

## Capecitabine (Xeloda®)

**Pronounce:** cap-eh-SITE-ah-bean

**Classification:** Antimetabolite

### About Capecitabine (Xeloda®)

Capecitabine interferes with DNA production. This stops cell growth and division, resulting in the slowing or stopping of cancer growth. Since cancer cells, in general, divide faster and with less error-correcting than healthy cells, cancer cells are more sensitive to this damage.

### How to Take Capecitabine

Capecitabine is taken by mouth, in pill form, within 30 minutes after a meal. It is typically taken twice a day. The dose is dependent on your body size, the regimen your provider is following, and whether or not it is being used in conjunction with other chemotherapies or radiation therapy. You will have lab work regularly to monitor your blood counts. Please take note of your dose because it may include multiple pills of different strengths. Swallow the pills whole (do not crush, chew or break), with water.

It is important to make sure you are taking the correct amount of medication every time. Before every dose, check that what you are taking matches what you have been prescribed.

Certain medications can interfere with capecitabine, including phenytoin, leucovorin, and folate. Make sure your provider is aware of all the medications, vitamins, and supplements you are taking before you begin taking capecitabine.

### For Patients Taking Blood Thinners

Capecitabine can interact with blood-thinning medications, such as warfarin (Coumadin). The combination of these medicines can cause your blood to take longer to clot, which can increase the risk of serious bleeding. This can happen as soon as a few days after you start taking capecitabine, during treatment, or up to a month after your last dose of capecitabine. The risk of bleeding is higher in people with cancer and those over age 60. Your healthcare provider will monitor your INR (blood test to measure clotting time) frequently. Be sure to report any bleeding to your provider.

### Storage and Handling

Store your medication in the original, labeled container at room temperature and in a dry location (unless otherwise directed by your healthcare provider or pharmacist). This medication should not be stored in a pillbox. Keep containers out of reach of children and pets.

If a caregiver prepares your dose for you, they should consider wearing gloves or pour the pills directly from their container into the cap, a small cup, or directly into your hand. They should avoid touching the pills. They should always wash their hands before and after giving you the medication. Pregnant or nursing women should not prepare the dose for you. Ask your oncology team where to return any unused medication for disposal. Do not flush down the toilet or throw in the trash.

### Where do I get this medication?

Depending on your prescription coverage, this medication may be available at your local retail pharmacy or through a specialty pharmacy. Your oncology team will work with your prescription drug plan to identify the appropriate supplier for this medication.

## Insurance Information

This medication may be covered under your prescription drug plan. Patient assistance may be available to qualifying individuals without adequate prescription drug coverage. Co-pay cards, which reduce the patient co-pay responsibility for eligible commercially (non-government sponsored) insured patients, may also be available. Your care team can help you find these resources, if they are available.

This medication is covered under Medicare part B for Medicare recipients. Make sure your pharmacist knows to process this prescription through your Medicare part B and NOT Part D.

## Possible Side Effects

There are a number of things you can do to manage the side effects of capecitabine. Talk to your care team about these recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

### Diarrhea

This medication can cause diarrhea that can be severe and lead to serious dehydration. Notify your oncology team if you develop diarrhea or if the number of bowel movements you have in a day increases by 4 or more. Your oncology team can recommend medications to relieve [diarrhea](#) and tell you how to take them, which is often different than the directions on the package.

Also, try eating bland foods, such as white rice and boiled or baked chicken. Avoid raw fruits, vegetables, whole-grain breads, cereals, and seeds. Soluble fiber is found in some foods and absorbs fluid, which can help relieve diarrhea. Foods high in soluble fiber include: applesauce, bananas (ripe), canned fruit, orange sections, boiled potatoes, white rice, products made with white flour, oatmeal, cream of rice, cream of wheat, and farina. Drink 8-10 glasses of non-alcoholic, un-caffeinated fluid a day to prevent dehydration.

### Hand Foot Syndrome

[Hand foot syndrome](#) (HFS) is a skin reaction that appears on the palms of the hands and/or the soles of the feet, as a result of certain chemotherapy agents being absorbed by the skin cells. HFS can begin as a mild tingling, numbness, pins-and-needles feeling, redness or pain, or swelling of the hands and/or feet. This can then progress to painful swelling, blistering or peeling skin that can interfere with your ability to do normal activities. Be sure to let your oncology team know right away if you notice these symptoms, as they may need to adjust the chemotherapy dose or take a break to allow the skin to heal. Some tips to help prevent HFS include:

- Keep hands and feet clean and dry.
- Avoid tight shoes or socks.
- Avoid activities that put pressure on the palms or soles for 1 week after treatment.
- Apply an alcohol-free moisturizer liberally and often. (Avoid moisturizers with perfumes or scents)
- Avoid very hot water for baths and showers.

