



Virtual Learning

# Medical Interventions Immunotherapy

April 30, 2020



# Medical Interventions

## Lesson: April 30, 2020

### **Objective/Learning Target:**

Recognize that Immunotherapy shows great promise in the treatment of cancer. (3.4.4)

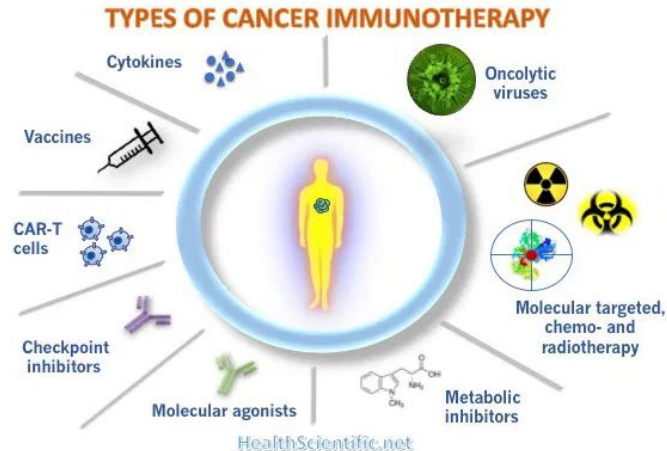


## Let's Get Started:

1. Review the immune system by watching [this video](#).
2. Watch [this video](#) to learn about immunotherapy and cancer. What is the link between immunotherapy and cancer?

# Let's Get Started: **Answer**

1. Review the immune system by watching [this video](#).
2. Watch [this video](#) to learn about immunotherapy and cancer. What is the link between immunotherapy and cancer?
  - a. Immunotherapy uses the body's immune system to fight cancer





## Lesson Activity

Read [this article](#) and identify how each of the following Immunotherapy treatments works to fight cancer:

1. Immune checkpoint inhibitors
2. T-cell transfer therapy
3. Monoclonal antibodies
4. Treatment vaccines
5. Immune system modulators



## Lesson Activity - Answers

1. Immune checkpoint inhibitors
  - a. drugs that block immune checkpoints that are a normal part of the immune system and keep immune responses from being too strong; allow immune cells to respond more strongly to cancer
2. T-cell transfer therapy
  - a. boosts natural ability of T cells to fight cancer; immune cells taken from tumor, those most active against cancer are selected/changed in lab to better attack cancer cells then grown in large batches and put back into body
3. Monoclonal antibodies
  - a. immune system proteins created in the lab designed to bind to specific targets on cancer cells to be better seen/destroyed by the immune system
4. Treatment vaccines
  - a. work by boosting your immune system's response to cancer cells
5. Immune system modulators
  - a. enhance the body's immune response against cancer. Some of these agents affect specific parts of the immune system, whereas others affect the immune system in a more general way



## Practice

Indicate which immunotherapy is being described below.

1. Requires growing cells in a lab for several weeks.
2. Include interferons and interleukins.
3. Works by stopping the “off” signal sent to T-Cells.
4. Act like molecular “flags” on cancer cells that allow immune cells to destroy.
5. Uses an oncolytic virus to help the body detect and kill cancer.



## Practice - **Answers**

Indicate which immunotherapy is being described below.

1. T-cell transfer therapy
2. Immune system modulators
3. Immune checkpoint inhibitors
4. Monoclonal antibodies
5. Treatment vaccines





## Additional Practice/Resources

1. Check your understanding of the immune system responses by playing this [game](#) from the Nobel Prize website. Think about how each of the immunotherapy treatments would be involved as you play.
2. Learn about how monoclonal antibodies are making waves for treating [lung cancer](#).