

For the Patient: GIGAVCOXP

Other Names: First-Line Treatment of Locally Advanced or Metastatic Gastroesophageal Cancer Using Oxaliplatin, Capecitabine and Pembrolizumab

GI = GastroIntestinal
GAV = Gastroesophageal, **Advanced**
COXP = Capecitabine, **Oxaliplatin**, **Pembrolizumab**

ABOUT THIS MEDICATION

What are these drugs used for?

- Oxaliplatin, capecitabine, and pembrolizumab are drugs given to treat locally advanced or metastatic cancer of the esophagus or stomach-esophagus junction.

How do these drugs work?

- Both capecitabine and oxaliplatin work by interfering with dividing cells and preventing an increase in the number of cancer cells.
- Pembrolizumab helps body's immune system target cancer cells to stop them from growing.

INTENDED BENEFITS

- This therapy is being given to destroy and/or limit the growth of cancer cells in your body. This treatment may improve your current symptoms, and delay the onset of new symptoms.
- It may take several treatments before your doctor can judge whether or not this treatment is helping.

TREATMENT SUMMARY

How are these drugs given?

- Pembrolizumab and oxaliplatin is given directly into the vein (IV). Capecitabine is a tablet taken by mouth.
- You will receive the pembrolizumab and oxaliplatin at the clinic by a chemotherapy nurse on the first day of treatment **for one day only**. You will be given the capecitabine to start on the same day. Capecitabine is usually given **for 14 days, followed by a 7 day break**. You will take this medication home with you.
- This 21 day period of time is called a "cycle".
- Each treatment will take **about three hours**. Your first treatment will probably take longer, as the nurse will review information on the chemotherapy drug with you.
- Capecitabine will be given to you by a pharmacist when you come in for each oxaliplatin treatment. You will be given enough tablets so you can take them while at home.

The calendar below outlines how the medications are given each 3 week cycle.

C Y C L E	DATE	TREATMENT PLAN
		▶ Week 1 → pembrolizumab, oxaliplatin IV x 1 day capecitabine orally in a.m.& p.m. x 7 days with food.
	1	Week 2 → capecitabine orally in a.m.& p.m. x 7 days with food.
		Week 3 → no treatment

C Y C L E	DATE	TREATMENT PLAN
		▶ Week 1 → pembrolizumab, oxaliplatin IV x 1 day capecitabine orally in a.m.& p.m. x 7 days with food.
	2	Week 2 → capecitabine orally in a.m.& p.m. x 7 days with food.
		Week 3 → no treatment

Treatment may be continued as long as you are benefiting from it and not having too many side effects for chemotherapy and for a maximum of 2 years for pembrolizumab, as determined by your oncologist.

What will happen when I get my drugs?

- A **blood test** is done each cycle, on or before the first day of each treatment cycle. The dose and timing of your chemotherapy may be changed based on your blood counts and/or other side effects

SIDE EFFECTS AND WHAT TO DO ABOUT THEM

Unexpected and unlikely side effects can occur with any drug treatment. The ones listed below are particularly important for you to be aware of as they are directly related to the common actions of the drugs in your treatment plan.

Your doctor will review the risks of treatment and possible side effects with you before starting treatment. The chemotherapy nurse will review possible side effects of the drugs and how to manage those side effects with you on the day you receive your first treatment..

