



# Oncolytic Virus

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# Overview:

## History

- What
- Who
- Developing

## Impact

- What
- Who

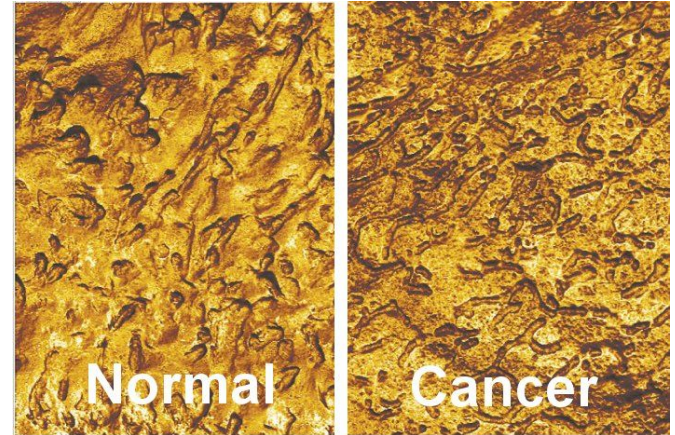
## Advancement

- Pros
- Cons

## Cites

## History: What

- The Oncolytic Virus was first thought of in the 1960s
- It was created to infect and kill cancer cells
- FDA approved 2015 Talimogene Laherparepvec - melanoma cancer





# History: Who

## Aina Muceniece

- First person to think of a virus to treat cancer
  - 1960s-1970s

## Juan Fueyo

- First person to develop this virus and start testing it on brain tumors
  - Still testing the virus

## History: Developing

- Scientists are still working on developing viruses to fight diseases
  - Measles virus
  - Reovirus
  - Newcastle disease virus
- Scientists have been working on creating a virus that can kill brain tumors





## Impact: Who

- The Oncolytic Virus therapy impacts the patients who have cancer, harmful diseases, and brain tumors.
- This therapy doesn't only affect the patients who are suffering, they also affect the families of the patients.
  - This virus will target the cancer and brain tumor that will kill the cells, which will allow the patient to live longer.

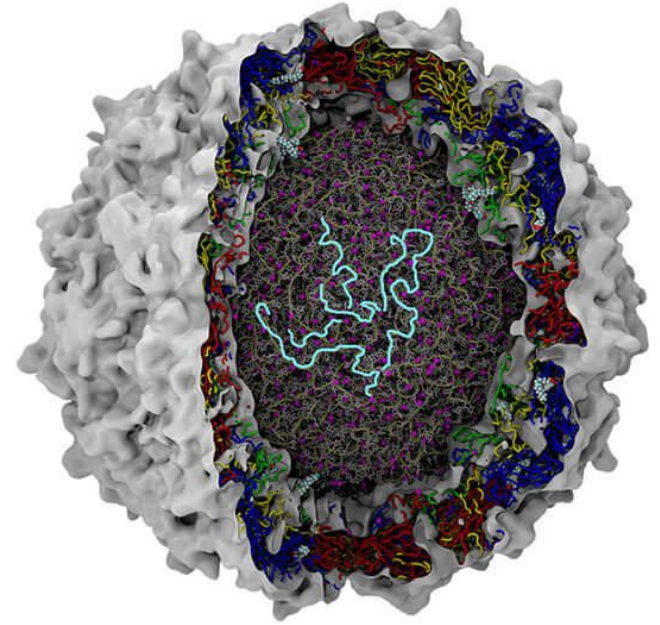


## Impact: What

- If scientists are able to make a virus for cancer treatment and able to cure any cancer treatment will be an amazing break through not only in the science field but also in the medical one too.
- This will lead to many more breakthroughs and a new way of providing medical care.

