



For the Patient: GIENAFUPRT

Other Names: Neo-adjuvant Combined Modality Therapy for Operable Esophageal and Esophageal-stomach Junction Cancer using Cisplatin, Infusional Fluorouracil and Radiation Therapy.

ABOUT THIS TREATMENT

What is this treatment used for?

- Fluorouracil (also known as 5FU) and cisplatin are drugs used to treat cancer of the esophagus and esophageal-stomach junction. Fluorouracil and cisplatin are both given directly into the vein, or intravenously (IV).
- Radiation therapy is a very effective therapy used to kill cancer cells by directing high-energy X-rays beams to a specific area of the body.

How do fluorouracil, cisplatin and radiation therapy work?

- Fluorouracil and cisplatin work by interfering with dividing cells and preventing an increase in the number of cancer cells.
- Radiation also works by interfering with dividing cells by either killing them or stopping them from growing and reproducing.
- Fluorouracil and cisplatin also act as a “radio-sensitizer”. That is, the fluorouracil and cisplatin 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

- This therapy is being given to destroy and/or limit the growth of cancer cells in your body. This treatment may prevent a recurrence of cancer, improve your current symptoms and delay the onset of new symptoms.
- “Neo-adjuvant” means this treatment is being given before, and in addition to, surgery.

TREATMENT SUMMARY

How are these drugs given?

- Fluorouracil and cisplatin are given directly into the vein (IV). You will be given the fluorouracil continuously over 4 days by an infusion device, and the cisplatin will be given once daily for 3 days in a row. Both drugs will be started at the same time. This will then be followed by a rest period. This period of time is called a “cycle”. You will receive 2 cycles of chemotherapy, combined with radiation therapy, as long as you are benefitting from treatment and do not have too many side effects as determined by your oncologist.

Cisplatin

- You will receive **cisplatin** at the clinic by the chemotherapy nurse once daily **for 3 days in a row**, as determined by your oncologist. This treatment takes about **30 minutes**.

Fluorouracil

- You will receive **fluorouracil** at the clinic by the chemotherapy nurse on **day 1 only** of your 3 day treatment schedule, after receiving the cisplatin. The fluorouracil is given using a disposable infusion device called an INFUSOR® or “baby bottle”. The infusion device delivers the fluorouracil slowly and continuously to your body over 96 hours. Please see a copy of “*Your INFUSOR® - A Guide for Patients*”, available through your chemotherapy nurse.
- The infusion device is connected to your veins by either a peripherally inserted central catheter (PICC Line) or a PORT-A-CATH®. If using a PICC line, this is inserted in your upper arm. If using a PORT-A-CATH®, this is inserted under the skin of the chest using local freezing. The insertion would be done several days before your treatment starts and would be removed once the treatment program is finished.
- The chemotherapy nurse will connect the infusion device to your IV site at the clinic. When you have received your daily cisplatin dose, and when your radiation treatment is over, you can go home while your fluorouracil treatment is delivered over the 96 hours.
- The connection will take about **1 hour**. This includes a dressing change if you have a PICC line. If you have a PORT-A-CATH®, a dressing change is not needed, so your treatment will take less time. Your first treatment will probably take longer, as the nurse will review information on the chemotherapy drugs and infusion device with you.
- If your doctor decides to delay or stop your fluorouracil during radiation therapy due to side effects of the drug, your radiation will continue.

How is radiation therapy given?

- Radiation therapy is offered at each of the five regional BC Cancer Agency 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 on the following page outlines your overall treatment plan.

DATE	CYCLE	TREATMENT PLAN
	1	<ul style="list-style-type: none"> ▶ Cisplatin IV x 3 days + ▶ Infusional fluorouracil x 96 hours, started on day 1 of cycle ▶ Both given at same time and usually starts first day of radiation therapy
	2	<ul style="list-style-type: none"> ▶ Cisplatin IV x 3 or 4 days + ▶ Infusional fluorouracil x 96 hours, started on day 1 of cycle ▶ Both given at the same time with the fifth week of radiation therapy

What will happen when I get my drugs?

- A **blood test** is done each cycle, on or before the first day of each treatment cycle. The dose and timing of your chemotherapy may be changed based on your blood counts and/or other side effects.
- Your doctor may ask you to **drink water** on the morning of your treatment (2-3 cups). Following your treatment your doctor may ask you to drink plenty of liquids (8 – 12 cups a day). This helps prevent kidney problems.

What will happen when I get radiation therapy?

- Radiation treatments are delivered every day of the week except weekends and holidays.
- The length of your treatment appointment 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

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.

Your doctor will review the risks of treatment and possible side effects with you before starting treatment. The chemotherapy nurse will review possible side effects of fluorouracil and how to manage those side effects with you on the day you receive your first treatment.