SERIOUS SIDE EFFECTS DURING TREATMENT	MANAGEMENT
<p>Tell your nurse if you feel like you have difficulty breathing or swallowing during or immediately after your oxaliplatin infusion. This may occur rarely.</p>	<ul style="list-style-type: none"> • These symptoms will disappear in a few hours, and may not require treatment. • If you have these symptoms with a 2-hour infusion, your next treatment may be given over 6 hours.
<p>Allergic reactions may rarely occur. Signs of an allergic reaction are dizziness, feeling faint, confusion, shortness of breath, and wheezing. This may occur immediately or several hours after receiving the drugs. It can occur after the first dose, or after many doses.</p>	<p>Tell your nurse if this happens while you are receiving the drugs or contact your doctor immediately if this happens after you leave the clinic.</p>
<p>Oxaliplatin burns if it leaks under the skin.</p>	<p>Tell your nurse or doctor immediately if you feel burning, stinging, or any other change while the drug is being given.</p>
<p>Hand-foot skin reaction may occur very commonly during capecitabine treatment. The palms of your hands and soles of your feet may tingle, become red, numb, painful, or swollen. Skin may also become dry or itchy. You may not be able to do your normal daily activities if blisters, severe pain or ulcers occur.</p>	<ul style="list-style-type: none"> • Avoid tight-fitting shoes or rubbing pressure to hands and feet, such as that caused by heavy activity. • Clean hands and feet with lukewarm water and gently pat to dry; avoid hot water. • Apply lanolin-containing creams (eg. BAG BALM®, UDDERLY SMOOTH®) to hands and feet liberally and often. • Tell your cancer doctor at the next visit if you have any signs of hand-foot skin reaction. • Stop taking capecitabine and call your cancer doctor if the skin reaction is painful, as your dose may need to be changed. Taking a lower dose does not affect the usefulness of capecitabine.
<p>Nausea and vomiting may occur after your oxaliplatin treatment and may last for 24- 48 hours.</p> <p>Nausea and vomiting may also occur while you are taking capecitabine.</p> <p>If you are vomiting and it is not controlled, you can quickly become dehydrated.</p>	<p>You may be given a prescription for an anti-nausea drug(s) to take before your chemotherapy treatment and/or at home. It is easier to prevent nausea than treat it once it has occurred, so follow directions closely.</p> <ul style="list-style-type: none"> • Drink plenty of liquids. • Eat and drink often in small amounts. <p>Try the ideas in <i>Practical Tips to Help Manage Nausea.*</i></p> <p>Tell your healthcare team if nausea or vomiting continues or is not controlled with your anti-nausea drug(s).</p>

SERIOUS SIDE EFFECTS DURING TREATMENT	MANAGEMENT
<p>You may feel tingling or a loss of feeling in your hands, feet, nose, or throat. They may be made worse by exposure to cold. This is very common after oxaliplatin treatment. These problems often disappear after a few hours or days.</p>	<ul style="list-style-type: none"> • Avoid cold air if possible. • Protect yourself from the cold, which can cause or worsen these symptoms. Wear gloves, socks, and something that covers your mouth and nose when outside in cold weather. • Do not drink cold beverages or eat cold food for a few days after treatment. • Be careful when walking on uneven surfaces or doing activities that need you to balance or be steady. • Try the ideas in <i>Coping With/Preventing Oxaliplatin Cold Dysesthesias*</i> <p>Talk to your healthcare team if symptoms continue for more than a week, or you have trouble with buttons, writing, picking up small objects, walking, or have fallen.</p>

<p align="center">SERIOUS SIDE EFFECTS DURING TREATMENT</p>	<p align="center">MANAGEMENT</p>
<p>Diarrhea may occur very commonly during your treatment. If you have diarrhea and it is not controlled, you can quickly become dehydrated.</p>	<p>For mild diarrhea (up to 3 stools per day more than usual), diarrhea may be treated with loperamide 2 mg tablets (e.g., IMODIUM®):</p> <ul style="list-style-type: none"> • Take <i>TWO tablets</i> at the first sign of loose or more frequent stools than usual. • Then take <i>ONE tablet</i> after every loose stool, up to a maximum of eight tablets per day AND continue until diarrhea has stopped for 12 hours or as directed by your doctor or nurse. • Always keep a supply of loperamide (e.g., have 48 tablets at home). You can buy loperamide at any pharmacy without a prescription. • To help diarrhea: <ul style="list-style-type: none"> ▪ Drink plenty of fluids. ▪ Eat and drink often in small amounts. ▪ Avoid high fibre foods as outlined in <i>Food Choices to Help Manage Diarrhea</i>.* ▪ A dietitian can give you more suggestions for dealing with diarrhea. <p>Stop taking capecitabine and call your healthcare team if you have:</p> <ul style="list-style-type: none"> ▪ four stools a day more than usual ▪ have diarrhea during the night ▪ diarrhea that does not improve 24 hours after starting loperamide ▪ diarrhea that lasts more than 48 hours. <p>Note: If lactose in milk usually gives you diarrhea, the lactose in the tablet may be causing your diarrhea. Take LACTAID® tablets just before your capecitabine dose.</p>
<p>Sore mouth may occur commonly during treatment. Mouth sores can occur on the tongue, the sides of the mouth or in the throat. Mouth sores or bleeding gums can lead to an infection.</p>	<ul style="list-style-type: none"> • Brush your teeth gently after eating and at bedtime with a very soft toothbrush. If your gums bleed, use gauze instead of a brush. Use baking soda instead of toothpaste. • Make a mouthwash with ½ teaspoon baking soda or salt in 1 cup warm water and rinse several times a day. • Try soft, bland foods like puddings, milkshakes and cream soups. • Avoid spicy, crunchy or acidic food, and very hot or cold foods. • Try ideas in <i>Food Ideas to Try with a Sore Mouth</i>*.

