



Provincial Health Services Authority

For the Patient: BRAJFECD

Other Names: [Neoadjuvant](#) or Adjuvant Therapy for Breast Cancer Using Fluorouracil, Epirubicin and Cyclophosphamide and Docetaxel

BR = BReast

AJ = AdJuvant

F = Fluorouracil

E = Epirubicin

C = Cyclophosphamide

D = Docetaxel

Uses:

- BRAJFECD is a drug treatment given after breast cancer [diagnosis](#) in the hope of destroying breast cancer cells that may have spread to other parts of your body. [It can be given before \(called neoadjuvant\) or after \(called adjuvant\) breast cancer surgery.](#) This treatment may reduce the chance of your breast cancer coming back and may improve your overall survival or chance of a cure.

Treatment Plan:

- Your treatment plan consists of 6 chemotherapy cycles (about 4 months). A cycle length is 3 weeks. All the drugs are given intravenously at every visit. For each cycle, you will need to have a blood test and see your oncologist before the treatment. The dose and timing of your chemotherapy may be changed based on your blood counts and/or other side effects.
- Epirubicin, Fluorouracil and Cyclophosphamide (FEC, all chemotherapy drugs) are given for the first 3 cycles. Each FEC treatment takes about one hour. You will be given a prescription for anti-nausea drugs to take 30 minutes before each treatment, and for a few days after chemotherapy.
- Docetaxel (a chemotherapy drug) will be given every 3 weeks for the last 3 cycles. You will be asked to take Dexamethasone 8 mg (usually 2 x 4 mg pills), twice daily for three days, starting one day prior to each dose of Docetaxel. This medication helps to prevent allergy to Docetaxel and also helps to prevent some of the side effects that might occur after using Docetaxel, such as edema (swelling). Docetaxel is given over about 1 hour.

- If needed, radiation therapy will start after your last chemotherapy cycle is finished. Hormone treatments may also be started after chemotherapy and/ or radiation, if your oncologist has recommended these for you.

Instructions:

- For the first 3 treatments, bring your anti-nausea drugs with you to take before each treatment. You will also need to take your anti-nausea drugs at home after therapy. It is easier to prevent nausea than treat it once it has occurred, so follow directions closely.
- Drink lots of fluids for the first day or two after chemotherapy, especially after FEC (8 or more cups a day).
- Check with your doctor or pharmacist before you start taking any new drugs. Other drugs such as Phenytoin (DILANTIN®), Warfarin (COUMADIN®), Digoxin (LANOXIN®), Ketoconazole, Erythromycin and Thiazide diuretics (“water pills”) may interact with BRAJFECD.
- You may drink small amounts of alcohol, as it will not affect the safety or usefulness of your treatment.
- Tell other doctors or dentists that you are being treated with BRAJFECD before you receive any treatment from them.
- If you are still having menstrual periods, BRAJFECD may cause your ovaries to stop working, resulting in menopausal symptoms (such as hot flashes) and infertility. Your periods may stop. **This may be permanent**, especially if you are 40 years of age or older. Even if you have stopped having periods after treatment, if you were fertile prior to chemotherapy, you may be able to conceive a pregnancy. Use birth control (but **not** birth control pills) if you could become pregnant, even if you have stopped menstruating because of chemotherapy. Do not breast feed during treatment. Talk to your doctor if you have questions about fertility and birth control after treatment.

Serious Risks of Treatment:

Unexpected and unlikely side effects can occur with any drug treatment. The ones listed below are particularly relevant to your treatment plan:

During treatment:

- **Infection:** The number of white blood cells that help fight infection will be lowered by the chemotherapy drugs, usually starting after about day 7 of each cycle. Your blood count is expected to return to normal by day 1 of the next cycle, and will be normal again after the 4-5 months of chemotherapy drugs. If your white blood cell count becomes very low you could get a serious infection. **If you have a fever over 38°C or 100°F, call your cancer doctor immediately (24 hours a day) or go immediately to your nearest Hospital Emergency and tell the doctor you are on chemotherapy.**
- **Increased risk of bleeding:** The number of platelets (special blood cells that help your blood to clot normally after injury) may be lowered by the treatment. They are expected to return to normal by day 1 of next cycle. When the platelet count is low you may be more likely to bruise or bleed. Notify your cancer doctor promptly if you develop large or numerous bruises, or unusual bleeding

(eg. nosebleed that won't stop, blood in stool, urine, or sputum). Try to avoid using ASA or ibuprofen, if other pain medications could be used, as they may increase the risk of bleeding, but if you need to use one of these medications, let your doctor know. For patients receiving Warfarin, a modification of the dose may be required based on blood test results (increased INR due to possible interaction with chemotherapy).

