



BC Cancer Agency

For the Patient: HNNAVFUFA

Treatment of Recurrent or Metastatic Nasopharyngeal Cancer with Fluorouracil and Leucovorin (Folinic Acid)

HN = Head and Neck

N = Nasopharyngeal

AV = AdVanced

FU = FluoroUracil

FA = Folinic Acid

ABOUT THIS MEDICATION

What are these drugs used for?

- Fluorouracil (flure oh yoor' a sill) is an anticancer medication used to treat many types of cancer. It is a clear liquid that is injected into a vein.
- Folinic acid is also known as leucovorin (loo koe vor' in) is not an anticancer medication, but is used along with some anticancer medications. It is a clear liquid that is injected into a vein. For the rest of this document, the term leucovorin will be used.

How do these drugs work?

- Fluorouracil interferes with the genetic material, DNA and RNA, of cancer cells and kills them and prevents their growth.
- Leucovorin enhances the effect of Fluorouracil to reduce the number of cancer cells.

INTENDED BENEFITS

- This therapy is being given to destroy and/or prevent the growth of new cancer cells in your body.
- This treatment may improve your current symptoms, and delay or prevent the onset of new symptoms.
- This treatment is meant to delay the progression of your cancer.

TREATMENT SUMMARY

How are these drugs given?

- Fluorouracil and leucovorin are given once a week for 6 to 8 weeks. Each week is equal to one cycle. This treatment may be given for more than 8 cycles at the discretion of the treating physician.

What will happen when I get my drugs?

- A blood test is done within one month prior to starting your first treatment.
- A blood test is done every 2 weeks during treatment. The dose and timing of your chemotherapy may be changed based on your blood counts and/or other side effects.
- This medication rarely causes nausea. However, if you should experience any nausea, your pharmacist will counsel you on how to prevent nausea and treat it if it has occurred, so follow suggestions given to you.

- To prevent nausea, be well-hydrated and eat small meals frequently. Refer to the pamphlet on “Food Choices to Help Control Nausea”.

Treatment Protocol

DATE	CYCLE		TREATMENT
	1	Week 1 Day 1	Fluorouracil + Leucovorin
	2	Week 2 Day 1	Fluorouracil + Leucovorin
	3	Week 3 Day 1	Fluorouracil + Leucovorin
	4	Week 4 Day 1	Fluorouracil + Leucovorin
	5	Week 5 Day 1	Fluorouracil + Leucovorin
	6	Week 6 Day 1	Fluorouracil + Leucovorin
	7	Week 7 Day 1	Fluorouracil + Leucovorin
	8	Week 8 Day 1	Fluorouracil + Leucovorin

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 as they are directly related to the common actions of the drugs in your treatment plan.

SERIOUS SIDE EFFECTS	How common is it?	MANAGEMENT
Chest pain or pressure or irregular heartbeat.	rare	Call the oncologist <i>immediately</i> and go to your nearest emergency department.
Loss of balance, difficulty walking, or visual changes may occur weeks or months later.	rare	Call the oncologist at first sign of changes.
Fluorouracil burns if it leaks under the skin.	rare	Tell our nurse or doctor <i>immediately</i> if you feel burning, stinging, or any other change while the drug is being given.

SERIOUS SIDE EFFECTS	How common is it?	MANAGEMENT
<p>Allergic reactions may rarely occur. Signs of an allergic reaction are dizziness, feeling faint, confusion, shortness of breath, and wheezing. This may occur immediately or several hours after receiving the drugs. It can occur after the first dose, or after many doses.</p>	rare	<p>Tell your nurse if this happens while you are receiving the drugs or contact your doctor immediately if this happens after you leave the clinic.</p>

OTHER SIDE EFFECTS	How common is it?	MANAGEMENT
<p>Your white blood cells will decrease during or 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, you are at greater risk of having an infection.</p>	common	<p>To help prevent infection:</p> <ul style="list-style-type: none"> • Wash your hands often and always after using the bathroom. • Take care of your skin and mouth. • 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.