SERIOUS SIDE EFFECTS DURING TREATMENT	MANAGEMENT
<p>Your white blood cells will decrease 1-2 weeks after your treatment. They usually return to normal 3 weeks after your last treatment. White blood cells protect your body by fighting bacteria (germs) that cause infection. When they are low, you are at greater risk of having an infection.</p>	<p>To help prevent infection:</p> <ul style="list-style-type: none"> • Wash your hands often and always after using the bathroom. • Take care of your skin and mouth. • Call your doctor immediately at the first sign of an infection such as fever (over 100°F or 38°C by an oral thermometer), chills, cough, or burning when you pass urine.

OTHER SIDE EFFECTS DURING TREATMENT	MANAGEMENT
<p>Pain or tenderness may occur where the needle was placed.</p>	<p>Apply warm compresses or soak in warm water for 15-20 minutes several times a day.</p>
<p>Fever may commonly occur shortly after treatment with oxaliplatin. Fever should last no longer than 24 hours.</p>	<ul style="list-style-type: none"> • Take acetaminophen (e.g. TYLENOL®) every 3-4 hours. • Fever which occurs more than 48 hours after treatment maybe the sign of an infection. See details under Serious Side Effects above
<p>Your platelets may decrease during or after your treatment. They will return to normal after your last treatment. This is common. Platelets help to make your blood clot when you hurt yourself. You may bruise or bleed more easily than usual.</p>	<p>To help prevent bleeding problems:</p> <ul style="list-style-type: none"> • Try not to bruise, cut, or burn yourself. • Clean your nose by blowing gently. Do not pick your nose. • Avoid constipation. • Brush your teeth gently with a soft toothbrush as your gums may bleed more easily. Maintain good oral hygiene. <p>Some medications such as ASA (e.g. ASPIRIN®) or ibuprofen (e.g. ADVIL®) may increase your risk of bleeding.</p> <ul style="list-style-type: none"> • Do not stop taking any medication that has been prescribed by your doctor (e.g. ASA for your heart). • For minor pain, try acetaminophen (e.g. TYLENOL®) first, but occasional use of ibuprofen may be acceptable.
<p>Tiredness, fatigue and lack of energy may occur commonly. As the number of treatment cycles increase, fatigue may get worse.</p>	<ul style="list-style-type: none"> • Do not drive a car or operate machinery if you are feeling tired. • Try the ideas in the handout titled Fatigue/Tiredness*.

OTHER SIDE EFFECTS DURING TREATMENT	MANAGEMENT
Your skin may sunburn easily from the capecitabine. This occurs very rarely.	To help prevent sunburn: <ul style="list-style-type: none"> • Avoid direct sunlight. • Wear a hat, long sleeves and long pants or skirt outside on sunny days. • Apply a sun block lotion with an SPF (sun protection factor) of at least 30. • Refer to Your Medication Sun Sensitivity and Sunscreens* or the BC Health Guide for more information. • After sun exposure, if you have a severe sunburn or skin reaction such as itching, rash, or swelling, contact your doctor.
Hair loss is rare with oxaliplatin and capecitabine. Your hair will grow back once you stop treatment. Colour and texture may change.	<ul style="list-style-type: none"> • Use a gentle shampoo and soft brush. • Care should be taken with use of hair spray, bleaches, dyes and perms.
Abnormal heart rhythm (QT prolongation) rarely occurs.	Minimize your risk of abnormal heart rhythm by: <ul style="list-style-type: none"> • Always checking with your pharmacist and doctor about drug interactions when starting a new medication, herbal product, or supplement. • Tell your doctor immediately or get emergency help if your heart is beating irregularly or fast, or if you feel faint, lightheaded, or dizzy.

