

# Trastuzumab, Cisplatin, Fluorouracil (5-FU), and Leucovorin

**Care Team Contact Information:** \_\_\_\_\_

**Pharmacy Contact Information:** \_\_\_\_\_

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

- This treatment is often used for stomach cancer, esophageal cancer, and cancer where the esophagus joins the stomach. However, it may also be used for other uses.
- Your care team will perform a test for human epidermal growth factor receptor 2 (HER2) to make sure this treatment is right for you.

**Goal of Treatment:** \_\_\_\_\_

- Treatment may continue for a certain time period, until it no longer works, or until side effects are no longer controlled.

## Treatment Regimen

Treatment Name	How the Treatment Works	How the Treatment is Given
Trastuzumab (tras-TOO-zoo-mab): Herceptin (her-SEP-tin), Hercessi, Herzuma, Kanjinti, Ogivri, Ontruzant, Trazimera	Slows down or stops cancer growth by blocking a specific protein that cancer cells need to survive.	Infusion given into a vein.
Cisplatin (sis-PLA-tin): Platinol (PLA-tih-nol)	Slows down or stops the growth of cancer cells by damaging the genetic material that cancer cells need to multiply.	Infusion given into a vein.
Leucovorin (LOO-koh-VOR-in)	Helps fluorouracil (5-FU) bind more tightly to its target inside cancer cells. This allows it to stay and fight longer.	Infusion given into a vein.
Fluorouracil (floor-oh-YOOR-uh-sil). It is also called "5-FU"	Stops cancer cells from making the instructions they need to grow and multiply, causing the cells to die.	Continuous infusion given into a vein through a pump over 1 day (24 hours).

**Treatment Administration and Schedule:** Treatment is typically repeated every 2 weeks. This length of time is called a "cycle".

- Note: Fluorouracil (5-FU) is given as a continuous infusion over 24 hours, starting on Day 1 and ending on Day 2.

Treatment Name	Cycle 1							Next Cycle
	Day 1	Day 2	Day 3	Day 4	Day 5	...	Day 14	Day 1
Trastuzumab	✓							✓
Cisplatin	✓							✓
Leucovorin	✓							✓
Fluorouracil (5-FU)	→	→						→

**Appointments:** Appointments may include regular check-ups with your care team, treatment appointments, lab visits, and imaging tests. It's important to keep your appointments whenever you can. If you miss any appointments, call your care provider as soon as possible to reschedule your appointment.

## Supportive Care to Prevent and Treat Side Effects

Description	Supportive Care Given at the Clinic or Hospital	Supportive Care Taken at Home
To help prevent or treat nausea or vomiting		
Hydration and other supportive care		

## Common Side Effects

Side Effect	Important Information
<b>Low White Blood Cell (WBC) Count and Increased Risk of Infection (Cisplatin Boxed Warning)</b>	<p>Description: WBCs help protect the body against infections. If you have a low WBC count, you may be at a higher risk of infection.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>Wash your hands and bathe regularly.</li> <li>Avoid crowded places.</li> <li>Stay away from people who are sick.</li> <li>Your care team may prescribe a drug that promotes the growth of WBCs.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>Fever of 100.4 °F (38°C) or higher</li> <li>Chills</li> <li>Cough</li> <li>Sore throat</li> <li>Painful urination</li> <li>Tiredness that is worse than normal</li> <li>Skin infections (red, swollen, or painful areas)</li> </ul>
<b>Low Platelet Count (Cisplatin Boxed Warning)</b>	<p>Description: Platelets help the blood clot and heal wounds. If you have low platelet counts, you are at a higher risk of bruising and bleeding.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>Blow your nose gently and avoid picking it.</li> <li>Brush your teeth gently with a soft toothbrush and maintain good oral hygiene.</li> <li>Use an electric razor for shaving and a nail file instead of nail clippers.</li> <li>Avoid over-the-counter medications that may increase the risk of bleeding, such as NSAIDs.</li> <li>Talk with your care team or dentist before medical or dental procedures, as you may need to pause your treatment.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>Nosebleed lasting over 5 minutes despite pressure</li> <li>Cut that continues to bleed</li> <li>Significant gum bleeding when flossing or brushing</li> <li>Severe headaches</li> <li>Blood in your urine or stool</li> <li>Blood in your spit after a cough</li> </ul>

