

Zevalin[®] (Yttrium - 90 Ibritumomab Tiuxetan) for Transplant Patients

What is Zevalin[®]?

Zevalin[®] is a treatment for certain types of Non-Hodgkin's lymphomas that uses an antibody joined to a radioactive substance called yttrium.

The antibody is a version of an immune system protein that is designed to lock onto a certain receptor (CD20) found on a type of white blood cell called a B lymphocyte. This receptor can be found on some normal lymphocytes and lymphocytes that are cancerous, as in Non-Hodgkin's lymphoma. Once attached to the receptor, the radiation in the antibody kills the cell. Zevalin[®] treatment works best if Rituximab (Rituxan[®]), another antibody, is given first.

How Will I Receive Zevalin[®]?

Zevalin[®] is given as an injection into your vein (intravenously). It is very important that you do not miss scheduled treatments. If you miss a scheduled treatment, the treatment process would need to be restarted from the beginning.

Day 1: Rituxan[®] and Imaging Dose

You will receive an intravenous infusion of Rituxan[®] in the Infusion Room over several hours. Following the Rituxan[®] infusion, you will go to Medical Imaging to receive an imaging dose of Indium-111 Zevalin[®]. This intravenous infusion portion of this visit will take approximately 10 minutes.

Day 3: Whole Body Scans

Two days after the Day 1 Rituxan[®] and Imaging dose, you will go to Medical Imaging for whole body images taken with a special type of camera (gamma camera). Your doctor uses these images to view the path of Indium-111 Zevalin[®] in the body. The scan takes approximately 30 minutes.

Day 8: Rituxan[®] and Zevalin[®] Infusion

You will receive a second infusion of Rituxan[®] in the Infusion Room. After receiving the Rituxan[®], you will again go to Medical Imaging, this time to receive Zevalin[®]. Zevalin[®] is administered by an intravenous infusion that is completed in about 10 minutes. Then, you will go back up to the Infusion Room to receive an intravenous infusion of fluid.

What Radiation Precautions are Necessary After Receiving Zevalin[®]?

There are no special precautions required after the Imaging Dose on Day 1, or the Whole Body Scan on Day 3.

After the Day 8 infusion of Zevalin[®], you will need to take the precautions outlined below. Radiation from Zevalin[®] does not escape outside the body, but a small amount of radiation may be present (for about a week following treatment) in body fluids, such as blood and urine. In general, it is not necessary to avoid contact with friends or family during this time and isolation is not required. You will be given a radiation information "Travel Card" after receiving the Day 8 Zevalin[®] infusion. You should keep this card with you anywhere you travel for one month following the Day 8 Zevalin[®] infusion. You should also follow these guidelines:

For **three days** after the Zevalin[®] infusion:

- Spilled urine or other body fluids should be cleaned up and flushed down the toilet or placed in a plastic bag in the household trash.
- Wash your hands thoroughly after using the bathroom.

For **seven days** after the Zevalin[®] infusion:

- Use a condom during sexual intercourse.
- Avoid deep kissing. A quick “peck” is acceptable.

For **twelve months** after the Zevalin[®] infusion:

- Do not conceive a child (get pregnant) while taking Zevalin[®] or for 12 months after. Please discuss with your nurse or doctor you may safely conceive a child. You should discontinue breast feeding while taking Zevalin.

What are the Common Side Effects?

Please see the Patient Care Manual and refer to the Symptom Management section for additional information.

What You May Expect	What You Should Do
Allergic reactions may occur, especially during the first treatment. Signs of allergic reactions can include trouble breathing, tightness or swelling in the mouth or throat, itchy welts on the skin, feeling lightheaded or dizzy (due to low blood pressure), chest pain, irregular heartbeat, and coughing.	<ul style="list-style-type: none"> • Notify your nurse or doctor if you have any signs of allergic reaction.
Skin reaction may occur. Signs of skin reaction can include a skin rash with redness or blistering in the mouth, nose, eyes, and skin.	<ul style="list-style-type: none"> • Report any signs of skin rash, redness, blistering in the mouth, nose, eyes, skin, or fever and body aches to your doctor or nurse.
Flu-like illness may occur. Signs of flu-like illness include fever and body aches.	<ul style="list-style-type: none"> • Report any signs of flu-like illness to your doctor or nurse.
Nausea and vomiting may occur. Most people have little to no nausea.	<ul style="list-style-type: none"> • You may be given a prescription for an antinausea drug(s) to take at home. It is easier to prevent nausea than to treat it once it has occurred. • Drink plenty of liquids. • Eat and drink often and in small amounts.
Decreased blood counts (lowered platelet, red and white blood cells) may occur. Blood counts generally reach their lowest point 4-6 weeks after Zevalin [®] therapy, and generally recover by 8-9 weeks after therapy. You may feel weak and tired. You may develop infections more easily and may bruise more easily. Your health care providers will test your blood frequently to monitor your blood counts.	<ul style="list-style-type: none"> • Report any signs of infection, fever, unusual bleeding, or bruising to your nurse or doctor. • Do not get any immunizations (vaccines) either during or after treatment with this drug without your doctor’s okay. Avoid contact with people who have recently received a live virus vaccine, such as the oral polio vaccine or smallpox vaccine.