*Please ask your chemotherapy nurse, pharmacist or dietitian for a copy.

Pembrolizumab may cause serious immune reactions against your own body (autoimmune) affecting many parts.

What is the most important information I should know about SERIOUS SIDE EFFECTS?

- Pembrolizumab can cause serious side effects in many parts of your body. These side effects are most likely to begin during treatment; however, side effects can show up months after your last treatment with pembrolizumab.
- **Tell** your doctor as soon as possible if you have any of serious side effects listed in the table below or your symptoms get worse.
- **Do not try to treat or diagnose symptoms yourself.** Getting medical treatment right away may keep the problem from becoming more serious.

SERIOUS SIDE EFFECTS DURING PEMBROLIZUMAB TREATMENT	How Common is it?
<p>Inflammation of the intestines (colitis) <i>Symptoms may include:</i></p> <ul style="list-style-type: none"> • diarrhea (loose stools) or more bowel movements than usual. Do not treat the diarrhea yourself. • blood or mucus in stools or dark, tarry, sticky stools • severe stomach pain (abdominal pain) or tenderness 	<p>Common (less than 1 in 10 but more than 1 in 100)</p>
<p>Inflammation of the thyroid gland (hyperthyroidism, hypothyroidism) <i>Symptoms may include:</i></p> <ul style="list-style-type: none"> • rapid heart beat • weight loss or gain • increased sweating • hair loss • feeling cold • constipation or diarrhea • your voice gets deeper • muscle aches • changes in sleep patterns 	<p>Common (less than 1 in 10 but more than 1 in 100)</p>
<p>Inflammation of the pituitary gland (hypophysitis, hypopituitarism, including secondary adrenal insufficiency) <i>Symptoms may include:</i></p> <ul style="list-style-type: none"> • weight loss • increased sweating, hot flashes • hair loss (includes facial and pubic) • feeling cold • headaches that will not go away or unusual headache • decreased sex drive • vision problems • excessive thirst and urination 	<p>Common (less than 1 in 10 but more than 1 in 100)</p>
<p>Inflammation of the lungs (pneumonitis) <i>Symptoms may include:</i></p> <ul style="list-style-type: none"> • shortness of breath • chest pain • coughing 	<p>Common (less than 1 in 10 but more than 1 in 100)</p>
<p>Problems with muscles <i>Symptoms may include:</i></p> <ul style="list-style-type: none"> • rash • dry skin 	<p>Common (less than 1 in 10 but more than 1 in 100)</p>
<p>Problems in other organs (nervous system, eyes) <i>Symptoms may include:</i></p> <ul style="list-style-type: none"> • tingling, numbness, lack of energy • changes in eyesight • dizziness 	<p>Common (less than 1 in 10 but more than 1 in 100)</p>

