

For the Patient: LYDARCBDF

Other Names: Treatment of Light Chain Amyloidosis using Daratumumab, Cyclophosphamide, Bortezomib and Dexamethasone

LY = **LY**mphoma (tumour group)

DAR = **DAR**atumumab

C = **Cyclo**phosphamide

B = **Bortezomib**

D = **Dexamethasone**

F = **F**irst line (or previously untreated)

Uses:

- LYDARCBDF is a drug treatment combination given for Light Chain (AL) Amyloidosis which is the buildup of abnormal proteins (called amyloid) in the body.
- LYDARCBDF is offered to patients with Light Chain (AL) Amyloidosis that have not had any prior treatment and who cannot receive a stem cell transplant.

How does it work?

- LYDARCBDF is a combination of four drugs, daratumumab (dar-a- toom-ue-mab), cyclophosphamide (sigh-kloe-FOSS-fa-mide), bortezomib (bor-TEZ- oh- mib) and dexamethasone (dex- a-METH-a- sone).
- Daratumumab is a monoclonal antibody, a type of protein designed to target and interfere with the growth of cancer cells.
- Cyclophosphamide is a chemotherapy drug added to this combination to help kill cancer cells.
- Bortezomib is a targeted therapy drug that interferes with the growth and function of cancer cells by blocking certain enzymes (proteasomes).
- Dexamethasone is a steroid that helps kill cancer cells.

Intended Benefits:

- LYDARCBDF may stop or slow down the buildup of amyloid in your body. This may improve your symptoms and delay or prevent new symptoms from developing.
- It will take between several weeks or months of treatment before your doctor can judge if the treatment is working.

Treatment Plan:

- It is a combination of four drugs (daratumumab, cyclophosphamide, bortezomib and dexamethasone). Daratumumab and bortezomib are injected under the skin (given subcutaneously). Dexamethasone and cyclophosphamide are tablets taken by mouth.
- Your treatment consists of cycles. Each cycle is 28 days (Days 1-28).
 - For Cycles 1 and 2, you will receive daratumumab, bortezomib and dexamethasone treatment every week (Days 1, 8, 15, 22). Cyclophosphamide will be taken every week (Days 1, 8, 15, 22) or every 2 days depending on how your doctor orders this.

- For Cycles 3 to 6, you will receive daratumumab every 2 weeks (Days 1 and 15) and bortezomib and dexamethasone every week (Days 1, 8, 15, 22). Cyclophosphamide will be taken every week (Days 1, 8, 15, 22) or every 2 days depending on how your doctor orders this.
- For cycle 7 onwards, you will receive only daratumumab every 4 weeks (Day 1 only). This is continued until the treatment stops working, you cannot tolerate the treatment any longer, or you have reached 24 cycles total.
- Administering the very first daratumumab subcutaneous dose:
 - Premedications are given before daratumumab administration.
 - For your first dose of daratumumab, your nurse will start an intravenous (IV) line into your vein so medications can be given in the case you have a reaction.
 - Daratumumab will be injected subcutaneously over 5 minutes into the abdomen. For the first treatment, you will be observed for one hour after the injection is given. Your nurse will let you know when the observation time is complete.
 - If you do not have a reaction, you will not need to stay for observation with future doses of daratumumab.

This calendar outlines what your treatment looks like:

Cycle(s) <i>Each cycle is 28 days</i>	Day 1	Day 8	Day 15	Day 22
1 and 2	Dexamethasone Cyclophosphamide* Bortezomib Daratumumab	Dexamethasone Cyclophosphamide* Bortezomib Daratumumab	Dexamethasone Cyclophosphamide* Bortezomib Daratumumab	Dexamethasone Cyclophosphamide* Bortezomib Daratumumab
3 to 6	Dexamethasone Cyclophosphamide* Bortezomib Daratumumab	Dexamethasone Cyclophosphamide* Bortezomib	Dexamethasone Cyclophosphamide* Bortezomib Daratumumab	Dexamethasone Cyclophosphamide* Bortezomib
7 and onwards	Daratumumab			

** your doctor may prescribe Cyclophosphamide to be taken every 2 days, instead of every week*

Daratumumab

- May cause administration-related reactions. Medications are given prior to the daratumumab treatment to prevent reactions.
 - Please fill the prescription for **montelukast**
 - Buy **acetaminophen 325 mg**
 - Buy either **diphenhydramine 25 mg** *or* **loratadine 10 mg**, depending on which one your doctor orders.
- Redness, swelling, pain, or tenderness are possible with subcutaneous daratumumab treatment. These reactions typically occur within 1-2 days and usually disappear on their own. Apply cool compresses for 15-20 minutes several times a day after the injection. Tell your healthcare team if these reactions are very painful or last longer than 2 days.

