



Provincial Health Services Authority

Treatment of Locally Advanced Non-Small Cell Lung Cancer Using Carboplatin and Paclitaxel with Radiation Therapy

**LU = Lung**

**LA = Locally Advanced**

**CAT = CARboplatin, PacliTaxel**

**RT = Radiation Therapy**

## **For the Patient: LULACATRT**

### **ABOUT THIS MEDICATION**

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

- Carboplatin and paclitaxel are drugs used in the treatment of non-small cell lung cancer.
- Radiation therapy is a very effective therapy used to kill cancer cells by directing high-energy X-ray beams to a specific area of the body.

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

- Carboplatin is an anticancer drug that works by preventing the synthesis of DNA that is needed for cancer cells to divide.
- Paclitaxel is an anticancer drug that works by preventing the replication of DNA that is needed for cancer cells to divide.
- Radiation also works by interfering with dividing cells by either killing them or stopping the cells from growing and reproducing.
- Both carboplatin and paclitaxel act as a “radio-sensitizer” to the radiation treatments. That is, the drugs make the cancer cells more sensitive to the killing effect of the radiation. This is why the two types of treatment (radiation and chemotherapy) are used together at the same time.

### **INTENDED BENEFITS**

- You are being asked to take carboplatin, paclitaxel and radiation therapy as a treatment 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.

### **TREATMENT SUMMARY**

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

- The treatment will start within the first few days of starting radiation therapy.
- Carboplatin and paclitaxel are given directly into the vein (IV) at the clinic by the chemotherapy nurse, once a week for 6 weeks in a row. Treatments will last about **two-and-a-half to three hours**. Your first treatment will probably take longer, as the nurse will review information about the chemotherapy drugs with you.

- Your medical oncologist may or may not decide to give you two additional treatments after you have completed radiation therapy. The same drugs may be given once every 3 weeks.

### How is the radiation therapy given?

- Radiation therapy is offered at each of the six regional [BC Cancer](#) Centres.
- Prior to starting treatment, you will attend the cancer centre to have your treatment planned. A CT scanner will take images which the radiation oncologist and radiation therapist will use to custom plan your treatment.
- Your treatment will start a few days after your planning appointment.
- A machine called a linear accelerator is used to generate and give the high energy x-rays.
- Radiation treatments are given every day of the week except weekends and holidays.

The calendar below outlines your overall treatment plan.

| DATE        | TREATMENT PLAN  |
|-------------|---|
|             | ➤ Week 1 → paclitaxel and carboplatin IV x 1 day<br>→ radiation 5 days per week |
|             | ➤ Week 2 → paclitaxel and carboplatin IV x 1 day<br>→ radiation 5 days per week |
|             | ➤ Week 3 → paclitaxel and carboplatin IV x 1 day<br>→ radiation 5 days per week |
|             | ➤ Week 4 → paclitaxel and carboplatin IV x 1 day<br>→ radiation 5 days per week |
|             | ➤ Week 5 → paclitaxel and carboplatin IV x 1 day<br>→ radiation 5 days per week |
|             | ➤ Week 6 → paclitaxel and carboplatin IV x 1 day<br>→ radiation 5 days per week |
| (Optional)* | ➤ Week 10 → paclitaxel and carboplatin IV x 1 day                               |
| (Optional)* | ➤ Week 13 → paclitaxel and carboplatin IV x 1 day                               |

\*Your medical oncologist may choose to use or not use consolidative chemotherapy on weeks 10 and 13. This decision is made on a case-by-case basis.

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

- A **blood test** is done each week, on or before each day of treatment. The dose and timing of your chemotherapy may be changed based on your blood test results or other side effects.
- You will be given medications to help prevent an allergic reaction to paclitaxel with your first, and if indicated, subsequent cycles of chemotherapy. This is usually given

by the chemotherapy nurse, just before your treatment. The medications are given directly into the vein (IV).

### What will happen when I get radiation?

- Radiation treatments are delivered every day of the week except weekends and holidays.
- The length of your treatment appointments will be approximately 15 minutes, but you will be receiving radiation for only a few minutes.
- While the radiation is being given, the radiation therapists will not be in the room with you. They will be watching you on a video camera and you can talk with them over the microphone.
- You will not feel anything during the radiation treatments.

### SIDE EFFECTS AND WHAT TO DO ABOUT THEM

#### Radiation Therapy

- Prior to starting treatment, your radiation oncologist and radiation therapist will provide you with information on the side effects you may experience. You will also be provided with information on how to manage these side effects.
- The most common side effects are difficulty eating and swallowing, fatigue and nausea. The radiation therapists will assess you daily.
- Once a week, you will be scheduled to meet with your radiation oncologist, which will mean you will be at the cancer centre a little longer.
- Nurses, dieticians and other health care professionals are available to help support you during treatment.