SERIOUS SIDE EFFECTS DURING PEMBROLIZUMAB TREATMENT	How Common is it?
Inflammation of the liver (hepatitis) <i>Symptoms may include:</i> <ul style="list-style-type: none"> • nausea or vomiting • loss of appetite • pain on the right side of your stomach • yellowing of your skin or the whites of your eyes • dark urine • bleeding or bruise more easily than normal 	Uncommon (less than 1 in 100 but more than 1 in 1000)
Inflammation of the kidneys (nephritis) <i>Symptoms may include:</i> <ul style="list-style-type: none"> • changes in the amount or colour of your urine 	Uncommon (less than 1 in 100 but more than 1 in 1000)
Problems in the pancreas <i>Symptoms may include:</i> <ul style="list-style-type: none"> • abdominal pain • nausea and vomiting 	Rare (less than 1 in 1000 but more than 1 in 10000)
Blood sugar problems (type 1 diabetes mellitus) <i>Symptoms may include:</i> <ul style="list-style-type: none"> • hunger or thirst • a need to urinate more often • weight loss 	Rare (less than 1 in 1000 but more than 1 in 10000)
Infusion reactions <i>Symptoms may include:</i> <ul style="list-style-type: none"> • Shortness of breath, itching or rash, dizziness, fever, wheezing, flushing, feeling like passing out, chills and may sometimes occur during the first pembrolizumab infusion. • Reactions are less common with later treatments. • Tell your nurse or doctor immediately if you have a reaction during your treatment. • Your pembrolizumab may be temporarily stopped and then given more slowly. • You may be given other drugs to treat the reaction. 	Rare (less than 1 in 1000 but more than 1 in 10000)

Special note:

Heart Problems: Serious heart problems can occur when starting capecitabine. These can rarely be fatal. Problems such as chest pain, heart attack, abnormal heart rhythm, or heart failure can occur. Having a history of heart problems with fluorouracil, a related chemotherapy drug, is a risk factor, as is having a history of prior angina (heart pain) or heart attack. Seek medical attention promptly if you experience feelings of heavy pressure or pain in the chest, trouble breathing, significant worsening leg swelling, or marked lightheadedness. These symptoms can occur within days after starting capecitabine. If your symptoms are severe, you may need to call for emergency help.

INSTRUCTIONS FOR THE PATIENT

- Tell your doctor if you have ever had an unusual or **allergic reaction** to cisplatin (PLATINOL®) or carboplatin (PARAPLATIN®) before starting oxaliplatin treatment, or to fluorouracil (5FU, ADRUCIL®) before taking capecitabine.
- The **drinking of alcohol** (in small amounts) does not appear to affect the safety or usefulness of pembrolizumab, oxaliplatin or capecitabine.
- Pembrolizumab, oxaliplatin and capecitabine may damage sperm and may harm the baby if used during pregnancy. It is best to **use birth control** undergoing treatment and for **4 months** after the last dose. Tell your doctor right away if you or your partner becomes pregnant. Do not breast feed during treatment.
- **Tell** doctors, dentists and other health professionals that you are being treated with pembrolizumab, oxaliplatin and capecitabine before you receive any treatment from them.

Other important things to know:

- **Before you are given pembrolizumab**, talk to your doctor or pharmacist if you:
 - have an active condition where your immune system attacks your body (autoimmune disease), such as ulcerative colitis, Crohn's disease, lupus, rheumatoid arthritis or sarcoidosis.
 - take other medicines that make your immune system weak. Examples of these may include steroids, such as prednisone or dexamethasone.
 - had an organ transplant, such as a kidney transplant.
 - have any other medical conditions.

Capecitabine

- Capecitabine is taken by mouth twice a day, about 10-12 hours apart, with equal numbers of tablets taken at each dose. You may be given tablets of more than one strength to make the right dose. Capecitabine should be taken within 30 minutes following the end of a meal (breakfast and dinner) with a glass of water. It is usually **given for 14 days, followed by a 7 day break**.
- The tablet contains lactose.
- If you **vomit after taking capecitabine**, do not take a second dose. Call your doctor during office hours for advice.
- If you **miss a dose of capecitabine**, take it as soon as you can if it is within 6 hours of the missed dose. If it is over 6 hours since the missed dose, skip the missed dose and go back to the usual dosing time. Let your doctor know during office hours if you have missed a dose.
- Sometimes capecitabine treatment has to be **stopped for a short time** because of side effects. When you **restart** capecitabine treatment, do not make up for the missed dose; instead, take as directed by your cancer doctor and finish the treatment on the same day as originally planned. For example, if you stop on day 3 of your 14-day treatment course and then restart at a later day, you would still take the last dose on day 14. You may be told to take a different dose and you may have extra tablets left over. Return the extra tablets to the clinic at your next visit. Taking a lower dose does not affect the usefulness of capecitabine.
- **Store** capecitabine tablets out of the reach of children; at room temperature; away from heat, light and moisture.