- During treatment with subcutaneous daratumumab, administer other subcutaneous drugs at alternative injection sites whenever possible.

Dexamethasone

- Usually given as 4 mg tablets (4 mg of dexamethasone per tablet).
- Can be given in different dosing regimens as prescribed by your doctor.
- The number of tablets you take will depend on the dose that your doctor prescribes for you.
- Pick up your **dexamethasone** from BC Cancer pharmacy the day before or *at least one hour before* your appointment as you will need to take these medications before the daratumumab treatment.
- On the day of your daratumumab treatment, take your dexamethasone before the daratumumab.
- On the weeks when you are not receiving daratumumab, take your dexamethasone tablets as a single dose with food in the morning.
- Some patients may not be able to take dexamethasone and may be offered prednisone instead.

Labs:

- Blood tests are taken prior to the first treatment and every 4 weeks, within four days of your next treatment cycle.

Serious Side Effects:

Unexpected and unlikely side effects can occur with any drug treatment. The ones listed below are particularly important as they are directly related to the common actions of these drugs.

- Cyclophosphamide, daratumumab and bortezomib may **damage sperm and may harm** the baby if used during pregnancy. It is best to use birth control during this treatment and for at least three months after treatment has ended. Tell your doctor right away if you or your partner becomes pregnant. Do not breastfeed during treatment.
- **Infection:** You are at an increased risk for getting an infection if your white blood cells decrease. **If you have a fever over 38°C or 100°F, call your cancer doctor immediately (24 hours a day) or go immediately to your nearest Hospital Emergency and tell the doctor that you are on cancer treatment. It is recommended you have a working thermometer at home.**
- **Bleeding Problems:** You are at an increased risk of having bleeding problems if your platelets decrease. If you develop black tarry stools, blood in your urine, pinpoint red spots on the skin, or prolonged nose bleeds report them immediately to your doctor or nurse.
- Other drugs and **vitamin C supplements** may interact with bortezomib. Check with your doctor or pharmacist before you start taking any new drugs or vitamin supplements.
- **Green tea** and preparations made from green tea should be avoided throughout the entire time of treatment. These have been found to severely decrease the effectiveness of bortezomib, and might make it have no effect at all.

- The **drinking of alcohol (in small amounts)** does not appear to affect the safety or usefulness of daratumumab, bortezomib or cyclophosphamide.
- While you are taking cyclophosphamide, you should drink plenty of liquids e.g., 8-12 cups (2000-3000 mL) a day. Depending on your dose, you may be told to empty your bladder (pass urine) frequently, every 2 hours while you are awake and at bedtime for at least 24 hours after your dose. Your doctor may also tell you to get up in the night to empty your bladder. This helps prevent bladder and kidney problems.

Common Side Effects and Management:

SIDE EFFECTS	MANAGEMENT
<p>Normal 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. • Avoid crowds and people who are sick. • 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.
<p>Normal platelets help your blood to clot normally after an injury (e.g., cut). When the platelet count is low, you may be more likely to bruise or bleed.</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. <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>Allergic reactions may sometimes occur. Signs of an allergic reaction may include runny or stuffy nose, throat irritation, cough, rash, itching, dizziness, and swelling or breathing problems including wheezing. This can occur immediately or</p>	<p>Tell your nurse if this happens while you are receiving daratumumab or contact your oncologist immediately if this happens after you leave the clinic.</p>

