



Provincial Health Services Authority

For the Patient: LULAPERT

Other Names: Treatment Locally Advanced Non-Small Cell Lung Cancer Using Cisplatin, Etoposide and Radiation

LU = LUng
LA = Locally Advanced
PE = CisPlatin, Etoposide
RT = Radiation Therapy

ABOUT THIS MEDICATION

What are these drugs used for?

LULAPE 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.

Cisplatin and etoposide are offered to people who have good kidney function and a good performance status. Performance status is a measure of how well a person is able to perform their usual daily activities.

How do these drugs work?

Cisplatin is an anticancer drug that works by *preventing* the synthesis of DNA, RNA, and proteins that are needed for cancer cells to divide. Cisplatin is also a radio-sensitizer. This means that when cisplatin is given with radiation, the treatment is more effective.

Etoposide is an anticancer drug that works by *preventing* the synthesis of the DNA that is needed for cancer cells to divide.

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, such as pain, coughing, wheezing, difficulty swallowing, weight loss and fatigue. It can also delay or prevent new symptoms from starting. Research has shown that patients may live longer after receiving this chemotherapy treatment.

LULAPERT TREATMENT SUMMARY

How are these drugs given?

- Your treatment plan consists of 4 chemotherapy “cycles”. Each cycle lasts 3 or 4 weeks (21 or 28 days).
- For each cycle, you will have two medications given to you intravenously (through the vein) on Days 1, 2 and 3.
 - Cisplatin is given first, and is given intravenously over approximately 20-30 minutes.
 - Etoposide is given second, and is given intravenously over approximately 30-60 minutes.

- For cycles given concurrently (together) with radiation therapy:
 - Radiation usually starts with the first cycle of chemotherapy, but your oncologist will decide what the best timing for you will be.
 - Radiation is usually given over a period of approximately three weeks; once per day, during the week (Mon-Fri), with weekends off.
 - For the first three days of your scheduled radiation, you will receive both cisplatin and etoposide chemotherapy and your radiation will be given after your daily chemotherapy treatments are complete.

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 each 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 to 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 treatment. It is easier to prevent nausea than to treat it once it happens, so follow directions closely.

LULAPERT TREATMENT PROTOCOL

Start Date: _____

Cycle 1:

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Blood Test Cisplatin & Etoposide	Cisplatin & Etoposide	Cisplatin & Etoposide	No chemo	No chemo	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

This 21-day cycle will repeat 3 more times

*****Radiation will be given from Monday to Friday over approximately 3 weeks during one cycle, usually with cycle #1. You will still receive 3 days of chemotherapy during this cycle. At the end of this cycle, you may be given one extra week off (28-day cycle) – this will be up to your oncologist*****

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 white blood cells may decrease 7-10 days after your treatment. They usually return to normal in 3 weeks. 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.	Very common	To help prevent infection: <ul style="list-style-type: none"> • Wash your hands often and always after using the bathroom. • Take care of your skin and mouth by gently washing regularly. • 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.
Your platelets 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. You may bruise or bleed more easily than usual.	Common	To help prevent bleeding problems: <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. • Brush your teeth gently with a soft toothbrush as your gums may bleed more easily. Maintain good oral hygiene. Avoid taking ASA (e.g.: ASPIRIN®) or Ibuprofen (e.g.: ADVIL®), <i>unless prescribed by your doctor.</i>
Allergic reactions may rarely occur. Signs of an allergic reaction are dizziness, confusion and wheezing or difficulty breathing. This reaction can occur during or immediately after cisplatin or etoposide, several hours after receiving cisplatin, or after many doses of cisplatin.	Rare	<ul style="list-style-type: none"> • Tell your nurse immediately if this happens while you are receiving cisplatin or etoposide. Go to your local Emergency Room immediately if this happens after you leave the clinic.
Cisplatin and etoposide burn if they leak under the skin.	Very rare	Tell your nurse immediately if you feel pain, burning, stinging, or any other change while the drug is being given.

