



Provincial Health Services Authority

For the Patient: LYEPOCHR

Other Names: DA-EPOCHR

E	Etoposide
P	Prednisone
O	Vincristine (ONCOVIN®)
C	Cyclophosphamide
H	Doxorubicin (ADRIAMYCIN®, Hydroxydaunorubicin)
R	Rituximab

Uses:

- EPOCHR is a drug treatment for aggressive (fast-growing) B-cell Lymphomas which have two separate chromosome changes (double-hit lymphoma). The **goal** of the drug treatment is to destroy cancer cells.
- EPOCHR is currently offered to **people** with different types of Lymphomas including diffuse large b-cell lymphoma (DLBCL), transformed lymphoma, unclassified lymphoma, and some patients with intermediate grade lymphoma or Burkitt lymphoma.

Treatment Plan:

- Some patients are admitted to hospital for this treatment, while others will get some of their treatments at home. Your oncologist will decide which treatment option is best for you.
- You will have a central line **put in** to make it easier for you to receive your treatment. A central line is a type of **thin tube** that is placed in a large vein, **most commonly in the arm**. Compared to a typical IV line, a central line is larger, can stay in place longer, and can deliver a greater volume of fluids.
 - Your treatment plan consists of up to 6 chemotherapy cycles.
 - Each cycle lasts 3 weeks (21 days). For each cycle you will have five chemotherapy drugs, plus a drug called prednisone, **which is a pill you swallow**.
 - You will **have** treatment over 5 days **for each cycle**.
 - During your treatment, you may receive another chemotherapy drug which is **injected** into the space around the spinal cord (intrathecally) for a total of eight injections.
 - You will need lab work 2 times each week throughout your entire treatment and for three weeks following your last treatment cycle. This lab work is used to decide:

- Your next chemotherapy doses
- how long you will stay on the drug filgrastim during your current treatment cycle.

The calendar below outlines your overall treatment plan

CYCLE 1 to 6	Date	Treatment Plan
	Day 1	cyclophosphamide* IV x 1 hour etoposide, doxorubicin, vincristine IV continuous x 24 hours prednisone orally twice a day
	Day 2	etoposide, doxorubicin, vincristine IV continuous x 24 hours methotrexate intrathecal** prednisone orally twice a day
	Day 3	etoposide, doxorubicin, vincristine IV continuous x 24 hours prednisone orally twice a day
	Day 4	etoposide, doxorubicin, vincristine IV continuous x 24 hours prednisone orally twice a day
	Day 5	rituximab* IV or SC methotrexate intrathecal** prednisone orally twice a day

*In certain situations, your doctor may change the day rituximab and/or cyclophosphamide is given.

**Optional methotrexate intrathecal injections usually start in Cycle 3. Your doctor will decide if you will receive this drug.

Drugs:

- You will get six chemotherapy drugs (etoposide, doxorubicin, vincristine, prednisone, cyclophosphamide, and rituximab) at each cycle.
- The etoposide, doxorubicin, and vincristine are mixed together in the same bag and given over 24 hours for four days.
- Optional methotrexate intrathecal injections are started in Cycle 3 and given twice a week.
- A drug called filgrastim (also known as G-CSF: granulocyte colony stimulating factor) is started on Day 6 to improve your white blood cell count. The drug is injected under the skin (subcutaneous, SC) once a day. You will get this drug until your white blood cell count recovers after chemotherapy. The count has to reach $5.0 \times 10^9/L$ above the lowest amount it reached during treatment. Your nurse will teach you or a family member how to give a SC injection.
- You will go to your local lab for bloodwork twice a week (normally every Monday and Thursday) to monitor the white blood cell count.

- Other medications such as antibiotics and laxatives will be prescribed to prevent side effects of your treatment.