<b>Low Red Blood Cell (RBC) Count and Hemoglobin (Hgb) (Cisplatin Boxed Warning)</b>	<p>Description: RBCs and Hgb help bring oxygen to your body's tissues and take away carbon dioxide. If you have low RBC counts or Hgb, you may feel weak, tired, or look pale.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Get 7 to 8 hours of sleep each night.</li> <li>• Avoid operating heavy machinery when tired.</li> <li>• Balance work and rest, staying active but resting when needed.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Shortness of breath</li> <li>• Dizziness</li> <li>• Fast or abnormal heartbeats</li> <li>• Severe headache</li> </ul>
<b>Nausea and Vomiting (Cisplatin Boxed Warning)</b>	<p>Description: Nausea is an uncomfortable feeling in your stomach or the need to throw up. This may or may not cause vomiting.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Eat smaller, more frequent meals.</li> <li>• Avoid fatty, fried, spicy, or highly sweet foods.</li> <li>• Eat bland foods at room temperature and drink clear liquids.</li> <li>• If you vomit, start with small amounts of water, broth, or other clear liquids when you are ready to eat again. If that stays down, then try soft foods (such as gelatin, plain cornstarch pudding, yogurt, strained soup, or strained cooked cereal). Slowly work up to eating solid food.</li> <li>• Your care provider may prescribe medicine for these symptoms.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Vomiting for more than 24 hours</li> <li>• Vomiting that's nonstop</li> <li>• Signs of dehydration (like feeling very thirsty, having a dry mouth, feeling dizzy, or having dark urine)</li> <li>• Blood or coffee-ground-like appearance in your vomit</li> <li>• Bad stomach pain that doesn't go away after vomiting</li> </ul>
<b>Nerve Problems in Your Arms, Hands, Legs, or Feet (Cisplatin Boxed Warning)</b>	<p>Description: Nerve pain and tingling are uncomfortable sensations caused by nerve damage or irritation. Pain may be sharp, burning, or deep, while tingling feels like pins-and-needles or mild electric shocks, often in the hands, feet, arms, or legs.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Track your pain levels, sensations, and any triggers or factors that make the pain worse or better.</li> <li>• Check your feet daily for any injuries or changes, especially if you have numbness or tingling that affects your feeling.</li> <li>• Your care team may prescribe or recommend medicine for symptoms.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• "Pins and needles" or burning feeling in your hands or feet</li> <li>• Trouble moving your arms or legs</li> <li>• Trouble keeping your balance</li> </ul>

<b>Kidney Problems (Cisplatin Boxed Warning)</b>	<p>Description: Treatment can cause kidney problems, including damage to the kidneys and decreased kidney function. This may lead to acute kidney injury or long-term kidney failure. It can also cause low magnesium levels that last after treatment. These issues usually happen within days of getting the drug.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Drink 8 to 10 glasses of water or other fluids each day, unless your care team tells you otherwise.</li> <li>• Your care team will give you fluids and electrolytes with your treatment.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Decrease in your amount of urine</li> <li>• Blood in your urine</li> <li>• Swelling of your ankles</li> <li>• Loss of appetite</li> </ul>
<b>Infusion Reactions (Trastuzumab Boxed Warning)</b>	<p>Description: An infusion reaction is a bad response that happens during or not long after getting medicine into a vein.</p> <p>Get medical help right away if you develop any of the following symptoms of infusion reaction during or after your infusion:</p> <ul style="list-style-type: none"> <li>• Chills or shaking</li> <li>• Itching, rash, or flushing</li> <li>• Trouble breathing or wheezing; tongue-swelling</li> <li>• Dizziness or feeling faint</li> <li>• Fever of 100.4°F (or 38°C) or higher</li> <li>• Pain in your back or neck</li> </ul>
<b>Mouth Irritation and Sores</b>	<p>Description: This treatment can irritate the lining of the mouth. In some cases, this can cause redness, sores, pain, and swelling.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Rinse your mouth after meals and at bedtime, and more often if sores develop.</li> <li>• Brush your teeth with a soft toothbrush or cotton swab after meals.</li> <li>• Use a mild, non-alcohol mouth rinse at least four times daily (after meals and at bedtime). A simple mixture is 1/8 teaspoon salt and 1/4 teaspoon baking soda in 8 ounces of warm water.</li> <li>• Avoid acidic, hot, spicy, or rough foods and drinks that may irritate your mouth.</li> <li>• If you have mouth sores, avoid tobacco, alcohol, and alcohol-based mouthwashes.</li> <li>• Your care team may prescribe medicine for these symptoms.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Pain or sores in your mouth or throat</li> </ul>