OTHER SIDE EFFECTS	How Common Is It?	MANAGEMENT
Nausea and vomiting 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 prevent nausea than to treat it once it has happened, so follow directions closely.</p> <ul style="list-style-type: none"> • Drink plenty of liquids. • Eat and drink often in small amounts. • Try the ideas in <i>“Food Choices to Control Nausea”</i>. <p>Your doctor may manage delayed nausea and vomiting differently. Be sure to let your doctor know if you experience this.</p>
Constipation or diarrhea may occur.	Common	<p>To help constipation:</p> <ul style="list-style-type: none"> • Exercise if you can. • Drink plenty of liquids (8 cups a day). • Try ideas in <i>“Suggestions for Dealing with Constipation”</i>. <p>To help diarrhea:</p> <ul style="list-style-type: none"> • Drink plenty of liquids. • Eat and drink often in small amounts. • Avoid high fibre foods as outlined in <i>“Food Ideas to Help with Diarrhea during Chemotherapy”</i>.
Tiredness or lack of energy may occur.	Common	<ul style="list-style-type: none"> • Do not drive a car or operate machinery if you are feeling tired. • Try the ideas in <i>“Your Bank of Energy Savings: How People with Cancer can Handle Fatigue”</i>.
Pain or tenderness may occur where the needle was placed in your vein.	Common	<ul style="list-style-type: none"> • Apply cool compresses or soak in cool water for 15-20 minutes several times a day.
Hair loss sometimes occurs 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.	Common	<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. • Protect your scalp with a hat, scarf or wig in cold weather. • Cover your head or apply sun block on sunny days. • Apply mineral oil to your scalp to reduce itching. • Refer to the pamphlet <i>“For the Patient: Hair loss due to chemotherapy”</i>

OTHER SIDE EFFECTS	How Common Is It?	MANAGEMENT
<p>Sore mouth 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></p>	<p>Common</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 <i>Easy to Chew Recipes</i> and <i>Soft, Moist Food Ideas</i> • Call your doctor if you are having difficulty eating or drinking due to pain.

RADIATION SIDE EFFECTS AND MANAGEMENT

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

INSTRUCTIONS FOR THE PATIENT

What other drugs can interact with LULAPERT?

- Other drugs such as some antibiotics given by vein (e.g.: tobramycin, vancomycin), furosemide (LASIX®), phenytoin (DILANTIN®), pyridoxine (Vitamin B6), atovaquone (MEPRON®), warfarin (COUMADIN®), glucosamine and St John's Wort may interact with LULAPERT. 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.
- If you are admitted to hospital for intravenous antibiotics, be sure that the doctor treating you knows you are on cisplatin chemotherapy.

Other important things to know:

- Cisplatin can cause changes in kidney function, but this is not common with the doses used in this type of treatment. It is important that you are well-hydrated before and after treatment.
- Sometimes, the nerve which allows you to hear can be affected by cisplatin. This could result in ringing in the ears or a change in your hearing. Report any of these problems to your doctor and/or nurse.
- 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 cisplatin 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, pain or burning when you pass urine.
- Signs of a **stroke** such as sudden onset of severe headache, eyesight changes, slurred speech, loss of coordination, weakness or numbness in an arm or leg.
- 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 heart beat, face swelling or breathing problems.
- Signs of a **blood clot** such as tenderness or hardness over a vein, calf swelling and tenderness, sudden onset of cough, chest pain or shortness of breath.
- Signs of **heart problems** such as fast or uneven heartbeat.
- **Seizures** or **loss of consciousness**.

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

- **Muscle weakness.**
- Signs of **kidney problems** such as lower back or side pain, swelling of feet or lower legs.
- Uncontrolled **nausea, vomiting** or **diarrhea**.
- Signs of **anemia** such as unusual tiredness or weakness.
- **Numbness** or tingling in feet or hands.

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

- Easy bruising or bleeding.
- Uncontrolled nausea, vomiting, constipation or diarrhea.
- Severe jaw pain or headache.
- 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.
- Ringing in your ears or hearing problems.
- Numbness or tingling in feet or hands or painful leg cramps.
- Signs of anemia such as unusual tiredness or weakness.

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 _____