

BR: Bendamustine, Rituximab

What is BR?

BR is the short name for this cancer treatment. The two drugs you will receive during this treatment are Bendamustine (or “B”) and Rituximab (or “R”).

What is Bendamustine (ben-da-MUS-teen) and how does it work?

Bendamustine is a type of cancer therapy called an “alkylating agent”. This drug is made in a laboratory. Bendamustine works to stop fast growing cancer cells from dividing and making new cells.

What is Rituximab (ri-TUK-si-mab) and how does it work?

Rituximab is a type of targeted cancer therapy called a “monoclonal antibody”. Rituximab seeks out B-cells and attaches to “CD20” on the outside of the cell. Then the body’s natural immune system attacks and kills the B-cells “marked” by Rituximab. Rituximab affects both normal B-cells and the B-cells with cancer.

Why am I getting two chemotherapy drugs for my cancer?

These drugs work to stop fast growing cancer cells from dividing and making new cells, but they attack the cancer cells differently. Giving the two drugs together makes the treatment more effective.

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

What should I tell my doctor before getting chemotherapy?

Talk to your doctor about the following:

- If you have ever had chemotherapy and the names of the chemotherapy drugs you were given.
- If you have ever had heart, liver, or kidney problems.
- If you are pregnant or think you may be pregnant. Your doctor will talk with you about birth control while getting chemotherapy.
- If you are breastfeeding.
- If you have been told that you need to start a new medicine.
- If you plan to get any kind of immunization or vaccination.
- The medicines/pills you are taking, including:
 - ▶ Medicines prescribed by any of your doctors
 - ▶ Herbs
 - ▶ Vitamins
 - ▶ Over-the-counter medicines

How does my doctor decide my chemotherapy dose?

To determine your treatment dose, your doctor will review the following: your height, your weight, your medicines, how well your liver and kidneys are working, and any other health problems you have. You will receive a chemotherapy treatment every 4 weeks, for a total of 6 treatments. The doctor or nurse practitioner will meet with you before each dose of your “BR” chemotherapy.

Should I eat or drink before my treatment?

It is best to eat a small meal before getting your chemotherapy. Drinking plenty of non-caffeinated fluids may also be helpful. However, if you have been told to limit fluids, check with your doctor about how much you can drink.

How will my treatment be given?

You will be given several medicines, 30 to 60 minutes before your treatment, to prevent you from having an allergic reaction, and to prevent nausea and vomiting. **These medicines may affect your abilities, so for your safety you should have someone drive you home.**

Rituximab is given directly into your blood stream through a tube (IV) placed in your arm or chest. This treatment will take about 6 hours for your first dose. If you do not have any problems with your first dose, your future doses will be 4 hours. In some cases, Rituximab can be given over 1 hour, ask your healthcare provider or pharmacist if this is an option for you. You will have Rituximab on day 1 of each treatment.

Bendamustine is given directly into your blood stream through a tube (IV) placed in your arm or chest. This treatment will take about 10 minutes. You will have Bendamustine on day 1 and day 2 of each treatment.

BR (bendamustine, rituximab)

Day 1 (clinic) • Receive Rituximab • Receive Bendamustine	Day 2 (clinic) • Receive Bendamustine	Day 3	Day 4	Day 5	Day 6	Day 7
Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14
Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21
Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28

What are the side effects of this treatment?

Every person responds differently to treatment. Some of the more common side effects of this chemotherapy are:

- Nausea and/or vomiting lasting for several days
- Fatigue
- Hair thinning
- Low white blood cell count (may increase your risk for infection). You will be given a prescription for medicine(s) to help prevent infection.
- Low hemoglobin (may cause you to have less energy and tire more easily)
- Low platelet count (may cause you to bleed more easily or longer than normal and have more bruising)
- “Jittery” feeling, insomnia
- High blood sugar
- Infertility
- Rash
- **Signs of an allergic reaction with Rituximab, including:**
 - ▶ Difficulty breathing, wheezing, chest pain or tightness
 - ▶ Swelling in your face, lips, tongue, or throat
 - ▶ Rash
 - ▶ Shaking or chills

When should I call my doctor?

You should call your doctor **right away** if you have any of the following signs or symptoms:

- Fever of 100.4 degrees Fahrenheit (38 degrees Celsius) or higher

A fever can be life-threatening if not treated. Your doctor may ask you to go to the hospital.

- Chills, sore throat, cough or a wound that does not get better
- Open sores in your mouth
- Nausea that prevents you from eating or drinking

- Vomiting even after you have taken your anti-nausea medicine
- Skin redness or blisters
- Bleeding or bruising, including bloody or black stools or blood in your urine
- Diarrhea (4 or more loose stools in 24 hours)
- Changes in your heartbeat
- Shortness of breath or difficulty breathing
- Swelling in feet or ankles
- Fast weight gain
- Unable to eat or drink for 24 hours or have signs of dehydration such as tiredness, thirst, dark urine or dizziness
- Yellowing of the skin or eyes

Is there anything else I should know about this treatment?

- Chemotherapy may make it harder for your body to fight infections. Wash your hands often and stay away from people who are sick.
- This treatment requires special precautions to prevent the chemotherapy drugs from coming into contact (through blood, urine, bowel movements, vomit and vaginal or seminal fluids) with others. Your chemotherapy nurse will give you guidelines to follow for 48 hours after receiving chemotherapy.
- Chemotherapy can change how your body reacts to vaccines. Talk to your doctor before getting any vaccines.
- Chemotherapy may cause you to bleed more easily or longer than normal and have more bruising. Do not do activities or sports that could cause injury.
- Patients who get treatment with these drugs have a slightly higher risk of getting a rare form of blood cancer, called “leukemia”. Your doctor can tell you more about this risk.
- You should drink 8 to 10 eight-ounce glasses of non-caffeinated fluid each day throughout your treatment. This is important to keep you hydrated while you are receiving chemotherapy.
- This treatment may cause women to stop having periods. Depending on your age, your periods may or may not return.

- It may be difficult to get pregnant even after the chemotherapy is finished.
- This treatment may affect your ability to have children. Talk to your doctor before getting chemotherapy if you are planning to have children in the future.
- Do not take over-the-counter pain medicines (acetaminophen or NSAIDs) unless your doctor says it is okay.
- Stay out of the sun as much as possible. Use broad-spectrum sunscreen (SPF 30 or higher) and wear protective clothing to protect your skin.
- Maintain good nutrition and get plenty of rest.

For more information about cancer, chemotherapy, side effects or how to care for yourself during treatment, refer to your **Chemotherapy and You** book, or ask your doctor, nurse or pharmacist.

You may also find it helpful to watch The James Patient Education videos at <http://cancer.osu.edu/patientedvideos> to help you learn tips for managing treatment side effects.