<p>Low Appetite</p>	<p>Treatment can cause a low appetite, which means you may not feel like eating much. It's important to eat enough so your body gets the nutrients it needs to heal and stay strong. Eating healthy foods helps you feel better and recover faster.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Be as active as possible. Do some physical activity before a meal. Before starting an exercise program, talk with your care team.</li> <li>• Take note of the times during the day when your appetite is best. Do not limit food when your appetite is good. Eat your largest meal when you feel the most hungry, whether it is breakfast, lunch, or dinner.</li> <li>• Eat 5-6 small meals per day and snack anytime.</li> <li>• Choose foods high in protein, such as beans, chicken, fish, meat, yogurt, tofu, and eggs. During meals, eat high-protein foods first.</li> <li>• Choose foods that are high in calories. Do not select foods that are labeled "low-fat," "fat-free" or "diet."</li> <li>• If you feel full quickly when eating, do not drink any liquids 30 minutes before a meal so you have more room for solid food. Then, drink liquids between meals. Choose liquids with extra calories, not diet drinks.</li> <li>• Eat a bedtime snack. Choose something easy to digest, such as peanut butter and crackers. If you tend to experience reflux or heartburn, eat at least an hour before lying down.</li> <li>• If food is not appealing, try a nutritious beverage, such as a high-protein shake or smoothie, instead of solid food.</li> <li>• Ask your care team to recommend a liquid nutrition supplement. Add a scoop of protein powder, yogurt, or ice cream for added protein and calories.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Weight loss</li> <li>• No appetite</li> <li>• Tiredness</li> </ul>
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Diarrhea	<p>Description: Diarrhea is when you have loose, watery bowel movements more often than usual. The need to use the bathroom may occur urgently.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Keep track of how many times you go to the bathroom each day.</li> <li>• Drink 8 to 10 glasses of water or other fluids every day, unless your care team tells you otherwise.</li> <li>• Eat small meals of mild, low-fiber foods like bananas, applesauce, potatoes, chicken, rice, and toast.</li> <li>• Stay away from foods with high fiber (like raw vegetables, fruits, and whole grains), foods that cause gas (like broccoli and beans), dairy foods (like yogurt and milk), and spicy, fried, and greasy foods.</li> <li>• Your care team may recommend medicines (such as loperamide) for diarrhea.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• 4 or more bowel movements than normal in 24 hours</li> <li>• Dizziness or lightheadedness while having diarrhea</li> <li>• Bloody diarrhea</li> </ul>
Constipation	<p>Description: Constipation means having a hard time passing stools or not going to the bathroom often. Your stools might feel hard and dry, which can make you uncomfortable or hurt.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Keep track of how many times you move your bowels every day.</li> <li>• Drink 8 to 10 glasses of water or other fluids each day, unless your care team tells you otherwise.</li> <li>• Exercise regularly.</li> <li>• Eat high-fiber foods like raw fruits and vegetables.</li> <li>• Your care team may recommend medicine (such as polyethylene glycol 3350 or senna) for constipation.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Constipation that lasts 3 or more days</li> <li>• Constipation after 48 hours, even after using a laxative</li> </ul>