### Low White Blood Cell Count (Leukopenia or Neutropenia)

White blood cells (WBC) are important for fighting infection. While receiving treatment, your [WBC count can drop](#), putting you at a higher risk of getting an infection. You should let your oncology care team know right away if you have a fever (temperature greater than 100.4°F / 38°C), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn't heal.

## Tips to preventing infection:

- [Washing hands](#), both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever, or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bathe daily and perform frequent [mouth care](#).
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your oncology care team before scheduling dental appointments or procedures.
- Ask your oncology care team before you, or someone you live with has any vaccinations.

## Low Red Blood Cell Count (Anemia)

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the [red cell count is low](#), you may feel tired or weak. You should let your oncology care team know if you experience any shortness of breath, difficulty breathing, or pain in your chest. If the count gets too low, you may receive a blood transfusion.

## Low Platelet Count (Thrombocytopenia)

Platelets help your blood clot, so when the [count is low](#) you are at a higher risk of bleeding. Let your oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums or blood in your urine or stool. If the platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin®, Aleve®, Advil®, etc. as these can all increase the risk of bleeding. Unless your healthcare team tells you otherwise, you may take acetaminophen (Tylenol).
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

## Fatigue

[Fatigue](#) is very common during cancer treatment and is an overwhelming feeling of exhaustion that is not usually relieved by rest. While on cancer treatment, and for a period after, you may need to adjust your schedule to manage fatigue. Plan times to rest during the day and conserve energy for more important activities. Exercise can help combat fatigue; a simple daily walk with a friend can help. Talk to your oncology care team for helpful tips on dealing with this side effect.

## Nausea and/or Vomiting

Talk to your oncology care team so they can prescribe medications to help you manage [nausea and vomiting](#). In addition, dietary changes may help. Avoid things that may worsen the symptoms, such as heavy or greasy/fatty, spicy, or acidic foods (lemons, tomatoes, oranges). Try antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

Call your oncology care team if you are unable to keep fluids down for more than 12 hours or if you feel lightheaded or dizzy at any time.

## Decrease in Appetite

[Nutrition](#) is an important part of your care. Cancer treatment can affect your appetite and, in some cases, the

side effects of treatment can make eating difficult. Ask your oncology care team about nutritional counseling services at your treatment center to help with food choices.

- Try to eat five or six small meals or snacks throughout the day, instead of 3 larger meals.
- If you are not eating enough, nutritional supplements may help.
- You may experience a metallic taste or find that food has no taste at all. You may dislike foods or beverages that you liked before receiving cancer treatment. These symptoms can last for several months or longer after treatment ends.
- Avoid any food that you think smells or tastes bad. If red meat is a problem, eat chicken, turkey, eggs, dairy products, and fish without a strong smell. Sometimes cold food has less of an odor.
- Add extra flavor to meat or fish by marinating it in sweet juices, sweet and sour sauce, or dressings. Use seasonings like basil, oregano, or rosemary to add flavor. Bacon, ham, and onion can add flavor to vegetables.

## Mouth Ulcers (Sores)

Certain cancer treatments can cause [sores or soreness in your mouth](#) and/or throat. Notify your doctor or nurse if your mouth, tongue, inside of your cheek or throat becomes white, ulcerated, or painful. Performing [regular mouth care](#) can help prevent or manage mouth sores. If mouth sores become painful, your oncology care team can recommend a pain reliever.

- Brush with a soft-bristle toothbrush or cotton swab twice a day.
- Avoid mouthwashes that contain alcohol. A baking soda and/or salt warm water mouth rinse (2 level teaspoons of baking soda or 1 level teaspoon salt in an eight-ounce glass of warm water) is recommended 4 times daily.
- If your mouth becomes dry, eat moist foods, drink plenty of fluids (6-8 glasses), and suck on sugarless hard candy.
- Avoid smoking and chewing tobacco, drinking alcoholic beverages, and citrus juice

## Skin Reactions

This medication can cause serious skin reactions. Notify your oncology care team right away if you develop a skin rash, blisters, and/or peeling of your skin.

