

## Visit your closest Emergency Department if you experience:



Shortness of breath or chest pain



Diarrhea (that is not resolved with doses of anti-diarrheal medication ie: Imodium) or if there is blood in your stool.



Blistering rash develops



Vision loss or eye pain

## If you experience any of the symptoms listed above please call:

During the day:  
Cancer Centre Symptom Support 705-728-9090 x79565

After hours, evenings and weekends:  
Bayshore CAREchart Symptom Support: 1-877-681-3057

Please visit [www.rvh.on.ca](http://www.rvh.on.ca) for the latest information and hours of operation.

Fact sheet last updated: July 2021

References:  
South East Regional Cancer Program (2016) Immune Checkpoint Inhibitor Class – For patients and families.  
Kingston General Hospital (2016) Immune Checkpoint Inhibitor Assessment Flowsheet.  
Shoustari, A., Wolchok, J., Hellman, M. (2018) Principles of cancer immunotherapy. [https://www.uptodate.com/contents/principles-of-cancer-immunotherapy?search=monoclonal%20antibodies&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/principles-of-cancer-immunotherapy?search=monoclonal%20antibodies&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1)  
National Cancer Institute (2018) Immunotherapy to Treat Cancer <https://www.cancer.gov/about-cancer/treatment/types/immunotherapy>

# Patient Immunotherapy Fact Sheet

Your immune system helps your body fight against infections and other diseases. **Immunotherapy** is a biological cancer treatment, made from living organisms, that helps your immune system fight cancer.



**Monoclonal Antibodies** are drugs that are designed to bind to specific targets in your body. They “mark” cancer cells so it is easier for your immune system to find them and destroy them.



**Cytokines** are proteins, made by your body's cells, that play an important role of your body's normal immune response. Interferons and interleukins are examples of cytokines.



**Treatment Vaccines** work against cancer by boosting your immune system's response to cancer cells. Treatment vaccines are different from vaccines that prevent disease.



**Bacillus Calmette-Guerin (BCG)** is used to treat bladder cancer. It is a weakened form of bacteria that causes tuberculosis.



**Checkpoint Inhibitors** are drugs that help the immune system respond to a tumour. These drugs work by releasing the “brakes” that keep parts of the immune system from killing cancer cells. They do not target the tumour directly, rather, they interfere with the ability of the cancer cell to avoid an attack by the immune system.

## Side Effects from Immunotherapies

While immunotherapies are considered to be less toxic in comparison to chemotherapy and are usually well tolerated, there is a risk of side effects. The more common side effects include:



**GI inflammation (stomach and colon)**, which could be from mild irritation to severe as colitis (inflammation of colon), potentially even creating a hole in the bowel. Symptoms include bloating, cramps, diarrhea, bloody stools, abdominal pain and nausea.



**Inflammation of the thyroid**, which may lead to high activity (hyperthyroidism) or low activity (hypothyroidism). The thyroid controls metabolism, growth, and temperature control, so typical symptoms of hyperthyroidism include weight loss, fast heart rate, irritability, diarrhea and feeling warm most of the time. While hypothyroidism often include weight gain, fatigue, dry skin, constipation and feeling cold.



**Inflammation of the adrenal glands**, which may lead to fatigue, nausea, low blood pressure or low blood sugar. If you notice any of the following symptoms, notify your cancer care team: Nausea, headache, fatigue or vision changes



**Inflammation of the lungs**, which may appear as shortness of breath, new cough and wheezing and often shows up as low oxygen levels in the blood.



**Rash**, is another very common side effect. It often appears as a red, bumpy, and sometimes itchy rash on chest/abdomen, hands and feet. Severe cases can develop into blisters which may rarely require hospitalization.

**Other organs such as the kidneys, liver and brain may also develop some inflammation but this remains quite rare.**



**Inflammation of the liver**, tell your cancer care team if you notice yellowish skin or eyes, have dark urine or pain in your right side of your belly.



**Inflammation of the kidneys**, tell your cancer care team if you have been having difficulty voiding or if there is blood in your urine or if you have lower back pain.



**Inflammation of the brain**, tell your cancer care team if you are experiencing any numbness and tingling, headaches, muscle weakness, vision loss or pain in your eyes

**Report any/all changes to your care team**

## Symptom Management



### Skin (rash or dry itchy skin)

**Contact triage lines** if you develop a new rash or if there is no improvement of an ongoing rash. You should also call if the ongoing rash becomes severe.

#### Self-Management Strategies to prevent or treat dry skin:

- Use skin moisturizer (unscented)
- Protect your skin from the sun and cold
- Use sunscreen with UVA and UVB protection and an SPF of at least 30



### Diarrhea and/or bowel changes:

Loose, watery, or more frequent bowel movements, or any changes in bowel habits including stomach pain or blood in your stool.

Do not take any anti-diarrhea medications or steroids until you have talked to your cancer care team.

**Please call the triage lines.**

**If you have 3 or more stools over your normal in 24 hours, contact your Cancer Centre Care Team right away.**

#### Self-Management Strategies for Diarrhea after you have contacted the Cancer Centre Care Team:

- Rehydrate. Drink at least 6 to 8 cups of non-caffeinated liquids each day;
- Avoid foods or drinks with artificial sweetener, coffee and alcohol;
- Change to "BRAT" diet by eating bananas, white rice, applesauce and white toast, avoid high acidic foods/drinks (orange juice, tomatoes);
- Eat small meals and snacks throughout the day rather than 2 to 3 large meals.;
- Over the counter anti-diarrheal medications, such as Imodium, may be taken as directed **only** after speaking with your cancer care team.