



BC Cancer Agency

For the Patient: FEC

Other names: BRAJFEC, FEC100

F Fluorouracil
E Epirubicin
C Cyclophosphamide

Uses:

- FEC is a drug treatment given after breast cancer surgery (called adjuvant chemotherapy) in the hope of destroying breast cancer cells that may have spread to other parts of your body. 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. Each cycle lasts 3 weeks (= 21 days). For each cycle, you will have an injection in the vein (IV) on the day following your doctor's appointment. You will return in 3 weeks for the next cycle.
- The IV treatment takes about 60 minutes. However, on day 1 of each cycle, you may need to spend some time before you chemo appointment for a blood test.
- Drugs:
 - Three drugs (fluorouracil, epirubicin, and cyclophosphamide) are given as an IV injection in your arm on day 1 of each cycle.
 - You take anti-nausea pills to help prevent nausea and vomiting. The anti-nausea prescription is filled at your drugstore.
- A blood test is done either on the day of your doctor's appointment or the day of your chemotherapy. The dose and timing of your chemotherapy may be changed based on your blood counts and/or other side effects.
- If needed, radiation therapy and/or tamoxifen start after your last chemotherapy cycle is finished.

Instructions:

- Bring your anti-nausea drugs with you to take before each IV treatment. You also need to take your anti-nausea drugs at home. It is easier to prevent nausea than treat it once it has occurred, so follow directions closely.
- Drink lots of fluids if possible (8-12 cups a day).
- Call your cancer doctor immediately (day or night) at the first sign of any infection but especially if you have a fever over 38°C or 100°F.

- Check with your doctor or pharmacist before you start taking any new drugs. Other drugs such as cimetidine (TAGAMET®), phenobarbital, phenytoin (DILANTIN®), warfarin (COUMADIN®), metronidazole (FLAGYL®) and thiazide diuretics (“water pills”) may interact with FEC.
- 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 FEC before you receive any treatment from them.
- Use birth control (but **not** birth control pills) if you could become pregnant. Do not breast feed.

Serious Side Effects:

Unexpected and unlikely side effects can occur with any drug treatment. The ones listed below are particularly important as they are directly related to the common actions of the drugs in your treatment plan. Leukemia and heart failure are more likely to occur after treatment is finished.

- **Infection:** The number of white blood cells that help fight infections will be lowered by the treatment. Your blood count is expected to return to normal by day 1 of the next cycle. If your white blood cell count becomes very low you could get a serious infection. The chance of a serious infection is around 3% with FEC. **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.**
- **Tissue injury:** Epirubicin can cause tissue injury if it leaks out of the vein while it is being given. Report any sensation of burning or pain to your nurse immediately.
- **Early menopause:** If you are still having menstrual periods, FEC may cause your ovaries to stop working, resulting in menopausal symptoms (such as hot flushes) and infertility. Your periods may stop. This may be permanent, especially if you are 40 years of age or older.
- **Leukemia:** In the large French study of 496 women given FEC, two patients developed acute leukemia (blood cancer). It is possible that this was related to the epirubicin in FEC. Although there is a small risk of leukemia, the overall benefit in terms of reducing breast cancer recurrence and improving survival are thought to outweigh this risk.
- **Heart Failure:** Rarely, epirubicin can have an effect on the heart in some patients causing failure of the heart’s pumping action which results in shortness of breath, fatigue and leg swelling. The heart failure rate was less than 2% in the large French study.

Common Side Effects and Management:

SIDE EFFECT	MANAGEMENT
<p>Nausea and vomiting can occur with this treatment and you will need to take anti-nausea drugs at the time of the injections and on days 2 and 3 while at home.</p>	<p>You will be given a prescription for anti-nausea drugs to take before your IV treatment and afterwards at home.</p> <ul style="list-style-type: none"> • It is easier to prevent nausea than treat it once it has occurred, so follow directions closely. • Refer to the following pamphlets: <i>For the Patient: Managing Nausea; Chemotherapy & You; Food choices to help control nausea*</i>.
<p>Weight gain may occur during treatment.</p>	<p>Do not try to lose weight during treatment.</p> <ul style="list-style-type: none"> • If you are feeling well, eat a varied and balanced diet and keep active. • Choose lower fat foods if you are eating frequently to relieve nausea. • Ask to see a nutritionist or refer to <i>A nutrition guide for women with breast cancer*</i>.
<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. Your hair will grow back once your treatments are over and sometimes between treatments. The colour and texture of the new hair growth may be different.</p>	<ul style="list-style-type: none"> • Shaving the head may be more comfortable. • 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. • Consider cutting your hair short before it falls out • Ask your nurse about information on wigs and head coverings.
<p>Mouth sores may occur a few days after treatment. Mouth sores can occur on the tongue, gums, 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 1/4 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.
<p>Fatigue is common especially in the first week after your treatment. As the number of treatment cycles increase fatigue may get worse.</p>	<ul style="list-style-type: none"> • Your energy level will improve with time after treatment is completed. • Refer to pamphlet "<i>Yes I can: How people with cancer can handle fatigue</i>"***.

