



BC Cancer Agency

For the Patient: AC

Other names: BRAVAC

- A** Doxorubicin
- C** Cyclophosphamide

Uses:

- BRAVAC is an intravenous drug treatment given as therapy for metastatic breast cancer, in the hope of destroying breast cancer cells that have spread to other parts of your body. This treatment may improve your overall survival and help reduce your symptoms.

Treatment Plan:

- Your treatment plan consists of 4-6 chemotherapy cycles (about 3-5 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.
- Each treatment will take about one hour. You will be given a prescription for anti-nausea drugs to take 30 minutes before the treatment and again about 6-8 hours after, and will usually be on anti-nausea drugs the following 2 days also.

Instructions:

- 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 (8 or more cups a day).
- Check with your doctor or pharmacist before you start taking any new drugs. Other drugs such as allopurinol, cimetidine (TAGAMET®), digoxin (LANOXIN®), fluoroquinolones, phenobarbital, phenytoin (DILANTIN®), and warfarin (COUMADIN®), may interact with AC.
- 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 BRAVAC before you receive any treatment from them.
- If you are still having menstrual periods, BRAVAC 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 after the 3-5 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:** Doxorubicin can cause tissue injury if it leaks 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, Doxorubicin 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 1-2% or less. The treatment may be stopped or interrupted if there are concerns about your heart function.

Common chemotherapy side effects and management:

SIDE EFFECT	MANAGEMENT
<p>Nausea and vomiting can occur with DAC. You will need to take anti-nausea drugs before DAC treatments, and for days 2 and 3 while at home.</p>	<p>Follow the directions on your anti-nausea pill bottles.</p> <ul style="list-style-type: none"> • It is easier to prevent nausea than treat it once it has occurred, so follow directions closely. • If you have a lot of nausea despite your medications, contact your clinic for advice. • Refer to the following pamphlets: <i>For the Patient: Managing Nausea; Chemotherapy & You; Food choices to help control nausea*</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 chemotherapy treatments are over and sometimes between treatments. The colour and texture of the new hair growth may be different.</p>	<p>Refer to the pamphlet <i>For the Patient: Hair loss due to chemotherapy.*</i> You may also want to:</p> <ul style="list-style-type: none"> • 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.

SIDE EFFECT	MANAGEMENT
<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.
<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. • Try the ideas in <i>Your Bank of Energy Savings: How People with Cancer Can Handle Fatigue.*</i>
<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 Loperamide (e.g., 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. • Avoid high fiber foods as outlined in <i>Food Ideas to Help with Diarrhea During Chemotherapy</i>.
<p>Pain affecting joints or muscles. After you stop chemotherapy altogether, you may feel increased joint aching or stiffness for a few months.</p>	<ul style="list-style-type: none"> • You may take acetaminophen (e.g., TYLENOL®) every 4-6 hours to a maximum of 4 g (4000 mg) per day for mild to moderate pain. Contact your cancer doctor if your pain is severe. • Your family doctor can help you to manage symptoms of joint pain after chemotherapy.

*available through your nurse or nutritionist

** available through your nurse

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 _____