

INTRAVENOUS CANCER TREATMENT EDUCATION



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PEMBROLIZUMAB

Name of the regimen and cancer drugs

Pembrolizumab (pem-broh-LIH-zoo-mab): Keytruda

Common uses

Pembrolizumab is used to treat many different types of cancer, including skin cancer, Hodgkin's lymphoma, lung, head and neck, gastric, esophageal, bladder, colorectal, endometrial, cervical, liver, breast, and kidney cancers. This regimen may be used for other treatments.

Treatment schedule

Your treatment will be given into your vein through an intravenous (IV) line. This may be into a short, flexible temporary catheter in your arm, or through a central venous catheter. A central venous catheter, or central line is a long, flexible IV tube that empties into a very large vein next to the heart. Talk with your care team to see which will be best for you and your treatment.

Each pembrolizumab treatment is repeated every 21 days. This is known as one cycle. Your treatment may be given for a set number of cycles, or it will keep going until the drug stops working or you have side effects which stop you from continuing treatment.

- Pembrolizumab IV is given on Day 1

Drug	Cycle 1	Day 1	2	3	4	5	6	7	8	9	10	11	12	...	21	Cycle 2 Day 1
Pembrolizumab																

Other medications

Other medications may be ordered for you to prevent or treat certain side effects. These include:

	Instructions:
Medications to prevent side effects	<p>You will receive your medications to prevent side effects just before your chemotherapy. You may get prescriptions for other medications to take at home, as below:</p> <hr/> <hr/> <hr/> <hr/>

Possible drug interactions

- Pembrolizumab may interact with other drugs you are taking. Please inform your care providers of all prescription medicine, over-the-counter medications, vitamins, and herbal products that you take.
- Discuss with your care provider or pharmacy prior to taking steroid medications such as prednisone, methylprednisolone (Medrol), dexamethasone (Decadron), or hydrocortisone.
- Talk with your care provider or pharmacist before taking new medications, supplements, or receiving any vaccines.

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Common Side Effects

Common side effects that have been known to happen in patients receiving pembrolizumab are listed in the left side of this table. In some instances, the side effects may be reported less often but are still important to discuss. This table does not list all the known side effects for this therapy, only the ones that are experienced most often. Not every patient experiences every known side effect of a drug; even if you are taking the same drug as another patient, you may experience different side effects. Options to help manage any side effects that do occur are included on the right side of this table. These should be discussed with your care provider. If you experience any side effect you cannot manage or that is not listed here, contact your care provider.

Possible Side Effect	Management
Fatigue	<ul style="list-style-type: none"> You may be more tired than usual or have less energy. Stay as active as possible, but know it is okay to rest as needed. Try to do some type of moderate activity every day. Conserve your energy. Plan your activities and do them at a time of day when you feel a bit more energetic. Follow a healthy diet and stay hydrated. Accept help from family and friends Find healthy ways to manage stress, such as meditation, journaling, yoga, and guided imagery Develop good sleeping habits, limit napping during the day to help you sleep better at night. Avoid operating heavy machinery if you feel too tired. <p>Contact your care team if you experience extreme fatigue that prevents you from doing your normal daily activities.</p>
Muscle or joint pain or weakness	<ul style="list-style-type: none"> Keep a diary of your pain, including when and where the pain happens, what it feels like, and how long it lasts Stay as active as possible, but know that it is okay to rest as needed, too Tell your care team if pain limits what you can do <p>If the pain or weakness bothers you, ask your provider what you may use to help with this discomfort. Take only pain medication that has been prescribed or recommended by your care team</p>

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Possible Side Effect	Management
<p>Rash or itchy skin</p>	<ul style="list-style-type: none"> • Keep your skin moisturized with creams and moisturizing lotions to decrease the risk of rash or itchiness and wear loose fitting clothing. • Avoid using perfumes and cologne as these products may increase rash symptoms. • Avoid being in the heat for long periods of time. • Your provider may recommend an over-the-counter antihistamine or a topical cream. • Sunlight can make symptoms worse • Avoid sun exposure as much as possible to decrease the risk of sunburn. The highest exposure to UV (ultra-violet) radiation occurs between the hours of 10am and 4pm. • Wear long-sleeved clothing, with UV protection if possible. • Wear broad-brimmed hats. • Apply broad-spectrum sunscreen (UVA/UVB) with at least SPF 30 as often as directed on the bottle. • Use lip balm with at least SPF 30 <p>If your rash or itching continues to worsen, contact your care team.</p>
<p>Diarrhea (loose and/or urgent bowel movements)</p>	<p>Monitor how many bowel movements you have each day.</p> <ul style="list-style-type: none"> • Drink 8-10 (8-ounce) glasses of water or fluid each day unless your care team has asked you to limit your fluid intake. • Eat small, frequent meals throughout the day rather than a few large meals. • Eat bland, low-fiber foods (such as bananas, applesauce, potatoes, chicken, rice, and toast). • Avoid high fiber foods, such as raw vegetables and fruits and whole grains. • Avoid foods that cause gas, such as broccoli and beans. • Avoid foods with lactose, such as yogurt and milk. • Avoid spicy, fried, and greasy foods. <p>Contact your care team if:</p> <ul style="list-style-type: none"> • The number of bowel movements you have in a day increases by 4 or more • You are unable to stay hydrated (not able to drink 8-10 glasses of water/ fluid each day) • You feel dizzy or lightheaded • You feel abdominal pain or severe cramping <p>Talk with your care team if you believe you have diarrhea. They may recommend an over-the-counter medication or prescribe something to help keep it under control.</p>

