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# ONCOLOGY CLINICAL TRIALS AT A GLIMPSE…

## Presentation to The Rotary Club of Ottawa South

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# THE FUTURE OF CANCER THERAPY IS HERE AT TOHCC...

- **Cancer Immunotherapy**
  - Immune Checkpoint Inhibitors
  - Personalized Cancer Vaccines
  - Oncolytic Viruses

# CANCER IMMUNOTHERAPY IS HERE- TO STAY.

James P Allison and Tasuku Honjo win Nobel prize for medicine

**American and Japanese immunologists win 2018 award for their work on cancer therapy**

https://www.theguardian.com/science/2018/oct/01/james-p-allison-and-tasuku-honjo-win-nobel-prize-for-medicine

**Cancer Immunotherapy has joined surgery, radiation therapy and chemotherapy as the 4th pillar of oncology treatment.**

The Ottawa Hospital | L'Hôpital d'Ottawa

# WHAT IS CANCER IMMUNOTHERAPY?

- Immune therapy (or immunotherapy) is a type of treatment that uses your body's immune system to fight cancer. Some examples include: monoclonal antibodies, immune checkpoint inhibitors, and non-specific immunotherapy (interferons). http://www.cancer.ca

- Immune therapy treatments tell your body's immune system to attack and get rid of cancer cells.

- Once your immune system knows that the cancer is there, it starts to work hard to destroy your cancer cells.

- Chemotherapy medications attack and get rid of cancer cells, but they also damage some healthy cells. This causes side effects like hair loss and vomiting. Immune therapy medications do not damage healthy cells the same way as chemotherapy. https://www.cancercareontario.ca

# APPROVED CANCER IMMUNOTHERAPIES (TO DATE)

-As of last week, **16 cancer immunotherapies** are now approved by the Food and Drug Administration (4th International Cancer Immunotherapy Conference, Sept. 30- Oct. 3 2018)

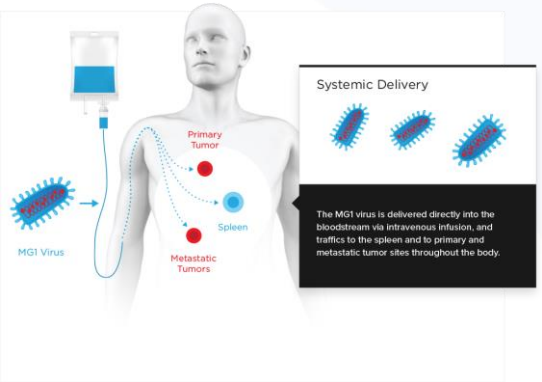
-Cancer Care Ontario has funded several cancer immunotherapies for specific indications. A few examples of checkpoint inhibitor immunotherapies include **(all offered at TOHCC)**:

- ✓ **Nivolumab (Opdivo):** Skin cancer (melanoma); lung cancer (non-small cell); kidney cancer; liver cancer; head and neck cancer; a type of blood/lymphatic cancer called Hodgkin Lymphoma *(Sept 2018)*
- ✓ **Pembrolizumab (Keytruda) :** Skin cancer (melanoma), lung cancer (non-small cell) or bladder cancer that has spread or cannot be removed by surgery. It is also used to treat certain patients with Hodgkin lymphoma *(Aug 2018)*
- ✓ **Ipilimumab (Yervoy):** Skin cancer (melanoma) that cannot be removed by surgery or has spread to other parts of the body (*May 2018)*
- ✓ **Atezolizumab (Tecentriq):** Bladder cancer- certain types (*May 2018)*
- ✓ **Durvalumab (Imfinzi):** Bladder cancer- who have received previous treatments (*May 2018)*

# ONCOLYTIC VIRUS TREATMENTS ARE HERE (THROUGH CLINICAL TRIALS)...

- **CCTG IND.214: MG1 Maraba/MAGE-A3**
- **Turnstone Ad/MG1-E6E7-002 (Kingfisher)**
- **BMS CA034-001:** CD80/αCD3 Oncolytic Virus
- **CCTG Reolysin trials:**
- IND.209, 210, 211, 213
- **Amgen MASTERKEY – TVEC**
- **VBL-111**
- **Toca-511**

Oncolytic viruses can infect and kill cancer cells without harming healthy cells, while also triggering an immune response to help fight the cancer.
www.cancer.ca




http://turnstonebio.com

The first oncolytic virus to receive FDA approval was a treatment for melanoma known as talimogene laherparepvec (Imlygic), or T-VEC. *(Feb 2018)*

# PERSONALIZED THERAPY IS HERE...

Many different types of personalized therapies are available, one example is a **personalized cancer vaccine (available in clinical trials at TOHCC).**

- A vaccine stimulates the immune system to produce antibodies to fight a disease.
- Cancer treatment vaccines can be made up of cancer cells, parts of cancer cells or proteins. These vaccines are made to recognize proteins on certain cancer cells.
- This helps the immune system to recognize and attack those cancer cells. These vaccines might eventually help to stop further growth of the cancer, prevent a cancer from coming back and destroy cancer cells left behind after other treatments. www.cancer.ca

Genentech Personalized Cancer Vaccine
(click link)

https://www.gene.com/stories/decoding-cancer

# THE FUTURE OF CANCER THERAPY IS HERE AT TOHCC...

- 133 patients enrolled on oncolytic virus trials
- 229 patients enrolled to molecular profiling trials – matching genetic profile to targeted therapy
- 681 patients enrolled to immunotherapy trials
- October 9, 2018 first patient enrolled to personalized vaccine trial
  - patients tumour used to create vaccine

THANK YOU TO…


FOR YOUR STRONG AND LASTING PARTNERSHIP WITH TOHCC

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