<p>Fatigue</p>	<p>Description: Fatigue is a constant and sometimes strong feeling of tiredness.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Routine exercise has been shown to decrease levels of fatigue. Work with your care team to find the right type of exercise for you.</li> <li>• Ask your family and friends for help with daily tasks and emotional support.</li> <li>• Try healthy ways to feel better, like meditation, writing in a journal, doing yoga, and using guided imagery to lower anxiety and feel good.</li> <li>• Make a regular sleep schedule and limit naps during the day so you can sleep better at night, aiming for 7 to 8 hours of sleep.</li> <li>• Don't use heavy machines or do things that need your full attention if you're very tired to avoid accidents.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Tiredness that affects your daily life</li> <li>• Tiredness all the time, and it doesn't get better with rest</li> <li>• Dizziness and weakness, along with being tired</li> </ul>
<p>Hand-Foot Syndrome</p>	<p>Description: Hand-Foot Syndrome causes dryness, thickening, swelling, or blisters of the skin on the palms of your hands and soles of your feet.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Keep hands and feet moisturized with a non-scented moisturizing cream.</li> <li>• Applying urea 10% or 20% cream twice daily to the affected area may be helpful.</li> <li>• Avoid exposure to hot water on the hands and feet in showers or baths that may dry out the skin or by doing dishes.</li> <li>• Avoid tight-fitting shoes or socks.</li> <li>• Avoid excess rubbing on hands and feet unless putting on lotion.</li> <li>• Wear gloves when working with your hands.</li> </ul> <p>Talk to your care team if you have:</p> <ul style="list-style-type: none"> <li>• Painful blisters or calluses</li> </ul>



## Select Rare Side Effects

Side Effect	Talk to Your Care Team if You Have Any of These Signs or Symptoms	
<b>Heart Problems (Trastuzumab Boxed Warning)</b>	<p>Your care team should check your heart function before and during treatment.</p> <ul style="list-style-type: none"> <li>Swelling of your stomach-area (abdomen), legs, hands, feet, or ankles</li> <li>Shortness of breath</li> <li>Nausea or vomiting</li> <li>Weight gain of more than 5 pounds in 24 hours</li> <li>Pain or discomfort in your arms, back, neck, or jaw</li> <li>Protruding neck veins</li> <li>Palpitations (rapid or irregular heartbeat)</li> <li>Dizziness or lightheadedness</li> <li>Chest discomfort or pain</li> <li>Fatigue</li> <li>Confusion</li> <li>Fainting or near-fainting spells</li> <li>Breaking out in a cold sweat</li> </ul>	
<b>Lung Problems (Trastuzumab Boxed Warning)</b>	<ul style="list-style-type: none"> <li>Cough</li> <li>Shortness of breath</li> <li>Chest pain</li> </ul>	
Liver Problems	<ul style="list-style-type: none"> <li>Yellowing of your skin or the whites of your eyes</li> <li>Severe nausea or vomiting, pain on the right side of your stomach area (abdomen)</li> </ul>	<ul style="list-style-type: none"> <li>Dark urine (tea colored)</li> <li>Bleeding or bruising more easily than normal</li> </ul>
Ear Problems	<ul style="list-style-type: none"> <li>Difficulty hearing high-pitched sounds (like certain consonant sounds, music, or birdsong)</li> <li>Ringling, buzzing, hissing, or other sounds in the ears when no external source is present</li> </ul>	<ul style="list-style-type: none"> <li>Difficulty understanding speech, particularly in noisy environments</li> <li>A feeling of fullness or pressure in the ears</li> <li>Dizziness or balance problems</li> </ul>
Eye Problems	<ul style="list-style-type: none"> <li>Dry or red eyes</li> <li>Eye pain or swelling</li> <li>Vision changes</li> </ul>	<ul style="list-style-type: none"> <li>Increased tears</li> <li>Sensitivity to light</li> <li>Blurred vision</li> </ul>
Brain Problems	<ul style="list-style-type: none"> <li>Headache</li> <li>Dizziness</li> <li>Confusion</li> <li>Memory problems</li> <li>Difficulty concentrating</li> </ul>	<ul style="list-style-type: none"> <li>Seizures</li> <li>Muscle weakness</li> <li>Tremors</li> <li>Changes in mood or behavior</li> <li>Sensory disturbances (such as tingling or numbness)</li> </ul>
Risk of New Cancers	There is a risk of developing new cancers during or after treatment. Talk with your care team about this risk, and ask about the signs and symptoms of new cancers.	
Extravasation	<p>Extravasation happens when medicine that is supposed to go into a vein leaks out into the tissues around it. This can cause pain, swelling, and damage to the skin and tissues.</p> <ul style="list-style-type: none"> <li>Pain, burning, or stinging at the infusion site</li> <li>Swelling, redness, or blistering around the site</li> <li>Coolness or numbness in the area</li> <li>Decreased blood flow or tissue damage, potentially leading to ulcers or tissue death in severe cases</li> </ul>	