- **Tissue or vein injury:** Epirubicin and Docetaxel can cause tissue injury if they leak out of the vein while being given. Report any sensation of burning or pain to your nurse immediately. Chemotherapy may cause some inflammation and/or scarring in the veins, which may make it difficult to start an IV. Your nurse will help your doctor assess whether a special intravenous device (PICC line or portacath) needs to be considered for your therapy. Pain or tenderness may occur where the needle was placed in your vein. If so, apply cool compresses or soak in cool water for 15-20 minutes several times a day.

During or after treatment:

- **Heart Failure:** Rarely, epirubicin can have a serious effect on the heart, causing failure of the heart's pumping action, which results in shortness of breath, fatigue and leg swelling. This can sometimes develop years after treatment. The risk is about 1% or less. The treatment may be stopped or interrupted if there are concerns about your heart function. This can sometimes develop years after treatment. The risk is about 1% or less. The treatment may be stopped or interrupted if there are concerns about your heart function. In up to 8% of patients, serious heart problems can occur within a few days of starting Fluorouracil. These can rarely be fatal. Problems such as chest pain, heart attack, abnormal heart rhythm, or heart failure can occur. Having a history of heart problems with Capecitabine, a related chemotherapy drug, is a risk factor, as is having a history of prior angina (heart pain) or heart attack. Tell your doctor promptly if you experience feelings of heavy pressure or pain in the chest, trouble breathing, significant worsening leg swelling, or marked lightheadedness, within the days after starting Fluorouracil. If your symptoms are severe, you may need to call for emergency help.
- **Leukemia:** After chemotherapy, there is an increase in the risk of leukemia, a cancer of the white blood cells. The risk is about 1% or less after this type of chemotherapy.
- **Neuropathy:** Docetaxel can cause you to develop damage to the peripheral nerve endings (the nerves to the hands and feet, and rarely, the face). This can result in feelings of numbness and tingling, or sometimes painful burning sensations. You will need to be careful when handling things that are sharp, hot, or very cold. The majority of the time, these feelings develop after a number of treatments, are not severe, and will resolve fully over a period of months once treatment stops. Infrequently (<5%), these feelings might occur early, might be severe, or might not entirely resolve.

Common chemotherapy side effects and management:

SIDE EFFECT	MANAGEMENT
<p>Nausea and vomiting can occur with FEC, but are uncommon with Docetaxel. You will need to take anti-nausea drugs before FEC treatments, and for days 2 and 3 while at home. You will likely not need anti-nausea drugs for docetaxel.</p>	<p>You will be given a prescription for an 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.</p> <ul style="list-style-type: none"> • Drink plenty of liquids. • Eat and drink in small amounts. Try the ideas in <i>Food Choices to Control Nausea</i>.*
<p>Allergic reactions may occur during or after the administration of Docetaxel. Signs of an allergic reaction are flushing, rash, itching, dizziness, swelling or breathing problems, or sudden chest or back pain.</p>	<ul style="list-style-type: none"> • Dexamethasone is used to help prevent allergic reactions. Doses of anti-allergic medications may be given if you have an allergic reaction despite this. • Your nurse will check your heart rate (pulse) and blood pressure if needed. • Tell your nurse or doctor <i>immediately</i> if you have any sign of an allergic reaction
<p>Hair loss. Your hair will fall out 2-4 weeks after treatment begins. Your scalp may feel tender. You may lose hair on your face and body. In most cases, your hair will grow back once your chemotherapy treatments are over and sometimes between treatments. Rarely, hair may not grow back for more than two years. The colour and texture of the new hair growth may be different.</p>	<ul style="list-style-type: none"> • Avoid hair spray, bleaches, dyes and perms. • Apply mineral oil to your scalp to reduce itching. • If you lose your eyelashes and eyebrows, protect your eyes from dust and grit with a broad-rimmed hat and glasses. • Ask your nurse about information on wigs and head coverings.
<p>Mouth sores may occur a few days after chemotherapy treatment and may last days or weeks. Mouth sores can occur on the tongue, gums, and the sides of the mouth or in the throat.</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. • Try baking soda mouth rinses (using 1/2 tsp baking soda in 1 cup warm water) and rinse several times a day. Try ideas in <i>Easy to chew, easy to swallow food ideas</i>*. • Tell your doctor about a sore mouth, as your chemotherapy doses may need to be decreased if mouth sores are severe. Call your doctor if you are having difficulty eating or drinking due to pain.