OTHER SIDE EFFECTS	How common is it?	MANAGEMENT
<p>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.</p>	uncommon	<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). • For minor pain, try acetaminophen (e.g., TYLENOL®) first, but occasional use of ibuprofen may be acceptable.
<p>Increase in tears during treatment, with or without itching and burning.</p>	common	<ul style="list-style-type: none"> • If this occurs, apply ice packs to eyes before, during and for 30 minutes after fluorouracil to minimize this side effect.
<p>Sore mouth may occur during treatment. Mouth sores can occur on the tongue, the sides of the mouth, or in the throat. Mouth sores or bleeding gums can lead to infection.</p>	uncommon	<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 the ideas in Food Ideas for a Sore Mouth During Chemotherapy
<p>Diarrhea may occur during treatment.</p>	uncommon	<p>To help diarrhea:</p> <ul style="list-style-type: none"> • Drink plenty of fluids. • Eat and drink often in small amounts. • Avoid high fibre foods as outlined in Chemo Induced Diarrhea - Food Choices to Help with Diarrhea During Chemotherapy.

OTHER SIDE EFFECTS	How common is it?	MANAGEMENT
Loss of appetite may occur and may persist long after discontinuation of fluorouracil.	uncommon	<ul style="list-style-type: none"> • Try the ideas in Nutrition > Patient Education Materials for Decreased Appetite
Hair loss sometimes occurs with fluorouracil. Your hair will grow back once you stop treatment with fluorouracil. Colour and texture may change.	uncommon	<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.
Hand-foot skin reaction is very rare but may occur during treatment. The palms of your hands and soles of your feet may tingle, become red, numb, painful, or swollen. Skin may also become dry or itchy. You may not be able to do your normal daily activities if blisters, severe pain or ulcers occur.	very rare	<ul style="list-style-type: none"> • Avoid tight-fitting shoes or rubbing pressure to hands and feet, such as that caused by heavy activity. • Clean hands and feet with lukewarm water and gently pat to dry; avoid hot water. • Apply lanolin-containing creams (e.g., BAG BALM®, UDDERLY SMOOTH®) to hands and feet liberally and often. • Tell your cancer doctor at the next visit if you have any signs of hand-foot skin reaction.
Your skin may sunburn easily.	rare	<p>To help prevent sunburn:</p> <ul style="list-style-type: none"> • Avoid direct sunlight. • Wear a hat, long sleeves and long pants for skirt outside on sunny days. • Apply a sunscreen that blocks both UVA and UVB and has a sun protection factor (SPF) of at least 30. Apply liberally – 30 minutes before exposure. Reapply every 2 hours and after swimming. • Consult the <i>BC Health Guide</i> or your community pharmacist for more information.
Nausea does not usually occur with fluorouracil or leucovorin.		

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

INSTRUCTIONS FOR THE PATIENT

What other drugs can interact with Fluorouracil and leucovorin?

- **Warfarin** (COUMADIN®), **phenytoin** (DILANTIN®), and **fosphenytoin** (CEREBYX®) may interact with fluorouracil. **Thiazide** diuretics (e.g., chlorthalidone, hydrochlorothiazide) may prolong fluorouracil-induced leucopenia. **Metronidazole** (FLAGYL®) or **cimetidine** (TAGAMET®) may increase the efficacy and toxicity of fluorouracil. 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 taking any new prescription or non-prescription products.

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 heart beat, face swelling or breathing problems.
- Signs of an **infection** such as fever (over 100°F or 38°C by oral thermometer), chills, cough, pain, or burning when you pass urine.
- Signs of **bleeding problem** such as black, tarry stools, blood in urine, pinpoint red spots on skin, extensive bruising.
- 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.

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

- **Painful hand-foot skin reaction** such as painful redness, peeling, tingling, numbness, swelling or blistering of the palms of your hands and/or the bottoms of your feet.
- **Diarrhea** with four stools a day more than usual, or diarrhea during the night.
- **Nausea** that causes you to eat a lot less than usual or **vomiting** more than 2 times in 24 hours.
- **Painful redness, swelling or sores on your lips, tongue, mouth or throat.**
- Signs of **liver problems** such as yellow eyes or skin, white or clay-coloured stools.
- Signs of **anemia** such as unusual tiredness or weakness.
- **Severe abdominal or stomach cramping or pain.**
- **Dizziness or trouble walking.**
- **Eye irritation or changes in eyesight.**

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

- Painless hand-foot skin reaction such as redness, peeling, tingling, numbness, swelling or blistering of the palms of your hands and/or bottoms of your feet.
- Painless redness, swelling or sores on your lips, tongue, mouth or throat.
- Uncontrolled nausea, vomiting, loss of appetite, diarrhea, or constipation.

- Skin rash or itching.
- Changes in fingernails or toenails.
- Heartburn; mild to moderate abdominal or stomach pain.
- Severe skin reaction where you have had radiation.
- Watery, irritated eyes.

If you experience symptoms or changes in your body that have not been described above but worry you, or in any symptoms are severe, contact:

_____ at telephone

number: _____