Instructions for all patients:

- Call your [healthcare team or get emergency help immediately](#) (day or night) at the first signs of any infection but especially if you have a fever over 38°C or 100°F.
- The filgrastim prescription is filled at your community pharmacy. [It is not always available right away and may take 1-2 days for your pharmacy to fill the prescription.](#)
- The cotrimoxazole and lansoprazole prescriptions are filled at your community pharmacy.
- The docusate and senna can be picked up at your community pharmacy and do not need a prescription.
- Check with your doctor or pharmacist before you start taking any new drugs. Other drugs such as barbiturates, digoxin (LANOXIN®), ciprofloxacin (CIPRO®) and similar antibiotics, phenytoin (DILANTIN®), carbamazepine (TEGRETOL®), ketoconazole (NIZORAL®) and similar antibiotics, nifedipine (ADALAT®), blood pressure medications and warfarin (COUMADIN®), may interact with EPOCH-R.
- You may drink small amounts of alcohol, as it will not affect the safety or effectiveness of your treatment. Drinking alcohol may increase the risk of some side effects of prednisone; discuss this with your doctor or pharmacist.
- Tell other doctors or dentists that you are being treated with chemotherapy before you receive any treatment from them.
- Use effective contraception (birth control) if you [or your partner](#) are of child-bearing age. Do not breastfeed [while having this treatment.](#)

Additional instructions if you are receiving this treatment at home:

- [Drink at least 8 to 12 glasses of fluids a day \(unless you are fluid restricted\) for 1-3 days after treatment with cyclophosphamide. If you are unable to drink this much fluid, talk with your health care team.](#)
- [Empty your bladder every 2-3 hours while awake and at bedtime for 3 days after treatment with cyclophosphamide.](#)
- [Contact your health care team immediately if you have any symptoms of an allergic reaction.](#)
- [A device called a CADD-Solis VIP ambulatory pump will deliver the etoposide, doxorubicin, and vincristine through the central line. The pump delivers the drugs slowly and continuously to your body over 24 hours, for four consecutive days. Please see a copy of "Patient and Caregiver Guide for CADD® - Solis VIP Pump", available from your chemotherapy nurse.](#)
- [You will return to the treatment center every day on Days 2, 3, 4, and 5. Your care team will disconnect your pump, change your intravenous bag, and reconnect the pump.](#)

- On Days 2, 3, 4 and 5, take the prednisone and anti-nausea medication in the morning at home, and prednisone again in the evening at home.
- If you have been prescribed mesna to take by mouth at home, you will need to:
 - take one dose 4 hours after the start of the cyclophosphamide infusion
 - take another dose 8 hours after the start of the cyclophosphamide infusion
 - To prepare the mesna, empty one mesna syringe into a small glass of a carbonated beverage right before you drink it. Drink all of the fluid.

Serious Side Effects:

Unexpected and unlikely side effects can **happen** with any drug treatment. The ones listed below are important as they are related to your treatment plan.

- **Infection:** Your chemotherapy will lower the number of white blood cells that help fight infections in your body. Filgrastim is used to increase your white blood cells. You continue filgrastim until your white blood cells reach a set level. If your white blood cell count becomes very low, you could get a serious infection. **If you have a fever over 38°C or 100°F, call your healthcare team immediately (24 hours a day) or go immediately to your nearest Hospital Emergency and tell the doctor that you are on chemotherapy. You should have a working thermometer at home.**
- **Allergic Reaction:** Rituximab can cause allergic type reactions during or hours after your treatment. Etoposide can also cause allergic type reactions. Tell your chemotherapy nurse right away if you have any light-headedness or dizziness, difficulty breathing, shortness of breath, cough, rash, skin flushing (skin turns red), itchy skin, tickle in throat, or chest tightness.
- **Bleeding Problems:** 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.
- **Tissue Injury:** Doxorubicin and vincristine can cause tissue injury while they are being given. Report any sensation of burning, stinging or pain to your chemotherapy nurse immediately.
- **Early menopause:** If you are a person still having menstrual periods, EPOCH-R may cause your ovaries to stop working, resulting in menopausal symptoms (such as hot flashes) and infertility. Your periods may stop. This may be permanent especially if you are 40 years of age or older.
- **Heart failure:** Rarely, doxorubicin can affect your heart so that it cannot pump blood properly. This causes shortness of breath, fatigue, and leg swelling. Tell your doctor right away if you have shortness of breath, chest pain, or a fast or uneven heartbeat.
- **Bladder problems:** Rarely, cyclophosphamide may damage to the lining of the bladder. Tell your doctor right away if you have blood in your urine, you feel you need to pee more often than is normal for you, or pain when you pee.

Common Side Effects and Management:

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 and how to manage them with you before or on the day you receive your first treatment.