## Pros to Advancement

- Being able to develop viruses to cure disease, brain tumors, and cancer will be an amazing breakthrough
- This will be a start to a medical revolution and change how we are treated
- The life expectancy will increase if there is a cure to cancer and tumors





## Cons to Advancement

Some downsides to the oncolytic virus therapy

- The cancer cells might resist the virus
- The virus can cause the immune system to attack healthy cells
- The virus also might target healthy cells which could damage their immune system
  - If the immune system is weak it can lead to life-threatening infections



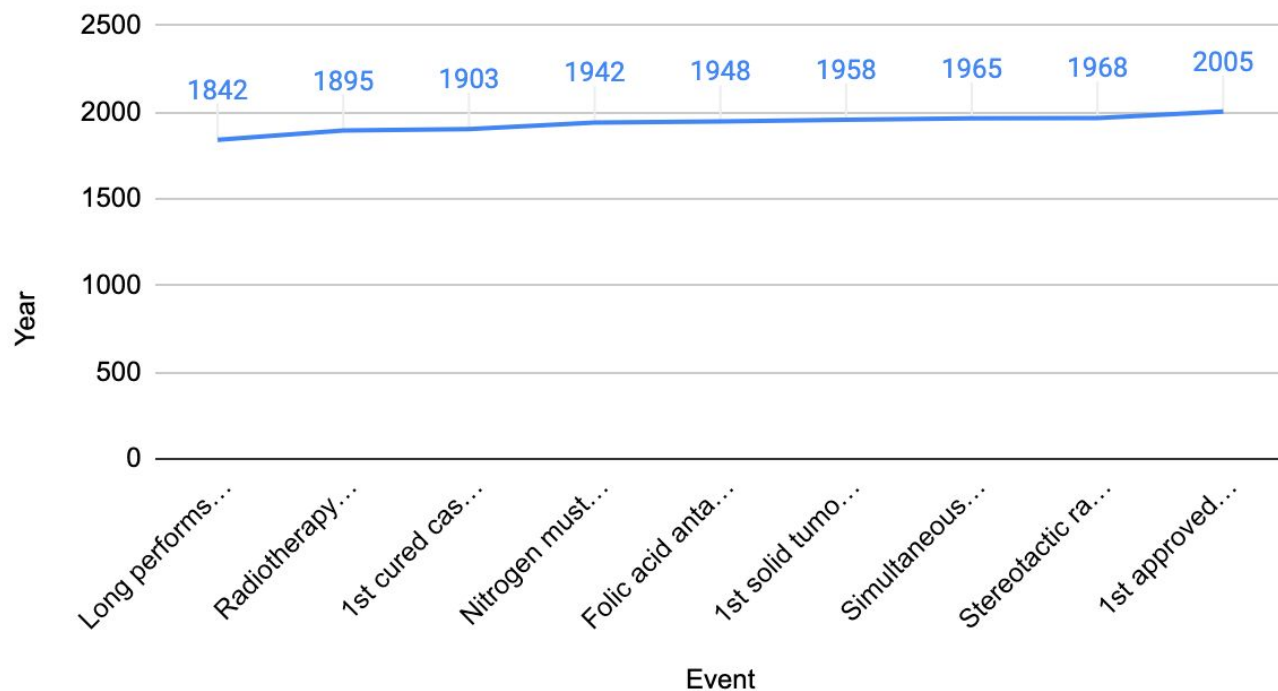


## Summary:

Scientists have been working forever to form a cure for cancer because it is one of the world's leading cause of death. I think overall this advancement of technology will be an amazing breakthrough as long as scientists are able to perfect the virus to only target the diseased cells. If the accuracy of the disease is increased, then this will change how we will cure diseases.

# Chart

Year vs. Event





## Cites:

- [Pros and cons of oncolytic virotherapy](#) - January 2015
- [How Oncolytic Virus Therapy is Changing Cancer Treatment](#) - John C. Bell
- [History of Oncolytic Viruses: Genesis to Genetic Engineering](#) - April 4, 2007
- [Oncolytic Virus Therapy: Using Tumor-Targeting Viruses to Treat Cancer](#) - February 9, 2018
- [FDA Approves Talimogene Laherparepvec to Treat Metastatic Melanoma](#) - November 25, 2015
- [Delivery and Biosafety of Oncolytic Virotherapy](#) - April 15, 2020