Medication Interactions

Some drugs such as warfarin (COUMADIN®), phenytoin (DILANTIN®) and fosphenytoin (CEREBYX®) may **interact** with capecitabine and oxaliplatin. Tell your doctor if you are taking these or any other drugs as you may need extra blood tests or your dose may need to be changed. Check with your doctor or pharmacist before you start taking any new drugs.

THE FOLLOWING INFORMATION IS VERY IMPORTANT

STOP TAKING CAPECITABINE AND SEE YOUR DOCTOR OR GET EMERGENCY HELP IMMEDIATELY IF YOU HAVE:

- Signs of an **infection** such as fever (over 100°F or 38°C by an oral thermometer); chills; cough; pain or burning when you pass urine.
- Signs of **bleeding problems** such as black tarry stools; blood in urine; pinpoint red spots on skin.
- Signs of **heart or lung problems** such as fast or uneven heartbeat, chest pain, chest pressure, shortness of breath or difficulty in breathing, swelling of ankles, or fainting.
- Signs of **kidney problems** such as lower back or side pain, blood in the urine, swelling of feet or lower legs, or change in amount or colour of urine.
- Signs of **blood sugar problems** such as thirst and frequent need to pass urine.
- Signs of an **allergic reaction** (rare) soon after a treatment including dizziness, fast heart beat, face swelling, or breathing problems.
- **Seizures** or **loss of consciousness** with or without **confusion, headache, or changes in eyesight.**
- **Diarrhea** or changes in bowel habits; black, tarry stools; blood or mucous in the stool; severe abdominal pain.

SEE YOUR DOCTOR AS SOON AS POSSIBLE (DURING OFFICE HOURS) IF YOU HAVE:

- **Painful hand-foot skin reaction** such as painful redness, peeling, tingling, numbness, swelling or blistering of the palms of your hands and/or bottoms of your feet. If there is a delay in seeing your doctor, stop taking your capecitabine tablets until you are seen or have discussed with your doctor
- **Diarrhea** with four stools a day more than usual, or diarrhea during the night.
- **Nausea** that causes you to eat a lot less than usual or **vomiting** more than 2 times in 24 hours.
- **Painful redness, swelling or sores on your lips, tongue, mouth or throat.**
- Signs of **liver problems** such as yellow eyes or skin, white or clay-coloured stools.
- Signs of **anemia** such as unusual tiredness or weakness.
- Signs of **thyroid problems** such as unusual weight gain or loss, feeling hot or cold, deepened voice, or unusual tiredness or weakness
- **Severe abdominal or stomach cramping or pain.**

CHECK WITH YOUR DOCTOR IF ANY OF THE FOLLOWING CONTINUE OR BOTHER YOU:

- Painless hand-foot skin reaction such as redness, peeling, tingling, numbness, swelling or blistering of the palms of your hands and/or bottoms of your feet,
- Painless redness, swelling or sores on your lips, tongue, mouth or throat.
- Uncontrolled nausea, vomiting, loss of appetite, diarrhea or constipation.
- Skin rash or itching.
- Changes in fingernails or toenails.
- Heartburn; mild to moderate abdominal or stomach pain.
- Easy bruising or minor bleeding.
- Tingling or a loss of feeling in your hands, feet, nose or throat
- Redness, swelling, pain or sores where the needle was placed.
- Watery, irritated eyes.

If you experience symptoms or changes in your body that have not been described above but worry you, or if any symptoms are severe, contact:

_____ at telephone number: _____



Provincial Health Services Authority

**MEDICAL
ALERT**

NAME _____

has received

**CHECKPOINT INHIBITOR IMMUNOTHERAPY:
Immune-Mediated Adverse Reactions**

**ALWAYS CARRY THIS CARD AND SHOW TO
PHYSICIANS INCLUDING ANESTHETISTS**

SEVERE IMMUNE-MEDIATED ADVERSE REACTIONS

Including enterocolitis, intestinal perforation, hepatitis, dermatitis (including toxic epidermal necrolysis), neuropathy, endocrinopathy, pneumonitis, myositis, myocarditis and toxicities in other organ systems. Duration of risk after treatment is unknown.

