



For the Patient: GIGAIRT

Other Names: Combined Modality Adjuvant Therapy For Completely Resected Stomach Cancer Using Fluorouracil And Folinic Acid (Leucovorin) And Radiation Therapy.

GI = Gastrointestinal

GA = Gastric Adenocarcinoma (stomach cancer)

I = Intravenous

RT = Radiation Therapy

ABOUT THIS TREATMENT

What is this treatment used for?

- Fluorouracil (also known as 5FU) and leucovorin are drugs used to treat cancer of the stomach. Both fluorouracil and leucovorin are given directly in to 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, leucovorin and radiation therapy work?

- Fluorouracil works by interfering with dividing cells and preventing an increase in the number of cancer cells.
- Leucovorin acts by enhancing the effects of fluorouracil and strengthening fluorouracil's ability to reduce 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 also acts as a "radio-sensitizer". That is, the fluorouracil makes 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 reduce the risk of recurrence of your stomach cancer. This therapy acts to destroy and/or limit the growth of cancer cells in your body.
- "Adjuvant" therapy means this treatment is being given in addition to other types of treatment, such as surgery.

TREATMENT SUMMARY

How are these drugs given?

- Fluorouracil and leucovorin are given directly into the vein (IV). They will be given to you at the clinic by a chemotherapy nurse. Each treatment usually takes about **20 minutes**, and will be given everyday for 3 to 5 days in a row followed by a rest period, depending on where you are in the treatment plan (see "**Treatment Plan**" on following page). Your first treatment will probably take longer as the chemotherapy nurse will review information on the chemotherapy drugs with you.
- The chemotherapy will be given to you before the start of radiation therapy, combined with radiation, and following the completion of therapy.

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 below outlines your overall treatment plan.

Treatment Plan

DATE	CYCLE	TREATMENT PLAN
	1 Week 1 Day 1-5	<ul style="list-style-type: none">▶ 5FU + Leucovorin IV push daily x 5 days▶ Given before the start of radiation therapy
		<ul style="list-style-type: none">▶ Radiation: 25 fractions given over 5 weeks (weeks 5 – 9)
	2 Week 5 Day 29 - 32	<ul style="list-style-type: none">▶ 5FU + Leucovorin IV push daily x 4 days▶ Given during the first 4 days of radiation therapy
	3 Week 9 Day 59 - 61	<ul style="list-style-type: none">▶ 5FU + Leucovorin IV push daily x 3 days▶ Given during last 3 days of radiation therapy
	4 Week 14 Day 92 - 96	<ul style="list-style-type: none">▶ 5FU + Leucovorin IV push daily x 5 days▶ Given after the completion of radiation therapy
	5 Week 18 Day 120 - 124	<ul style="list-style-type: none">▶ 5FU + Leucovorin IV push daily x 5 days▶ Given after the completion 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.
- You may be asked to **suck ice chips** as you receive your treatment. This is to help reduce mouth sores that may develop following your treatment. If wearing dentures, you will be asked to remove them. Place the ice chips in your mouth five minutes before chemotherapy. Continuously swish the ice chips in your mouth for 30 minutes, adding more ice as it melts. This may cause some numbness or headaches, but these effects will disappear quickly

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 the drugs 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.
Fluorouracil burns if it 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.

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>Diarrhea may occur during your treatment.</p>	<p>To help diarrhea:</p> <ul style="list-style-type: none"> • Drink plenty of fluids • Eat and drink often in small amounts • Eat low fibre foods and avoid high fibre foods as outline in <i>Coping with Diarrhea</i>*.
<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 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
Pain or tenderness may occur where the needle was placed.	Apply cool compresses or soak in cool water for 15-20 minutes several times a day.
Your platelets may decrease during or after your treatment. They will return to normal after your last treatment. This is common. Platelets help to make your blood clot when you hurt yourself. You may bruise or bleed more easily than usual.	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. • Avoid constipation. • Brush your teeth gently with a soft toothbrush as your gums may bleed more easily. Maintain good oral hygiene. Some medications such as ASA (e.g. ASPIRIN®) or ibuprofen (e.g. ADVIL®) may increase your risk of bleeding. <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.
Skin rashes are uncommon, but 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 mention it at your next visit.
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 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.
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> .*

OTHER SIDE EFFECTS DURING TREATMENT	MANAGEMENT
<p>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.</p>	<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. • Try taking pyridoxine (vitamin B6) 50 – 150mg orally daily. • Tell your cancer doctor at the next visit if you have any signs of hand-foot skin reaction.
<p>Hair loss sometimes occurs with fluorouracil. Your hair will grow back once you stop treatment with fluorouracil. Colour and texture may change.</p>	<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.
<p>Nausea does not usually occur with fluorouracil or leucovorin.</p>	

***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 leucovorin, fluorouracil or to capecitabine (XELODA®) before using fluorouracil.
- The **drinking of alcohol** (in small amounts) does not appear to affect the safety or usefulness of fluorouracil or leucovorin.
- Fluorouracil 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.
- Fluorouracil may damage sperm and may harm the baby if used during pregnancy. It is best to use **birth control** while being treated with fluorouracil. 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 before you receive any treatment from them

Medication Interactions

Some drugs such as warfarin (COUMADIN®), phenytoin (DILANTIN®) and fosphenytoin (CEREBYX®) may **interact with fluorouracil**. Other drugs may interact with **leucovorin**. 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 **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**.

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.
- **Uncontrolled nausea, vomiting, or diarrhea.**
- Signs of **anemia** such as unusual tiredness or weakness.
- **Severe skin irritation.**

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.
- Heartburn; mild to moderate abdominal or stomach pain.
- Dizziness or trouble walking.
- Eye irritation or changes in eyesight.
- Skin rash or itching.

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: _____