and kill cells, rather than relying on toxic chemicals, such as chemotherapy



THE RESEARCH

WHY MEASLES?

- The virus has stayed relatively stable for years, making it unlikely to revert back to a form causing disease²
- The altered virus binds to a receptor that is displayed on cancer tumor cells³
- Most people have been immunized against measles, so the virus will not spread easily²



THE PROCESS

HOW DOES IT WORK?



- The measles virus is altered to make it bind to receptors displayed on tumor cells²
- Once the virus binds, it can enter the tumor cell³
- This viral entry allows the immune system to recognize that a cell is infected and attack the tumor cells⁴

THE RISKS

IS THE TREATMENT SAFE?



- The altered form of the virus is incapable of causing disease in normal human tissues, but it triggers an immune reaction to the cancer-causing cells⁴
- It is stable, tumor specific, and safe in the United States since the population is generally immune due to vaccines²



THE FUTURE

WHAT DOES THIS MEAN FOR CANCER?

- The use of viruses to treat cancer has been researched for many years, but has gained more attention recently
- While it has been proven to be a successful treatment in some cases, there is still much research to be done⁵
- Other viruses of interest include the Polio Virus and HIV²