SIDE EFFECTS	MANAGEMENT
several hours after receiving daratumumab.	
Pain or tenderness may occur where the needle was placed.	Apply cool compresses or soak in cool water for 15-20 minutes several times a day.
Fever and chills may sometimes occur shortly after treatment with daratumumab or bortezomib. Fever should last no longer than 24 hours.	<ul style="list-style-type: none"> • Take acetaminophen (e.g., TYLENOL) every 4-6 hours, to a maximum of 4 g (4000 mg) per day. • Fever (over 100°F or 38°C by an oral thermometer) which occurs more than a few days after treatment may be a sign of an infection. Report this to your doctor immediately.
Tiredness and lack of energy may sometimes occur.	<ul style="list-style-type: none"> • Do not drive a car or operate machinery if you are feeling tired. • Try the ideas in <i>Managing Fatigue (Tiredness) – Patient Handout</i>.*
Skin rashes and itching may occur.	<ul style="list-style-type: none"> • To help itching you can use calamine lotion or diphenhydramine • If very irritating, call your doctor during office hours, otherwise make sure to mention it at your next visit.
Diarrhea may commonly occur	<p>Diarrhea must be treated immediately with loperamide 2 mg tablets (e.g., IMODIUM):</p> <ul style="list-style-type: none"> • Take ONE tablet at the first sign of loose or more frequent stools than usual. • Then take ONE tablet every TWO hours until diarrhea has stopped for 12 hours. • At night, you may take ONE tablet every FOUR hours (set your alarm) during the time you usually sleep. • Always keep a supply of loperamide (e.g., have 48 tablets on hand). You can buy loperamide at any pharmacy without a prescription. <p>To help diarrhea:</p> <ul style="list-style-type: none"> ▪ Drink plenty of liquids. ▪ Eat and drink often in small amounts.

SIDE EFFECTS	MANAGEMENT
	<ul style="list-style-type: none"> ▪ Avoid high fiber foods as outlined in <i>Food Choices to Help Manage Diarrhea – Patient Handout</i>.* ▪ A dietitian can give you more suggestions for dealing with diarrhea ▪ If diarrhea does not improve 24 hours after starting loperamide or lasts more than 36 hours, call your doctor.
Constipation may sometimes occur	<ul style="list-style-type: none"> • Exercise if you can. • Drink plenty of fluids. • Try ideas in <i>Food Choices to Manage Constipation – Patient Handout</i>.*
Headache may sometimes occur.	<ul style="list-style-type: none"> • Take acetaminophen (e.g., TYLENOL) every 4-6 hours if needed, to a maximum of 4 g (4000 mg) per day.
Sore mouth may occur a few days after treatment while you are taking cyclophosphamide but it is rare at the dose that you are receiving. 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.	<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 ¼ teaspoon baking soda AND ¼ teaspoon 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 the ideas in <i>Food Ideas to Try with a Sore Mouth – Patient Handout</i>.*
Muscle, joint, or back pain may sometimes occur.	<ul style="list-style-type: none"> • You may take acetaminophen (e.g., TYLENOL) every 4-6 hours to a maximum of 4 g (4000 mg) per day for mild to moderate pain. Tell your doctor if the pain interferes with your activity.
Loss of appetite may sometimes occur.	<ul style="list-style-type: none"> • Try the ideas in <i>Food Ideas to Help with Decreased Appetite – Patient Handout</i>.*
Increased calcium in the blood may sometimes occur.	<p>To help prevent high calcium:</p> <ul style="list-style-type: none"> • Keep active. • Drink plenty of fluids

SIDE EFFECTS	MANAGEMENT
<p>Hair loss may occur while you are taking cyclophosphamide, but is rare at the dose that you are receiving. Your hair may thin or you may become totally bald. Your scalp may feel tender. Your hair will grow back once your treatments are over and sometimes between treatments. Colour and texture may change.</p>	<p>Refer to Resources for <i>Hair Loss and Appearance</i>. You may also want to:</p> <ul style="list-style-type: none"> • Apply mineral oil to your scalp to reduce itching. • Use a gentle shampoo and soft brush. • Care should be taken with use of hair spray, bleaches, dyes and perms. • Protect your scalp with a hat, scarf or wig in cold weather. Some extended health plans will pay part of the cost of a wig. • Cover your head or apply sunblock on sunny days
<p>Increased energy and difficulty sleeping may be due to dexamethasone</p>	<ul style="list-style-type: none"> • The days you take your dexamethasone you may feel as though you have extra energy. • You may also have difficulty sleeping at night. • Take the dexamethasone first thing in the morning to prevent difficulty sleeping at night.

***Please ask your nurse or pharmacist for a copy.**

The pharmacists at BC Cancer and the pharmacists at your oncology clinic are also available to answer your drug-related questions.

Medication Interactions

Some Natural Health Products may interact with this treatment. Tell your doctor if you are taking any Natural Health Products. Check with your doctor or pharmacist before you start taking any Natural Health Products.

If you experience symptoms or changes in your body that have not been described above but worry you, tell your doctor about them at the time of your next visit. If any symptoms are severe, contact:

_____ at telephone number _____

If you have symptoms that are severe or need emergency services, go to your local hospital's Emergency Department.