#### Chemotherapy

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.

| SERIOUS SIDE EFFECTS DURING TREATMENT   | How common is it? | MANAGEMENT   |
|---|-------------------|--|
| Your <b>white blood cells</b> may decrease after your treatment. They usually return to normal after your last treatment. White blood cells protect your body by fighting bacteria (germs) that cause infection. When they are low, <b>you are at</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.</li> <li>• Avoid crowds and people who are sick.</li> <li>• Call your doctor immediately at the first sign of an infection such as fever (over 100° F or 38° C by an oral</li> </ul> |

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| greater risk of having an infection. |  | thermometer), chills, cough, or burning when you pass urine. |
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| SERIOUS SIDE EFFECTS DURING TREATMENT   | How common is it? | MANAGEMENT  |
|---|-------------------|---|
| The <b>platelets</b> may decrease after your treatment. They usually return to normal before your next treatment. Platelets help to make your blood clot when you hurt yourself. <b>You may bruise or bleed more easily than usual.</b>   | Very common       | <p>To help prevent bleeding problems:</p> <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>• Avoid constipation.</li> <li>• Brush your teeth gently with a soft toothbrush as your gums may bleed more easily. Maintain good oral hygiene.</li> </ul> <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"> <li>• Do not stop taking any medication that has been prescribed by your doctor (e.g. ASA for your heart).</li> </ul> <p>For minor pain, try acetaminophen (e.g. TYLENOL®) first, to a maximum of 4 g (4000 mg) per day, but occasional use of ibuprofen may be acceptable.</p> |
| <b>Allergic reactions</b> commonly occur with paclitaxel. Signs of an allergic reaction may include flushing, rash, dizziness, breathing problems, abdominal or back pain. This can occur immediately or several hours after receiving paclitaxel and usually only with the first or second dose. | Common            | Tell your nurse if this happens while you are receiving paclitaxel or contact your oncologist <b>immediately</b> if this happens after you leave the clinic.  |
| <b>Fever</b> may sometimes occur shortly after treatment with paclitaxel. Fever should last no longer than 24 hours.  | Uncommon          | <ul style="list-style-type: none"> <li>• Take acetaminophen (e.g. TYLENOL®) every 4 – 6 hours to a maximum of 4 g (4000 mg) per day.</li> <li>• Fever (over 100° F or 38° C by an oral thermometer), which occurs more than a few days after treatment,</li> </ul>  |

|   |                          | may be a sign of an infection. Report this to your doctor <b>immediately</b> . See “white blood cells” above under Serious Side Effects. |
|---|--------------------------|--|
| <b>SERIOUS SIDE EFFECTS DURING TREATMENT</b>        | <b>How common is it?</b> | <b>MANAGEMENT</b>  |
| Paclitaxel <b>burns</b> if it leaks under the skin. | Very rare                | Tell your nurse or doctor <b>immediately</b> if you feel burning, stinging, or any other change while the drug is being given.           |

| <b>OTHER SIDE EFFECTS DURING TREATMENT</b>  | <b>How common is it?</b> | <b>MANAGEMENT</b>   |
|---|--------------------------|---|
| <b>Hair loss</b> 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. | Very common              | <ul style="list-style-type: none"> <li>Refer to <i>For the Patient: Hair Loss Due to Chemotherapy</i>.<sup>*</sup> You may also want to:</li> <li>Apply mineral oil to your scalp to reduce itching.</li> </ul> <p>If you lose your eyelashes and eyebrows, protect your eyes from dust and grit with a broad-rimmed hat and glasses.</p>   |
| <b>Nausea and vomiting</b> may occur after your treatment and may last for 24 hours.  | Common                   | <p>You may be given a prescription for anti-nausea drug(s) to take before your chemotherapy treatment and/or at home. <b>It is easier to prevent nausea than treat it once it has occurred</b>, so follow directions closely.</p> <ul style="list-style-type: none"> <li>Drink plenty of fluids.</li> <li>Eat and drink often in small amounts.</li> <li>Try the ideas in <i>Food choices to Control Nausea</i>.<sup>*</sup></li> </ul> |
| <b>Numbness or tingling of the fingers or toes</b> may occur. This will slowly return to normal once your treatments are over. This may take several months.  | Common                   | <ul style="list-style-type: none"> <li>Be careful when handling items that are sharp, hot or cold.</li> </ul> <p>Tell your doctor at your next visit, especially if you have trouble with buttons, writing or picking up small objects.</p>   |
| <b>Muscle or joint pain</b> may commonly occur a few days after your treatment.   | Common                   | You may take acetaminophen (e.g. <b>TYLENOL</b> ®) every 4-6 hours to a maximum of 4g (4000 mg) per day or  |

