Bevacizumab

Names
The generic drug name is bevacizumab (bev-a-CY--soo-mab). The brand name is Avastin®. There may be other brand names for this medication.

How is it Administered?
Your medicine will be given by infusion into a vein (intravenous or IV), usually in your arm, wrist, hand or chest.

What is it Used For?
Bevacizumab is given to treat colon, rectal, and kidney cancer (renal cell) that has spread to other parts of the body; non-small cell lung cancer; and glioblastoma (a type of malignant brain tumor).

How Does it Work?
Bevacizumab is a type of targeted therapy called a monoclonal antibody. Cancer is a group of diseases in which abnormal cells multiply without control. Traditional chemotherapy agents identify cancer cells by their rapid rate of multiplication— and then attack those cells. Unfortunately, it also attacks normal cells that multiply quickly. Targeted therapy identifies other differences between normal cells and cancer cells, and then uses that difference to attack the cancer cells, sparing more of the normal cells.

Bevacizumab works like your body’s natural antibodies – by recognizing and attaching to a specific antigen, a protein called VEGF (vascular endothelial growth factor) on the cancer cell. The antibody and antigen fit together like a lock and key, signaling the immune system to destroy that cell. VEGF plays an important role in the formation of new blood vessels, a process called angiogenesis, so bevacizumab is also an anti-angiogenic agent. It interferes with the cancer’s ability to build the new blood vessels it needs to get oxygen and nutrients. This may slow the growth and spread of tumors.

What Should I Tell My Doctor Before I Begin?
Tell your doctor if you:
• have had an allergic reaction to bevacizumab or have any allergies
• have high blood pressure or a condition affecting your heart or blood vessels
• have ever been treated with radiation therapy to the left side of your chest or have ever had cancer that spread to your brain or spine
• are pregnant or breast-feeding

This drug may interact with other medications or cause harmful side effects. Tell your doctor and pharmacist about all prescription or over-the-counter medications, vitamins, herbal or diet supplements that you are taking.
### What Are Some Possible Side Effects?
- Low white blood cell count, which can increase your risk for infection
- Weakness, fatigue, headache
- Loss of appetite, changes taste, heartburn, belly pain, nausea, vomiting
- Heartburn, abdominal pain
- Diarrhea and/or constipation
- Runny nose, nosebleeds
- Hair loss
- Dry mouth, voice changes, mouth sores, skin sores

### How Can I Manage These Side Effects?
- To help avoid infections, stay away from people with colds, flu, or other infections. Wash your hands often. Be careful when handling sharp objects. Stay away from rough sports or other situations where you could be bruised, cut, or injured. Use an electric razor. Talk to your doctor before you have any vaccinations, such as the flu shot.
- Ask your doctor about medication to help prevent or lessen nausea, vomiting, and diarrhea.
- Drink 2-3 quarts of fluids every day, particularly water, unless your doctor has restricted your fluids.
- Mouth care is very important while taking this drug. Rinse your mouth with a mixture of ½ teaspoon of baking soda in 8 ounces of water after every meal and at bedtime. Brush your teeth and gums often with a soft toothbrush. (Soften it further by running it under warm water before brushing.)
- Avoid smoking, alcohol, and mouthwashes that contain alcohol.
- Talk to your doctor or nurse before you put anything on a rash or sore.

### When Should I Call the Doctor?
**Call 911 or go to the nearest emergency room if you have signs of a severe allergic reaction** (swelling, tingling in your face, mouth, tongue or throat; chest tightness; trouble breathing; dizziness; heart palpitations; hives). Let your doctor know you have gone to the ER or been admitted.

**Call your doctor immediately if you have:**
- any sign of infection: **Fever of 100.4°F (38°C)** or higher, chills, cough, sore throat, pain or burning upon urination; redness or tenderness along a vein, at an IV site, or at any other wound or skin irritation
- any sign of an allergic reaction: itching or hives, swelling in your face or hands, swelling or tingling in your mouth or throat, chest tightness, trouble breathing, dizziness, or palpitations
- coughing, gagging, or choking after eating or drinking
- severe headache, confusion, changes or loss of vision or speech

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• unusual bruising or bleeding: bleeding that lasts more than 10-15 minutes or that causes dizziness; black or bloody stools; vomit that is bloody or that looks like coffee grounds; blood in your urine
• weakness/numbness in arm or leg; pain in arm, neck, or upper back
• pain, tenderness, warmth, redness, or swelling in one leg only

Call your doctor as soon as possible if you have:
• headache, nausea, or vomiting not relieved by prescribed medication
• vomiting more than 3 times in one day
• unexplained weight gain
• dry, hacking cough

What Else Should I Know About Bevacizumab?

• Avoid becoming pregnant or fathering a child while on bevacizumab, it can harm the fetus. A barrier method of contraception, such as a condom, is recommended. Bevacizumab may affect your ability to have children in the future.
• Keep all your appointments with the lab and your doctor so your blood pressure is monitored and your urine tested regularly.
• This drug may cause rare, but serious, side effects. If you experience any of the following, call your doctor immediately.
  o Gastrointestinal ulcerations (a hole in your stomach or intestines) that may require surgery to repair. Watch for stomach pain, constipation nausea, vomiting, and fever.
  o Slow wound healing or closed wounds that reopen. This drug should not be started for at least 28 days after you have healed from surgery, and it should be stopped before you have surgery.
  o Hypertensive crisis (a severe increase in blood pressure). Watch for severe chest pain, severe headache with confusion or blurry vision, severe anxiety; shortness of breath, nausea, and vomiting.
  o Nephrotic syndrome (kidney damage). Watch for foamy urine (high protein level in the urine called proteinuria; swelling in hands, feet, or around the eyes; foamy urine; sudden weight gain.
  o Congestive heart failure (failure of the heart to pump blood well) in people with a history of anthracycline chemotherapy (doxorubicin, daunorubicin, etc.) or radiation therapy to the chest. Watch for fatigue, swelling in ankles, legs, or abdomen; shortness of breath – particularly when exercising or lying flat.
  o Severe bleeding - see When to Call the Doctor section.
• For more information about bevacizumab, talk to your doctor or pharmacist.