**Before starting treatment, ask your care team when to call 9-1-1 or seek emergency help.**  
**If you experience any new, worsening, or uncontrolled side effects, contact your care team immediately.**

## Intimacy, Pregnancy, and Breastfeeding

- Treatment may **change how you feel about intimacy and your body**. However, physical closeness—such as holding hands and hugging—remains safe. It is common to have questions about intimacy. If needed, talk to your care team for guidance.
- Treatment may **harm an unborn baby**.
  - If you are able to become pregnant, take a pregnancy test before starting treatment.
  - Use an effective method of birth control
    - During treatment
    - For 3 months after your last dose of fluorouracil (5-FU)
    - For 7 months after your last dose of trastuzumab
    - For at least 14 months after your last dose of cisplatin
  - If you think you might be pregnant or if you become pregnant, tell your care team right away.
  - If your partner(s) could become pregnant, use an effective method of birth control—such as condoms—during treatment, for 3 months after your last dose of fluorouracil (5-FU), and for 11 months after your last dose of cisplatin.
- **Do NOT breastfeed**
  - During treatment
  - For 24 hours after your last dose of fluorouracil (5-FU)
  - For at least 3 days after your last dose of cisplatin
  - For 7 months after your last dose of trastuzumab

## Handling Body Fluids and Waste

Some drugs you receive may stay in your urine, stool, sweat, or vomit for many days after treatment. Because many cancer drugs are toxic, your body waste may also be dangerous to touch. To help protect yourself, your loved ones, and the environment, **follow these instructions** for at least **48 hours** after each dose of **fluorouracil (5-FU)** and **cisplatin**.

- People who are pregnant should avoid touching anything that may be soiled with body fluids from the patient.
- You can use your usual toilet. Always close the lid and flush to discard all waste. If you have a low-flow toilet, flush twice.
- If the toilet or seat is soiled with urine, stool, or vomit, clean the surface after each use before others use it.
- Wash your hands with soap and water for at least 20 seconds after using the toilet.
- If you need a bedpan, inform your caregiver so they can wear gloves and assist with cleanup. Wash the bedpan with soap and water daily.
- If you cannot control your bladder or bowels, use a disposable pad with a plastic back, a diaper, or a sheet to absorb waste.
- Wash any skin exposed to body waste with soap and water.
- Wash soiled linens or clothing separately from other laundry. If you don't have a washer, place them in a plastic bag until they can be washed.
- Wash your hands with soap and water after touching soiled linens or clothing.

## Additional Information

- **Tell your care team about all the medicines you take.**  
This includes prescriptions, over-the-counter drugs, vitamins, and herbal products. Before starting any new medicine, supplement, or vaccine, ask your care team first.
- **Do not take products that contain folic acid or folate analog products**, for example, leucovorin or levoleucovorin, during treatment with fluorouracil (5-FU), unless your healthcare provider instructs you to take them.
- **People with deficiencies in the enzyme dihydropyrimidine dehydrogenase (DPD) may experience serious side effects.**  
People with certain changes in a gene called "DPYD" may have a deficiency of the DPD enzyme. Some of these people may not produce enough DPD enzyme, and some of these people may not produce the DPD enzyme at all.
  - People who do not produce any DPD enzyme are at increased risk of sudden side effects that come on early during treatment with fluorouracil (5-FU) and can be serious, and sometimes lead to death.
  - Call your care team right away if you develop any of the following symptoms and they are severe, including:
    - Sores of the mouth, tongue, throat, and esophagus
    - Diarrhea
    - Low white blood cell counts
    - Nervous system problems
  - People with some DPD enzyme may have an increased risk of serious side effects with fluorouracil (5-FU) treatment that can sometimes lead to death.
  - Your care teams should talk with you about DPYD testing to look for DPD deficiency.
- **This Patient Education Sheet may not describe all possible side effects.**  
Call your healthcare provider for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

## Notes

Updated Date: December 8, 2025

Scan the QR code below to access this education sheet.



Important notice: The Association of Cancer Care Centers (ACCC), Hematology/Oncology Pharmacy Association (HOPA), Network for Collaborative Oncology Development & Advancement, Inc. (NCODA), and Oncology Nursing Society (ONS) have collaborated in gathering information for and developing this patient education guide. This guide represents a brief summary of the medication derived from information provided by the drug manufacturer and other resources.

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