FOR MORE INFORMATION:

- BC Cancer - Abbotsford604-851-4710
 - BC Cancer - Kelowna250-712-3900
 - BC Cancer - Prince George.....250-645-7300
 - BC Cancer - Surrey604-930-4055
 - BC Cancer - Vancouver.....604-877-6000
 - BC Cancer - Victoria.....250-519-5500
- www.bccancer.bc.ca/health-professionals/professional-resources/cancer-drug-manual

Rev Aug 2018



To Whom It May Concern:

RE: _____

Medical Oncologist _____

Immunotherapy Regimen _____

This patient is receiving **immunotherapy** at the BC Cancer and is at risk of **immune-related toxicities** which may be life threatening and require urgent management.

Immunotherapy toxicities are different from those encountered with standard chemotherapy or targeted therapies. The immune system may become dysregulated during immunotherapy treatment, leading to symptoms and findings which mimic autoimmune disorders. Adverse events can occur during or following treatment and can be life threatening. Any organ system in the body is at risk including, but not limited to:

- Lungs (pneumonitis, pleuritis, sarcoidosis)
- Gastrointestinal (colitis, ileitis, pancreatitis)
- Liver (hepatitis)
- Skin (rash, Stevens-Johnson syndrome)
- Endocrine (hypophysitis, adrenal insufficiency, hypo/hyperthyroidism, type 1 diabetes mellitus)
- Renal (interstitial nephritis)
- Blood (hemolytic anemia, thrombocytopenia, neutropenia)
- Neurologic (encephalitis, Guillain-Barré syndrome, meningitis, myasthenia gravis, neuropathy)
- Musculoskeletal (myositis, arthritis)
- Cardiovascular (pericarditis, myocarditis, vasculitis)
- Ophthalmologic (uveitis, scleritis, episcleritis, conjunctivitis, retinitis)

Management of immune-related toxicities necessitates prompt coordination with a medical oncologist with **initiation of high dose corticosteroids**, and may require referral to the appropriate subspecialty. If you suspect your patient is presenting with immune-related toxicity, **please contact the patient's medical oncologist** directly or if after hours contact the on-call physician, or as per your local centre's process (next page). Additional information on immunotherapy toxicity treatment algorithms is located at the end of the above posted protocol at www.bccancer.bc.ca.

BC CANCER CENTRES	CONTACT INFORMATION AND PROCESS
Abbotsford	Contact the patient's medical oncologist immediately by calling the Abbotsford Regional Hospital and Cancer Centre (ARHCC) switchboard at (604) 851-4700 and ask for the on-call medical oncologist (24-hour call system).
Kelowna	Between 8:30 am – 5:00 pm, call (250) 712-3900 (press "8" to speak to the Kelowna Centre receptionist) and have an oncologist paged. Outside these hours, call the Kelowna General Hospital switchboard at (250) 862-4000 and ask for the on-call medical oncologist.
Prince George	Between 8:30 am – 4:00 pm Monday to Friday, call (250) 645-7313. Outside these hours, go to the emergency department at the University Hospital of Northern British Columbia (UHNBC).
Surrey	Between 8:30 am – 4:00 pm Monday to Friday (except Statutory holidays), call the Nursing Phone Line at (604) 930-4053. Outside these hours, call the Surrey Memorial Hospital switchboard at (604) 581-2211 and ask for the Fraser Valley on-call medical oncologist.
Vancouver	Between 8:30 am – 4:30 pm Monday to Friday, call the Patient Nurse Line at (604) 877-6025. Outside these hours, call the inpatient unit at (604) 877-6000 and press 1, and ask for the on-call medical oncologist.
Victoria	Between 8:30 am – 4:30 pm Monday-Friday (except Statutory holidays), call (250) 519-5500, and press 1 then 4 to speak with a registered nurse. Outside these hours, call the Royal Jubilee Hospital switchboard at (250) 370-8000 and ask for the on-call medical oncologist.