



Provincial Health Services Authority

For the Patient: LUOTCAV

Other Names: Treatment of Thymoma/Thymic Carcinoma with Cyclophosphamide, Doxorubicin and Vincristine

LU = LUng

OT = Other Thoracic: Thymoma/Thymic Carcinoma

C = Cyclophosphamide

A = Doxorubicin (Adriamycin®)

V = Vincristine

ABOUT THIS MEDICATION

What are these drugs used for?

LUOTCAV is an intravenous (through the vein) drug treatment for Thymoma and Thymic Carcinoma. The goal of this treatment is to help control or shrink the cancer and some of the symptoms caused by it.

Cyclophosphamide, doxorubicin and vincristine 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?

Cyclophosphamide is an anticancer drug that works by *interfering* with the synthesis of DNA, RNA, and proteins that are needed for cancer cells to divide.

Doxorubicin is an anticancer drug that works by *interfering* with the synthesis of DNA and RNA that are needed for cancer cells to divide.

Vincristine is an anticancer drug that is made from the leaves of the periwinkle plant. It works by *interrupting* processes that are needed for cancer cells to divide.

INTENDED BENEFITS

This treatment is being given to destroy and/or limit the growth of cancer cells in your body. This treatment may improve your current symptoms, and delay or prevent new symptoms from starting.

LUOTCAV TREATMENT SUMMARY

How are these drugs given?

- Your treatment plan consists of up to 6 chemotherapy “cycles”. Each cycle lasts 3 weeks (21 days).
- For each cycle, you will have three medications given to you intravenously (through the vein) on Day 1.
 - Doxorubicin is given first, and is given as an injection.

- Vincristine is given second, and is given intravenously over approximately 15 minutes.
- Cyclophosphamide is given last, and is given intravenously over approximately one hour (60 minutes).

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 for each treatment. Your nurse will tell you when to take the anti-nausea medication. 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.

LUOTCAV TREATMENT PROTOCOL

Start Date: _____

Cycle 1:

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Blood Test Doxorubicin, Vincristine & Cyclophosphamide	No Chemo	No Chemo	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 up to 5 more times.

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.

SIDE EFFECTS	How Common Is It?	MANAGEMENT
Your white blood cells will decrease after your treatment. They usually return to normal within 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 after your 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 (eg: ASPIRIN®) or ibuprofen (eg: ADVIL®), <i>unless prescribed by your doctor.</i>
Doxorubicin and vincristine burn if they leak under the skin.	Rare	Tell your nurse or doctor immediately if you feel burning, stinging, or any other change while the drug is being given.

SIDE EFFECTS	How Common Is It?	MANAGEMENT
Nausea and vomiting may occur after your treatment and may last for up to 24 hours.	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>.
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”</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.
Numbness or tingling of the fingers or toes 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"> • Be careful when handling items that are sharp, hot or cold. • Tell your doctor at your next visit, especially if you have trouble with buttons, writing or picking up small objects.

SIDE EFFECTS	How Common Is It?	MANAGEMENT
Hair loss is common 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, perms. • Protect your scalp with a hat, scarf or wig in cold weather. • Cover your head or apply sunblock on sunny days. • Apply mineral oil to your scalp to reduce itching.
Loss of appetite and weight loss are common and may persist after your treatments are over.	Common	<ul style="list-style-type: none"> • Try ideas in “<i>High Energy High Protein Ideas</i>” and in “<i>Healthy Eating Using High Energy, High Protein Foods</i>”.
Nasal congestion may occur during administration of cyclophosphamide. You may experience runny eyes and nose, sinus congestion and sneezing during or immediately after the infusion.	Uncommon	<ul style="list-style-type: none"> • For persistent nasal congestion a decongestant such as pseudoephedrine (e.g., SUDAFED®), or a decongestant/antihistamine can be used to relieve symptoms.
Your skin may darken in some areas such as your nails, soles or palms.	Uncommon	<ul style="list-style-type: none"> • This will slowly return to normal once you stop treatment with doxorubicin.
Headache, jaw pain and/or muscle pain may occur.	Uncommon	<ul style="list-style-type: none"> • For minor pain, take acetaminophen (e.g., TYLENOL®).

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>Uncommon</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. • Call your doctor if you are having difficulty eating or drinking due to pain. • Try the ideas in “<i>Help with Sore Mouth during Chemotherapy</i>”

INSTRUCTIONS FOR THE PATIENT

What other drugs can interact with LUOTCAV?

- Other drugs such as digoxin (LANOXIN®), cyclosporine (NEORAL®), SANDIMMUNE®), allopurinol, amiodarone, hydrochlorothiazide, indomethacin (INDOCID®), phenobarbital, phenytoin (DILANTIN®), warfarin (COUMADIN®), carbamazepine, isoniazid, nifedipine (ADALAT®), verapamil, some antifungal drugs (e.g., fluconazole) and certain antibiotics (e.g., erythromycin, ciprofloxacin) may interact with LUOTCAV. 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:

- Your doctor may tell you to drink plenty of liquids (e.g., 8-12 cups or 2000-3000 mL) every day. You may also 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 treatment. Your doctor may also tell you to get up in the night to empty your bladder. This helps prevent bladder and kidney problems.
- 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.
- 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 cyclophosphamide, doxorubicin and vincristine 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 **bleeding problems** such as blood in urine or stools.
- Signs of an **allergic reaction** (rare) soon after a treatment including dizziness, fast heart beat, face swelling or breathing problems.
- Signs of **heart or lung problems** such as fast or uneven heartbeat, chest pain, chest pressure, shortness of breath or difficulty breathing, swelling of ankles or fainting.
- **Seizures or loss of consciousness.**

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

- Signs of **gout** such as joint pain.
- **Changes in eyesight.**
- **Skin rash or itching.**
- Signs of **bladder problems** such as changes in urination, painful burning sensation, presence of blood or abdominal pain.
- **Trouble** in walking.
- Signs of **anemia** such as unusual tiredness or weakness.
- Ringing in your ears or **hearing problems.**
- Signs of **kidney problems** such as lower back or side pain, swelling of feet or lower legs.

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

- Easy bruising or minor bleeding.
- Uncontrolled nausea, vomiting or diarrhea.
- For diabetics: uncontrolled blood sugar levels.
- Redness, swelling, pain or sores where the needle was placed.
- Redness, swelling, pain or sores on your lips, tongue, mouth or throat.
- Skin rash or itching.
- Headache not controlled with acetaminophen.

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 _____