SIDE EFFECT	MANAGEMENT
<p>Fatigue is common especially in the first week after your treatment. As the number of chemotherapy cycles increases, fatigue may get worse or last longer.</p>	<ul style="list-style-type: none"> • Your energy level will improve with time after treatment is completed. • You may obtain a suggestion pamphlet for handling fatigue from nursing staff in your facility.
<p>Nail changes such as change in colour may occur. Rarely, nails will loosen or fall off, or the nailbeds will be painful.</p>	<ul style="list-style-type: none"> • You may be given frozen gloves to wear on your hands during your treatment to help prevent nail changes. • You may take acetaminophen (e.g. TYLENOL®) up to every 4 hours if nails are painful.
<p>Diarrhea may occur between treatments.</p>	<p>To help diarrhea:</p> <ul style="list-style-type: none"> • Drink plenty of liquids. • Eat and drink often in small amounts. • You can purchase IMODIUM® over the counter if diarrhea is persistent. Don't take this if you have abdominal pain, blood in your stool, or fever. In that case, consult your doctor promptly for tests. <p>Avoid high fiber foods as outlined in <i>Food ideas to help with diarrhea during chemotherapy</i>.</p>
<p>Fluid retention may occur after the administration of Docetaxel. Signs of extra fluid build-up are swelling of feet, hands or belly; breathing problems; cough or rapid weight gain. This is unlikely to develop after only 3 treatments.</p>	<ul style="list-style-type: none"> • Take your dexamethasone tablets, as directed by doctor, pharmacist or nurse, to try to prevent edema. This is usually taken twice a day with food (breakfast and supper) starting the day before your treatment. • Tell your doctor at your next visit if you notice swelling, or sooner if it seems severe. • Elevate your feet when sitting. • Avoid tight clothing.
<p>Pain affecting joints or muscles may occur for a few days after docetaxel. After you stop chemotherapy altogether, you may also feel increased joint aching or stiffness for a few months.</p>	<ul style="list-style-type: none"> • Take acetaminophen (e.g. TYLENOL®) for mild to moderate pain. If you need to take ibuprofen (e.g., ADVIL®) or ASA, please let your doctor know at your next visit. Contact your cancer doctor if your pain is severe. • Your family doctor can help you to manage symptoms of joint pain after chemotherapy.

Side effects of the dexamethasone premedication and management:

SIDE EFFECTS	MANAGEMENT
<p>Heartburn may occur. There may be an increased risk of stomach problems such as bleeding ulcers especially if you have had stomach problems before.</p>	<ul style="list-style-type: none"> · Take your dexamethasone after eating. · Take antacids one hour before or two hours after dexamethasone. Antacids can reduce the amount of dexamethasone absorbed when taken at the same time. · For minor pain, take acetaminophen (e.g., TYLENOL®). Avoid ASA (eg, ASPIRIN®) or ibuprofen (eg, ADVIL®) which can increase the risk of stomach problems.
<p>Blood sugar may be elevated, especially in diabetics.</p>	<ul style="list-style-type: none"> • Check your blood sugar regularly if you are diabetic. • If you have an unexpected degree of thirst and have to urinate very frequently, you should contact your clinic to get your blood sugar tested.
<p>You may have difficulty in falling asleep on the days you take dexamethasone.</p>	<p>Mild exercise before bed (such as a walk around the block) may help. Avoid caffeine and other stimulants. If the problem seems very significant, discuss this with your oncologist.</p>
<p>Swelling of hands, feet or lower legs occur if your body retains extra fluid.</p>	<ul style="list-style-type: none"> • Elevate your feet when sitting. • Avoid tight clothing. • Avoid food with high salt or sodium.
<p>You may have mood changes.</p>	<p>Discuss your symptoms with your doctor as it may be drug related.</p>

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 _____