## Liver Toxicity

This medication can cause liver toxicity, which your doctor may monitor for using blood tests called liver function tests. If you develop elevations in your liver function tests, your healthcare provider may need to lower your dose or stop the medication. Notify your healthcare provider if you notice yellowing of the skin or eyes, your urine appears dark or brown, or you have pain in your abdomen, as these can be signs of liver toxicity.

## Important but Less Common Side Effects

- **Heart Problems:** This medication can cause heart attack, chest pain, abnormal heart rhythms, heart failure, ECG changes, and cardiomyopathy. These more often occur in patients with a prior history of heart disease. Notify your healthcare provider right away or go to the emergency room if you have chest pain, shortness of breath, feel abnormal heartbeats, feel dizzy or faint, have sudden weight gain or swelling in the ankles or legs.
- **Kidney Failure and Dehydration:** This medication can cause kidney failure related to dehydration. It is important to stay hydrated and if you notice any changes in your urination habits, such as needing to go to the bathroom less often or a change in the color of your urine, you should contact your provider.
- **Hypersensitivity Reaction:** In some cases, you may have a reaction to this medication including

rash, itching, redness, or swelling of the lips, tongue, mouth, or throat. This swelling can make it hard to swallow and breathe. This is a serious reaction and you should contact your provider right away.

## Reproductive Concerns

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. Effective birth control is necessary during treatment and for 6 months after the end of treatment for women and 3 months after the end of treatment for men. If your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. Women should not breastfeed while taking capecitabine or for 1 week after the end of treatment.

## Irinotecan (Camptosar®, CPT-11)

Content Contributor: Christina Bach, MBE, LCSW, OSW-C, FAOSW

**Pronounce:** EYE-ri-noe-TEE-kan

**Classification:** Topoisomerase inhibitor

### About Irinotecan (Camptosar®, CPT-11)

Irinotecan is thought to work by blocking the action of an enzyme in cells called topoisomerase I. Cells need this enzyme to keep their DNA in the proper shape when they are dividing. Blocking this enzyme leads to breaks in the DNA, which leads to cell death.

### How to Take Irinotecan

Irinotecan is given by intravenous (IV, into a vein) infusion. It is used in a variety of chemotherapy regimens. The actual dose and dosing schedule will depend on your treatment regimen, body size, and general health. You may receive anti-nausea medication and anti-diarrheal medication like atropine prior to the irinotecan infusion.

Even when carefully and correctly administered by trained personnel, this drug may cause a feeling of burning and pain. There is a risk that this medication may leak out of the vein at the injection site, resulting in tissue damage that can be severe. If the area of injection becomes red, swollen, or painful at anytime during or after the injection, notify your care team immediately. Do not apply anything to the site unless instructed by your care team.

The blood levels of this medication can be affected by certain foods and medications, so they should be avoided for 1-2 weeks before treatment. These include: grapefruit, grapefruit juice, carbamazepine, ketoconazole, rifampin, phenytoin, phenobarbital, and St. John's wort, among others. Be sure to tell your healthcare provider about all medications and supplements you take.

### Possible Side Effects of Irinotecan

There are a number of things you can do to manage the side effects of irinotecan. Talk to your care team about these recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

#### Diarrhea

Diarrhea is a common side effect of irinotecan and can be very dangerous because it can lead to serious dehydration. Diarrhea can be defined as an increase in the number of bowel movements you have in a day. Your healthcare team may administer a medication in the clinic if you develop diarrhea right away. Your healthcare provider will tell you how to take loperamide (an anti-diarrheal medication) at home, which you should start taking as soon as diarrhea develops. Diarrhea is a serious side effect that can lead to dehydration. Notify your healthcare team if diarrhea does not stop on this medication so they can help you better manage

this side effect.

Runny nose, excess saliva, watery eyes, sweating and cramping can accompany diarrhea that occurs within the first day of receiving this medication. If any of these symptoms occur during the infusion, notify your nurse. Diarrhea can continue to occur for 10-12 days after the treatment. Diarrhea can be a serious side effect that can lead to dehydration. Notify your healthcare provider if you develop diarrhea.

## Low White Blood Cell Count (Leukopenia or Neutropenia)

White blood cells (WBC) are important for fighting infection. While receiving treatment, your [WBC count can drop](#), putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4°F/38°C), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn't heal.

### Tips to preventing infection:

- [Washing hands](#), both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bath daily and perform frequent [mouth care](#).
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your oncology care team before scheduling dental appointments or procedures.
- Ask your oncology care team before you, or someone you live with, has any vaccinations.