SERIOUS SIDE EFFECTS DURING TREATMENT	MANAGEMENT
Allergic reactions may occur but are very rare. 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.	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.
Cisplatin and fluorouracil both burn if the drug leaks under the skin.	Tell your nurse or doctor immediately if you feel burning, stinging, or any other change while the drug is being given.
Nausea and vomiting may occur after your treatment and may last for up to 24 hours. Nausea may last longer for some patients (i.e. delayed nausea and vomiting).	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 treat it once it has occurred, so follow directions closely. <ul style="list-style-type: none"> • Drink plenty of liquids. • Eat and drink often in small amounts. • Try the ideas in <i>Food Choice to Control Nausea*</i> Your doctor may manage delayed nausea and vomiting differently. Be sure to let your doctor know if you experience this.
Diarrhea may occur.	To help diarrhea: <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> .

SERIOUS SIDE EFFECTS DURING TREATMENT	MANAGEMENT
<p>Your white blood cells will decrease 1-2 weeks after your treatment. They usually return to normal 3 weeks 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>	<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. • 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.
<p>Sore mouth may occur commonly 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 an infection.</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 in <i>Easy to Chew, Easy to Swallow Food Ideas*</i>.

OTHER SIDE EFFECTS DURING TREATMENT	MANAGEMENT
<p>Pain or tenderness may occur where the needle was placed.</p>	<p>Apply cool compresses or soak in cool water for 15 – 20 minutes several times a day.</p>
<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>	<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.

OTHER SIDE EFFECTS DURING TREATMENT	MANAGEMENT
Your skin may sunburn easily.	To help prevent sunburn: <ul style="list-style-type: none"> • Avoid direct sunlight. • Wear a hat, long sleeves and long pants or skirt outside on sunny days. • Apply a sun block lotion with an SPF (sun protection factor) of at least 15.
Skin rashes may occur.	To help itching: <ul style="list-style-type: none"> • You can use calamine lotion. • If very irritating, call your doctor during office hours • Otherwise make sure to mention it at your next visit.
Loss of appetite may occur and may persist long after discontinuation of fluorouracil.	Try the ideas in <i>Food Ideas to Help with Decreased Appetite</i> .*
Hair loss sometimes occurs with fluorouracil. Your hair will grow back once you stop treatment with fluorouracil. Colour and texture may change.	<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.
Pain and difficulty with swallowing.	<ul style="list-style-type: none"> • Choose soft foods. Try ideas in <i>Easy to Chew Recipes</i>.* • Eat and drink small amounts more frequently throughout the day. • The temperature of food and liquids should not be too hot or too cold. • Sit up after eating to avoid indigestion. • Consult with your dietician for further nutrition advice. • Consult with your cancer doctor for pain management.

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

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 fatigue, increased difficulty with swallowing, and pain with swallowing. Nausea and vomiting are also possible. 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, dietitians and other health care professionals are available to help support you during treatment.

INSTRUCTIONS FOR THE PATIENT

- Tell your doctor if you have ever had an unusual or **allergic reaction** to fluorouracil (5 FU, ADRUCIL®) or cisplatin before receiving treatment.
- The **drinking of alcohol** (in small amounts) does not appear to affect the safety or usefulness of fluorouracil or cisplatin.
- Your doctor may ask you to take a **hearing test** before and at various times during your treatment with cisplatin. This helps to detect hearing problems.
- Fluorouracil and cisplatin may cause **sterility** in men and **menopause** in women. If you plan to have children, discuss this with your doctor before being treated with fluorouracil and cisplatin.
- Fluorouracil and cisplatin may damage sperm in males and may harm the baby if used during pregnancy. It is best to **use birth control** while being treated with these drugs, and for six months after your last treatment. Tell your doctor right away if you or your partner becomes pregnant. Do not breast feed during treatment.
- **Tell** doctors or dentists that you are being treated with fluorouracil and cisplatin before you receive any dental treatment.

Medication Interactions

Other drugs may interact with fluorouracil, such as phenytoin (DILANTIN®) and warfarin (COUMADIN®). Other drugs may interact with cisplatin, such as furosemide (LASIX®), phenytoin (DILANTIN®), pyridoxine, and some antibiotics given by vein (e.g. tobramycin, vancomycin). 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 drugs.

THE FOLLOWING INFORMATION IS VERY IMPORTANT

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

- Signs of an **allergic reaction** (rare) 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 an oral thermometer); chills, cough, pain or burning when you pass urine
- Signs of **bleeding problems** such as black, tarry stools, blood in urine, pinpoint red spots on skin, extensive bruising.
- Signs of a **stroke** such as sudden onset of: severe headache, eyesight changes, slurred speech, loss of coordination, weakness or numbness in arm or leg.
- 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 ankles, or fainting.
- Sudden **abdominal pain** or tenderness.
- **Seizures** or **loss of consciousness**.
- **Uncontrolled nausea, vomiting, or diarrhea.**

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.
- **Muscle weakness**
- Signs of **kidney problems** such as lower back or side pain, swelling of feet/lower legs.

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.
- 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.
- Ringing in your ears or hearing problems.
- Signs of anemia such as unusual tiredness or weakness.
- Heartburn; mild to moderate abdominal or stomach pain.
- Dizziness or trouble walking.
- Eye irritation or changes in eyesight.
- Skin rash or itching.
- Numbness or tingling in feet or hands or painful leg cramps.

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: _____