Call and Seek Help Immediately If You Experience:

- Shortness of breath, chest pain, or discomfort
- Swelling of your lips or throat
- Confusion

Contact Your Nurse or Doctor If You Have:

- Fever of 100.9⁰F or 38.3⁰C or higher
- Chills
- Unusual bruising or bleeding
- Nausea or vomiting that interferes with your ability to eat and that is unrelieved with medication
- Signs of skin reactions, including skin rash with redness or blistering in the mouth, nose, eyes, or skin.

Special Instructions:

- For 30 days after receiving the Day 8 Zevalin[®] infusion carry the radiation information Travel Card given to you.
- Do not conceive a child (get pregnant) while taking Zevalin[®]. Please discuss with your nurse or doctor when you may safely conceive a child.
- Do not breast feed while taking Zevalin[®].

Drug-Drug Interactions

Any drugs or supplements that interfere with blood clotting can raise the risk of bleeding during treatment with Zevalin[®]. These include:

- Vitamin E
- Non-steroidal anti-inflammatory drugs (NSAIDS) such as aspirin, ibuprofen (Advil[®], Motrin[®]) and naproxen (Aleve[®], Naprosyn[®])
- Warfarin (Coumadin[®])
- Ticlopidine (Ticlid[®])
- Clopidogrel (Plavix[®])

Note that many cold, flu, fever, and headache remedies contain aspirin or ibuprofen. Ask your pharmacist if you aren't sure what is in the medicines you take.

No other serious interactions are known at this time. Check with your doctor, nurse, or pharmacist about your other medicines, herbs, supplements, and whether alcohol can cause problems with this medicine.

Drug-food Interactions

No serious interactions with food are known at this time.

For more complete information, please request an additional teaching sheet from the National Library of Medicine at www.nlm.nih.gov/medlineplus/druginformation.html, your nurse or pharmacist.

Zevalin® Treatment Schedule for Transplant Patients

Patient Name: _____ MRN: _____

Physician: _____

Team Nurse Name: _____

Nurse Contact Information: _____

Treatment Day	Treatment Plan	Average Appointment Duration	Location	Date/Time
Day 1 Wednesday	Rituxan® infusion	4 Hours	5 th Floor Infusion	
	Imaging dose of Indium-111 Zevalin®	1 Hour	2 nd Floor Medical Imaging	
Day 3 Friday	Whole Body Scan	1 Hour	2 nd Floor Medical Imaging	
Day 8 Wednesday	Rituxan® infusion	3-4 Hours	5 th Floor Infusion	
	Therapeutic dose of Yttrium-90 Zevalin®	1 Hour	2 nd Floor Medical Imaging	
	Intravenous fluid infusion	5-6 Hours	5 th Floor Infusion	
Day 8 - 9	Intravenous fluid infusion	18 Hours	At home	

Example of Radiation Information Travel Card

Small amounts of radiation in the body can be detected by monitors at border crossings, airports and on ferries. After receiving the Day 8 infusion of Zevalin[®], you will be given a Travel Card similar to the example on the following page. The Nuclear Medicine Technologist will fill out the information on the card. Carry this card with you anywhere you travel for 30 days after the Zevalin[®] infusion. The card can be shown to officials at border crossings, airports or ferries. The officials may contact the phone number listed on the card for verification, if needed.



Medical Imaging
825 Eastlake Ave E
Seattle, WA 98109

Date _____
Patient Name _____
DOB _____

This patient had a nuclear medicine procedure and may still have small amounts of radiation capable of detection by radiation monitoring equipment. This amount of radiation poses no danger to the public and is allowed by the State of Washington medical use regulations.

Procedure _____ Administered date: _____

Administered radionuclide: **Tc-99m** **I-131** **Tl-201** **Y-90** Other: _____ Amount _____ mCi

Half-life _____

Suggested period of detection: (check one):

- Short** T_{1/2}: 3 days |
- Medium** T_{1/2}: 1 month
- Long** T_{1/2}: 2 months

If verification is needed, please call:

Mon-Fri 8:00 AM – 5PM: 206-288-7045

Evenings and weekends: 206-598-6190

Ask to page the radiology resident

Technologist: _____

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