## Low Red Blood Cell Count (Anemia)

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the [red cell count is low](#), you may feel tired or weak. You should let your oncology care team know if you experience any shortness of breath, difficulty breathing, or pain in your chest. If the count gets too low, you may receive a blood transfusion.

## Low Platelet Count (Thrombocytopenia)

Platelets help your blood clot, so when the [count is low](#) you are at a higher risk of bleeding. Let your oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums, or blood in your urine or stool. If the platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal anti-inflammatory medications (NSAIDs) such as Motrin/Advil (ibuprofen), Aleve (naproxen), Celebrex (celecoxib), etc., as these can all increase the risk of bleeding. Please consult with your healthcare team regarding the use of these agents and all over-the-counter medications/supplements while on therapy.
- Do not floss or use toothpicks, and use a soft-bristle toothbrush to brush your teeth.

## Nausea and/or Vomiting

Talk to your oncology care team so they can prescribe medications to help you manage [nausea and vomiting](#). In addition, dietary changes may help. Avoid things that may worsen the symptoms, such as heavy or greasy/fatty, spicy, or acidic foods (lemons, tomatoes, oranges). Try saltines or ginger ale to lessen symptoms.

Call your oncology care team if you are unable to keep fluids down for more than 12 hours or if you feel lightheaded or dizzy at any time.

## Fatigue

**Fatigue** is very common during cancer treatment and is an overwhelming feeling of exhaustion that is not usually relieved by rest. While on cancer treatment, and for a period after, you may need to adjust your schedule to manage fatigue. Plan times to rest during the day and conserve energy for more important activities. Exercise can help combat fatigue; a simple daily walk with a friend can help. Talk to your healthcare team for helpful tips on dealing with this side effect.

## Loss or Thinning of Scalp and Body Hair (Alopecia)

Your hair may become **thin, brittle, or fall out**. This typically begins two to three weeks after treatment starts. This hair loss can be all body hair, including pubic, underarm, legs/arms, eyelashes, and nose hairs. The use of scarves, wigs, hats, and hairpieces may help. Hair generally starts to regrow soon after treatment is completed. Remember your hair helps keep you warm in cold weather, so a hat is particularly important in cold weather or to protect you from the sun.

## Decrease in Appetite or Taste Changes

**Nutrition** is an important part of your care. Cancer treatment can affect your appetite and, in some cases, the side effects of treatment can make eating difficult. Ask your oncology care team about nutritional counseling services at your treatment center to help with food choices.

- Try to eat five or six small meals or snacks throughout the day, instead of 3 larger meals.
- If you are not eating enough, nutritional supplements may help.
- You may experience a metallic taste or find that food has no taste at all. You may dislike foods or beverages that you liked before receiving cancer treatment. These symptoms can last for several months or longer after treatment ends.
- Avoid any food that you think smells or tastes bad. If red meat is a problem, eat chicken, turkey, eggs, dairy products, and fish without a strong smell. Sometimes cold food has less of an odor.
- Add extra flavor to meat or fish by marinating it in sweet juices, sweet and sour sauce or dressings. Use seasonings like basil, oregano, or rosemary to add flavor. Bacon, ham, and onion can add flavor to vegetables.

## Important but Less Common Side Effects

- **Lung Changes:** This medication may cause interstitial lung disease, which is a scarring and stiffening of the lung tissue. Call your healthcare provider right away if you have new or worsening shortness of breath, cough, wheezing, or difficulty breathing.
- **Kidney Problems:** This medication can cause kidney problems, usually secondary to dehydration as a result of diarrhea or vomiting. Your creatinine level may be increased, which your oncology care team may monitor using blood tests. Notify your healthcare provider if you notice decreased urine output, blood in the urine, swelling in the ankles, or loss of appetite.
- **Allergic Reactions:** In some cases, patients can have an allergic reaction to this medication. Signs of a reaction can include: shortness of breath or difficulty breathing, chest pain, rash, flushing or itching, or a decrease in blood pressure. If you notice any changes in how you feel during the infusion, let your nurse know immediately. The infusion will be slowed or stopped if this occurs.

## Reproductive Concerns

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. Effective birth control is necessary during treatment and for 6 months after treatment has ended for women and 3 months after treatment has ended for men. Even if your

menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should not breastfeed while receiving this medication or for one week after your last dose.

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