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|  |  | ibuprofen (e.g. ADVIL ®) for mild to moderate pain. Tell your doctor if the pain interferes with your activity. |
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**\*Please ask your chemotherapy nurse or pharmacist for a copy.**

| <b>OTHER SIDE EFFECTS DURING TREATMENT</b>  | <b>How common is it?</b> | <b>MANAGEMENT</b>   |
|---|--------------------------|---|
| <b>Diarrhea</b> may sometimes occur.  | Common                   | <ul style="list-style-type: none"> <li>• Drink plenty of fluids.</li> <li>• Eat and drink often in small amounts.</li> </ul> Avoid high fibre foods as outlined in <i>Food Ideas to Help with Diarrhea During Chemotherapy</i> .*   |
| <b>Constipation</b> may sometimes occur.  | Common                   | <ul style="list-style-type: none"> <li>• Exercise if you can.</li> <li>• Drink plenty of fluids.</li> </ul> Try ideas in <i>Suggestions for Dealing with Constipation</i> .*  |
| <b>Tiredness</b> and lack of energy may commonly occur.   | Common                   | <ul style="list-style-type: none"> <li>• Do not drive or operate machinery if you are feeling tired.</li> <li>• Try the ideas in <i>Your Bank to Energy Savings: Helping People with Cancer Handle Fatigue</i>.*</li> </ul>   |
| <b>Loss of appetite</b> and <b>weight</b> may occur with paclitaxel.  | Common                   | Try the ideas in <i>High Energy, High Protein Ideas</i> * for food ideas to help with decreased appetite.   |
| <b>Sore mouth</b> may sometimes occur. Mouth sores can occur on the tongue, the sides of the mouth, or in the throat. <b>Mouth sores or bleeding gums can lead to an infection.</b> | 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 the ideas in <i>Food Ideas for a Sore Mouth During Chemotherapy</i>.*</li> </ul> |
| <b>Swelling</b> of hands, feet, or lower legs may sometimes occur if your body retains extra fluid.   | Uncommon                 | If swelling is a problem: <ul style="list-style-type: none"> <li>• Elevate your feet when sitting.</li> <li>• Avoid tight clothing</li> </ul>   |
| <b>Pain or tenderness</b> may occur where the needle was placed.  | Uncommon                 | Apply cool compresses or soak in cool water for 15-20 minutes several times a day.  |

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

## **INSTRUCTIONS FOR THE PATIENT**

- Tell your doctor if you have ever had an unusual or **allergic reaction** to carboplatin (PARAPLATIN®, PARAPLATIN-AQ®), or paclitaxel before starting this treatment.
- The **drinking of alcohol** (in small amounts) does not appear to affect the safety or usefulness of treatment.
- Carboplatin may cause **sterility** in men and **menopause** in women. If you plan to have children, discuss this with your doctor before being treated with carboplatin.
- Paclitaxel and carboplatin may damage sperm and may harm the baby if used during pregnancy. It is best to use **birth control** while being treated with these drugs. Tell your doctor right away if you or your partner becomes pregnant. Do not breast feed during treatment.
- Tell doctors, dentist, and other health professionals that you are being treated with paclitaxel and carboplatin before you receive any treatment from them.

### **Medication Interactions:**

- Other drugs such as disulfiram (ANTABUSE®) and metronidazole (FLAGYL®) may interact with paclitaxel.
- Other drugs such as phenytoin (DILANTIN®) may interact with carboplatin.
- Other drugs such as warfarin (COUMADIN®) may interact with both paclitaxel and carboplatin.

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 or stop taking any other drugs.

## **THE FOLLOWING INFORMATION IS VERY IMPORTANT**

### **SEE YOUR DOCTOR OR GET EMERGENCY HELP IMMEDIATELY IF YOU HAVE:**

- Signs of an **allergic reaction** soon after a treatment including dizziness, fast heartbeat, face swelling, abdominal pain or breathing problems.
- Sign of an **infection** such as fever (100° F or 38° C by an oral thermometer); shaking chills; severe sore throat; cough; cloudy or foul smelling urine; pain or burning when passing urine; painful, tender, or swollen red skin wounds or sores.
- Signs of **bleeding problems** such as black, tarry stools; blood in urine; pinpoint red spots on skin.
- 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 or lung problems** such as fast or uneven heartbeat, chest pain, chest pressure, shortness of breath or difficulty in breathing swelling of feet or lower legs, or fainting.
- **Uncontrolled** nausea, vomiting or diarrhea.

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

- Signs of **anemia** such as unusual tiredness or weakness.
- Signs of **liver problems** such as yellow eyes or skin, white or clay-coloured stools.
- Signs of **kidney problems** such as lower back or side pain, swelling of feet or lower legs, numbness or tingling in feet or hands.
- **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 OR BOTHER YOU:**

- Taste changes may occur.
- Uncontrolled constipation.
- Headache not controlled with acetaminophen (e.g. **TYLENOL®**)
- Easy bruising or minor bleeding.
- Redness, swelling, pain, or sores where the needle was placed.
- Redness, swelling, pain, or sores on your lips, tongue, mouth, or throat.
- Nail changes.
- Abdominal discomfort including pain, bloating or cramping.
- Skin irritation where you may have had radiation treatments.

**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:  
\_\_\_\_\_