



Provincial Health Services Authority

## For the Patient: LULAPE2RT (Carboplatin Option)

Other Names: Treatment of Locally Advanced Non-Small Cell Lung Cancer Using Alternative Dosing of Carboplatin and Etoposide with Radiation Therapy

**LU = LUng**  
**LA = Locally Advanced**  
**PE = CarboPlatin, Etoposide**  
**2 = 2 cycles**  
**RT = Radiation Therapy**

### **ABOUT THIS MEDICATION**

#### **What is this treatment used for?**

LULAPE2 is an intravenous (through the vein) drug treatment given with radiation therapy (RT) for non-small cell lung cancer. The goal of this treatment is to help control or shrink the cancer and some of the symptoms caused by it.

#### **How does this treatment work?**

Carboplatin and etoposide are anticancer drugs that work by *preventing* the synthesis of DNA that is needed for cancer cells to divide.

Carboplatin is also a radio-sensitizer. This means that when carboplatin is given with radiation, the treatment is more effective.

Radiation works by directing high-energy X-Ray beams to a specific area of the body where cancer cells are located.

### **INTENDED BENEFITS**

This treatment is being given to destroy and/or slow down the growth of cancer cells in your body. This treatment can help with controlling some of the symptoms the cancer may be causing and can also delay or prevent new symptoms from starting.

### **LULAPE2RT TREATMENT SUMMARY**

#### **How are these drugs given?**

- Your treatment plan consists of 2 chemotherapy “cycles”. Each cycle lasts 4 weeks or 28 days.
- With each cycle, you will have medications given to you intravenously (through the vein) on Day 1 through Day 5.
  - Carboplatin is given intravenously over approximately 30 minutes on day 1 only.
  - Etoposide is given intravenously over approximately 45 minutes on days 1 through 5.

- **Radiation:**
  - Radiation is given once per day, during the week, with weekends and holidays off.
  - On days when you receive both chemotherapy and radiation therapy, you will receive chemotherapy first.

**What will happen when I get my drugs?**

- A blood test is done within one month of starting treatment.
- A blood test is also done before Day 1 of the second cycle.
- The dose and timing of your chemotherapy may be changed based on your blood test results and/or other side effects.
- Your very first treatment will take longer than other treatments because a nurse will be reviewing the possible side effects of your chemotherapy plan and will discuss with you how to manage them. *It is a good idea to bring someone with you to your first chemotherapy appointment.*
- You will be given a prescription for anti-nausea medications (to be filled at your regular pharmacy). Please bring your anti-nausea medications with you for each treatment. Your nurse will tell you when to take the anti-nausea medication(s). You may also need to take your anti-nausea drugs at home after therapy. It is easier to prevent nausea than to treat it once it happens, so follow directions closely.

**LULAPE2RT TREATMENT PROTOCOL**

**Start Date:** \_\_\_\_\_

**Cycle 1:**

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
<b>Carboplatin &amp; Etoposide</b>	<b>Etoposide</b>	<b>Etoposide</b>	<b>Etoposide</b>	<b>Etoposide</b>	No chemo	No chemo
Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
No chemo	No chemo	No chemo	No chemo	No chemo	No chemo	No chemo
Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21
No Chemo	No chemo	No chemo	No chemo	No chemo	No chemo	No chemo
Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28
No Chemo	No chemo	No chemo	No chemo	No chemo	No chemo	No chemo

**This 28-day cycle will repeat 1 more time**

**\*\*\*Radiation will be given Monday-to-Friday throughout treatment\*\*\***

## CHEMOTHERAPY SIDE EFFECTS AND MANAGEMENT

### Are there any risks?

- Unexpected and unlikely side effects can occur with any drug treatment. The ones listed below are particularly important for you to be aware of.