SIDE EFFECTS	MANAGEMENT
Nausea and vomiting may occur with this treatment and may last for several hours. If you are vomiting and it is not controlled, you can quickly become dehydrated.	You will be given a prescription for anti-nausea drugs to take before your treatment and at home. It is easier to prevent nausea than treat it once it has occurred , so follow directions closely. <ul style="list-style-type: none">• Drink plenty of fluids• Eat and drink often in small amounts• Try the ideas in <i>Practical Tips to Manage Nausea</i>.*• Tell your healthcare team if nausea or vomiting continues or is not controlled with your anti-nausea drug(s).
Fevers and chills may sometimes occur, shortly after riTUXimab treatment. 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 38°C or 100°F by an oral thermometer) which occurs more than a few days after treatment may be a sign of an infection. Report this to your healthcare team immediately.
Hives , a type of allergic reaction, may occur. Hives are red or pale raised patches on your skin and are usually itchy. These reactions usually occur during or up to 24 hours after the infusion.	<ul style="list-style-type: none">• Take diphenhydramine (e.g., BENADRYL®) 25 or 50 mg up to 4 times a day. (Note: diphenhydramine causes drowsiness)
Redness, swelling, pain, or tenderness commonly occurs where the subcutaneous riTUXimab needle was placed. These reactions typically occur within 1-2 days and usually disappear on their own. Reactions are less common with later treatments even if you have a reaction with the first treatment.	<ul style="list-style-type: none">• Apply cool compresses for 15-20 minutes several times a day after the injection.• Tell your doctor or your nurse at the next visit if these reactions are very painful or last longer than 2 days.

SIDE EFFECTS	MANAGEMENT
<p>Hair Loss is common and may begin within a few days or weeks of treatment. Your hair may thin or you may lose it completely. Your scalp may feel tender. Hair loss may occur on your face and body. Hair will grow back once your treatments are over and sometimes between treatments. Colour and texture may change.</p>	<p>Refer to <i>Resources for Hair Loss and Appearance Changes – Patient Handout</i>.*</p> <p>You may also want to:</p> <ul style="list-style-type: none"> • Apply mineral oil to your scalp to reduce itching. • If you lose your eyelashes and eyebrows, protect your eyes from dust and grit with a broad-rimmed hat and glasses.
<p>Mouth Sores may occur a few days after treatment. Mouth sores can occur on the tongue, gums and sides of the mouth or in your 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 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 the ideas in <i>Food Ideas to Try with a Sore Mouth</i>.*
<p>Tiredness and lack of energy may occur.</p>	<ul style="list-style-type: none"> • Do not drive a car or operate machinery if you are feeling tired. • Try the ideas in <i>Fatigue/Tiredness – Patient Handout</i>.*

SIDE EFFECTS	MANAGEMENT
<p>Your platelets may decrease 6-13 days after your treatment. They usually return to normal 3 to 4 weeks after your last treatment. 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). <ul style="list-style-type: none"> • For minor pain try acetaminophen (TYLENOL®) first, to a maximum of 4 g (4000 mg) per day.
<p>Constipation often occurs and may be severe.</p>	<ul style="list-style-type: none"> • See your doctor as soon as possible if you get severe constipation. • Drink plenty of fluids • Add prunes or prune juice to diet • Eat foods high in fibre such as bran, whole grain breads and cereals, nuts, raw fruits and vegetables. • Avoid bulk-forming laxatives (e.g., METAMUCIL®, PRODIEM®). • Exercise if you can. • Try the ideas in <i>Food Choices to Manage Constipation</i>.*

SIDE EFFECTS	MANAGEMENT
Numbness or tingling of fingers or toes may occur.	<ul style="list-style-type: none"> Numbness and tingling of the toes and fingers will slowly return to normal after your last chemo. Tell your healthcare team at your next visit if you have trouble with buttons, writing, picking up small objects, walking or have fallen. Be careful when handling items that are sharp, hot or cold objects. Be careful when walking on uneven surfaces or doing activities that need you to balance or be steady.
Your urine may be pink or reddish for 1-2 days after your treatment.	This is expected as doxorubicin is red and is passed in your urine.
Sugar control may be affected in people with diabetes.	Check your blood sugar regularly if you have diabetes .
Increased energy and difficulty sleeping may be due to prednisone.	<ul style="list-style-type: none"> The days you take your prednisone you may feel as though you have extra energy. You may also have difficulty sleeping at night.

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** _____

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

* Available through your nurse