SERIOUS SIDE EFFECTS	How common is it?	MANAGEMENT
Your <b>white blood cells</b> may decrease after your treatment. White blood cells protect your body by fighting bacteria (germs) that cause infection. When they are low, <b>you are at greater risk of having an infection.</b>	Very common	To help prevent infection: <ul style="list-style-type: none"> <li>• Wash your hands often and always after using the bathroom.</li> <li>• Take care of your skin and mouth by gently washing regularly.</li> <li>• Avoid crowds and people who are sick.</li> <li>• Call your doctor <b>immediately</b> at the first sign of an <b>infection</b> such as fever (over 100°F or 38°C by an oral thermometer), chills, cough, or burning when you pass urine.</li> </ul>
Your <b>platelets</b> may decrease during or after your treatment. They will return to normal after your last treatment. Platelets help to make your blood clot when you hurt yourself. <b>You may bruise or bleed more easily than usual.</b>	Common	To help prevent bleeding problems: <ul style="list-style-type: none"> <li>• Try not to bruise, cut or burn yourself.</li> <li>• Clean your nose by blowing gently, do not pick your nose.</li> <li>• Brush your teeth gently with a soft toothbrush as your gums may bleed more easily. Maintain good oral hygiene.</li> <li>• Avoid taking ASA (eg: ASPIRIN®) or Ibuprofen (eg: ADVIL®), <i>unless prescribed by your doctor.</i></li> </ul>
<b>Allergic reactions</b> may <u>rarely</u> occur during or immediately following administration of etoposide. Signs of an allergic reaction may include: chest discomfort, shortness of breath, light headedness and flushing.	Rare	<ul style="list-style-type: none"> <li>• Tell your nurse or physician <i>immediately</i> if you experience these or any other side effects while receiving etoposide.</li> </ul>
<b>Dizziness</b> or <b>feeling faint</b> may occur during administration of etoposide.	Rare	<ul style="list-style-type: none"> <li>• Tell your nurse or doctor <i>immediately</i>.</li> <li>• Lie down or sit with your feet elevated.</li> </ul>

SERIOUS SIDE EFFECTS	How common is it?	MANAGEMENT
Etoposide <b>burns</b> if it leaks under the skin.	Very rare	<ul style="list-style-type: none"> <li>Tell your nurse <b>immediately</b> if you feel burning, stinging, or any other change while the drug is being given.</li> </ul>

OTHER SIDE EFFECTS	How common is it?	MANAGEMENT
<b>Nausea</b> and <b>vomiting</b> may occur after your treatment and may last for up to 24 hours. Nausea may last longer for some patients.	Very Common	<p>You will be given a prescription for anti-nausea drug(s) to take before your chemotherapy treatment and/or at home. It is easier to <i>prevent</i> nausea than to treat it once it has happened, so follow directions closely.</p> <ul style="list-style-type: none"> <li>Drink plenty of liquids.</li> <li>Eat and drink often in small amounts.</li> <li>Try the ideas in “<i>Food Choices to Help Control Nausea</i>”.</li> </ul> <p>Your doctor may manage delayed nausea and vomiting differently. Be sure to let your doctor know if you experience this.</p>
<b>Tiredness</b> or lack of energy may occur.	Common	<ul style="list-style-type: none"> <li>Do not drive a car or operate machinery if you are feeling tired.</li> </ul>
<b>Hair loss</b> can occur and may begin within a few days or weeks of treatment. Your hair may thin or you may become totally bald. Your scalp may feel tender. You may lose hair on your face and body. Your hair will grow back once your treatments are over and sometimes between treatments. Colour and texture may change when your hair grows back.	Common	<ul style="list-style-type: none"> <li>Use a gentle shampoo and soft brush.</li> <li>Care should be taken with use of hair spray, bleaches, dyes and perms.</li> <li>Protect your scalp with a hat, scarf or wig in cold weather.</li> <li>Cover your head or apply sunblock on sunny days.</li> <li>Apply mineral oil to your scalp to reduce itching.</li> </ul>

OTHER SIDE EFFECTS	How common is it?	MANAGEMENT
<b>Constipation</b> or <b>diarrhea</b> may occur.	Common	<p>To help constipation:</p> <ul style="list-style-type: none"> <li>• Exercise if you can.</li> <li>• Drink plenty of liquids (8 cups a day).</li> <li>• Try ideas in <i>“Suggestions for Dealing with Constipation”</i>.</li> </ul> <p>To help diarrhea:</p> <ul style="list-style-type: none"> <li>• Drink plenty of liquids.</li> <li>• Eat and drink often in small amounts.</li> <li>• Refer to the pamphlet <i>“Food Ideas to Help with Diarrhea”</i>.</li> </ul>
<b>Pain</b> or <b>tenderness</b> may occur where the needle was placed in your vein.	Uncommon	<ul style="list-style-type: none"> <li>• Apply cool compresses or soak in cool water for 15-20 minutes several times a day.</li> </ul>
<b>Sore mouth</b> may occur a few days after treatment. Mouth sores can occur on the tongue, the sides of the mouth or in the throat. <i>Mouth sores or bleeding gums can lead to an infection.</i>	Uncommon	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Make a mouthwash with ½ teaspoon baking soda or salt in 1 cup warm water and rinse several times a day.</li> <li>• Try soft, bland foods like puddings, milkshakes and cream soups.</li> <li>• Avoid spicy, crunchy or acidic food, and very hot or cold foods.</li> <li>• Call your doctor if you are having difficulty eating or drinking due to pain.</li> <li>• Try the ideas in <i>“Help with Sore Mouth during Chemotherapy”</i>.</li> </ul>
<b>Loss of appetite</b> and <b>weight loss</b> may occur	Uncommon	<ul style="list-style-type: none"> <li>• Try the ideas in <i>“Nutrition and Lung Cancer”</i> and <i>“Food ideas to Help with Poor Appetite”</i>.</li> </ul>
<b>Taste</b> alteration may occur	Uncommon	<ul style="list-style-type: none"> <li>• Try the ideas in <i>“Food Ideas to Cope with Taste and Smell Changes”</i>.</li> </ul>

## RADIATION SIDE EFFECTS AND MANAGEMENT

SIDE EFFECTS	How Common Is It?	MANAGEMENT
<b>Tiredness</b> or lack of energy may occur.	Very Common	<ul style="list-style-type: none"> <li>Do not drive a car or operate machinery if you are feeling tired.</li> <li>Try the ideas in “<i>Your Bank of Energy Savings: How People with Cancer can Handle Fatigue</i>”.</li> </ul>
Since radiation must pass through your skin, <b>skin irritation</b> may occur while receiving radiotherapy. Skin may feel warm and sensitive and color may change.	Common	<ul style="list-style-type: none"> <li>Bathe using lukewarm water and mild, unscented soap. Pat skin dry with a soft towel.</li> <li>Wear loose, comfortable clothing.</li> <li>Protect skin from direct sunlight and wind.</li> <li>Avoid deodorants, perfume, alcohol, astringents and adhesives.</li> </ul>
<b>Cough</b> or <b>shortness of breath</b> may occur, as radiation lowers the level of the lung’s <i>surfactant</i> , a substance that helps the lungs expand.	Common	<ul style="list-style-type: none"> <li>Drink plenty of fluids throughout the day</li> <li>If you are experiencing cough and are also feverish or unwell, it’s important to call your doctor.</li> </ul>
You may experience a <b>sore throat</b> or <b>difficulty swallowing</b> .	Common	<ul style="list-style-type: none"> <li>Try eating smaller amounts of food at more frequent intervals.</li> <li>Avoid highly seasoned foods, acidic foods, or foods that are very hot or very cold.</li> <li>Drink plenty of fluids throughout the day.</li> <li>Try ideas in “<i>Easy to Chew Recipes and Soft, Moist Food Ideas</i>”</li> </ul>
<b>Hair loss</b> will occur on the area of skin being treated.	Common	<ul style="list-style-type: none"> <li>Hair usually grows back within a few months. Sometimes, as it grows back, it can become patchy.</li> </ul>

## **INSTRUCTIONS FOR THE PATIENT**

### **What other drugs can interact with LULAPE2RT?**

- Other drugs such as phenytoin (DILANTIN®), atovaquone (MEPRON®), warfarin (COUMADIN®), glucosamine and St John's Wort may interact with LULAPE2RT. Tell your doctor if you are taking these or other drugs as you may need extra blood tests, your dose may need to be changed or your treatment may need to be held for a few days.
- Check with your doctor or pharmacist before you start taking any new prescription or non-prescription drugs.

### **Other important things to know:**

- The drinking of alcohol (in small amounts) does not appear to affect the safety or usefulness of this treatment.
- This treatment may cause sterility in men and menopause in women. If you plan to have children, discuss this with your doctor before starting treatment.
- This treatment may damage sperm and may cause harm to the baby if used during pregnancy. It is best to use *birth control* while you are undergoing treatment. Tell your doctor right away if you or your partner becomes pregnant. Do not breast feed during treatment.
- Tell all doctors or dentists you see that you being treated with carboplatin and etoposide before you receive treatment of any form.

### **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, sore throat, pain or burning when you pass urine.
- Signs of **bleeding problems** such as black, tarry stools, blood in urine or pinpoint red spots on skin.
- Signs of an **allergic reaction** (rare) soon after a treatment including dizziness, fast heartbeat, face swelling or breathing problems.

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

- Signs of **liver problems** such as yellow eyes or skin, white or clay-colored stools.
- Signs of **kidney problems** such as lower back or side pain, swelling of feet or lower legs.
- Signs of **anemia** such as unusual tiredness or weakness.
- **Changes in eyesight.**
- Ringing in your ears or **hearing problems.**
- **Skin rash or itching.**
- **Stomach pain** not controlled by antacids or acetaminophen.

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

- Easy bruising or bleeding.
- Uncontrolled nausea, vomiting, constipation or diarrhea.
- Redness, swelling, pain or sores where the needle was placed or along the arm.
- Redness, swelling, pain or sores on your lips, tongue, mouth or throat.
- Skin rash or itching.

**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 \_\_\_\_\_