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Possible Side Effect	Management
Cough or shortness of breath	A cough that does not produce any mucous (dry cough) may occur while taking this medication. If you experience any breathing problems or shortness of breath, notify your care team right away. This may be a serious side effect of the medication.
Lung (respiratory tract) infection	<ul style="list-style-type: none"> • Wash your hands often, especially before eating and after using the bathroom • Avoid people with fevers, flu, or other infections • Bathe often to keep good personal hygiene. • Report symptoms of a lung infection like a cough, sneezing, runny nose, fever, and scratchy or sore throat to your provider
Changes in liver function	<p>Your liver function will be checked every so often by a simple blood test. Contact your care team if you notice any of the following.</p> <ul style="list-style-type: none"> • Yellowing of the skin or whites of your eyes • Dark or brown urine • Bleeding or bruising
Changes in kidney function	<p>Your kidney function will be checked every so often by a simple blood test. Contact your care team if you notice any of the following.</p> <ul style="list-style-type: none"> • Decreased amount of urination • Unusual swelling in your legs and feet
Changes in electrolyte levels and other laboratory values: High blood glucose Low sodium levels High triglycerides Changes in thyroid hormone levels	<p>Changes in some lab values may occur and will be monitored by a simple blood test.</p> <ul style="list-style-type: none"> • You may not feel any symptoms if the changes are mild and they usually are not a sign of a serious problem. • More severe changes may occur which can be a sign of a serious problem. <p>Notify your care team if you have any of the following:</p> <ul style="list-style-type: none"> • Shortness of breath • Chest discomfort • Weakness or fatigue • New aches and pains • Headaches • Dizziness or confusion • Swelling of your legs or feet • Red or brown colored urine

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Rare but serious side effects

Tell your care provider if you experience any symptoms of these problems:

- Pembrolizumab can alter your hormone levels. Symptoms may include weight and mood changes, headaches, fatigue, sweating, elevated blood pressure, or heart racing. Contact your doctor if you are experiencing any of these symptoms.
- Pembrolizumab may cause inflammation in your colon. If symptoms of diarrhea or severe abdominal pain are present, please contact your health care team right away. Your health care team may have to prescribe corticosteroids in order to decrease the inflammation.
- Pembrolizumab may cause inflammation to your liver. Be sure to seek medical attention if you are experiencing jaundice (yellowing of the skin or eyes), severe nausea or vomiting, or easy bruising/bleeding. Dependent on liver function tests and severity of symptoms, your provider may have to discontinue the medication.
- Pembrolizumab can cause lung and breathing problems. Tell your care team right away if you have new or worse cough, shortness of breath, chest pain, or difficulty breathing or wheezing.
- Pembrolizumab may cause a severe skin reaction resulting in flu-like symptoms and painful rashes that can spread and blister. Your healthcare professional may withhold or permanently discontinue medication depending on the severity.
- Pembrolizumab may cause vision changes. Tell your care team if you experience eye pain, swelling, or redness, or any changes in vision such as flashes of light, blurred vision, floaters in your field of vision, or light hurting your eyes.
- Pembrolizumab can rarely cause an infusion reaction. During your treatment, let the nurse know right away if any of these symptoms happen: chills or shaking, dizziness, fever, itchiness or rash, flushing, sweating, difficulty breathing, face or throat swelling, wheezing, sudden back pain, or feeling faint.
- Pembrolizumab can cause severe reactions in people who receive a stem cell transplant before or after treatment. If you have received a stem cell transplant, talk with your care team about these risks before starting treatment.

If you experience ANY new, worsening, or uncontrolled side effects, call your care team immediately.

(INSTITUTIONAL CONTACT INFO)

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Handling body fluids and waste

Some of the drugs you receive may be present in urine, stool, sweat, or vomit for many days after treatment. Many cancer drugs are toxic, your bodily waste may also be toxic and can be dangerous to come into contact with. Once you have started pembrolizumab, follow the instructions below for at least two days after your treatment. This is to keep you, your loved ones, and the environment as safe as possible.

- Pregnant women should avoid touching anything that may be soiled with body fluids from the patient.
- Toilet and septic systems
 - You may use the same toilet, septic tank, and/or sewer that you usually use. If you have a low-flow toilet, close the lid and flush twice to ensure that all waste has been discarded.
- If the toilet or toilet seat becomes soiled with urine, stool, or vomit, clean the surface after every use before other people use the toilet.
- Wash hands with soap and water after using the toilet for at least 20 seconds.
- If you need a bedpan, be sure your caregiver knows to wear gloves to assist with cleanup and to wash the bedpan with soap and water every day.
- If you do not have good control of bladder or bowels, use a disposable pad with a plastic back, a diaper, or a sheet to absorb body waste.
- Wash any skin that has been exposed to body waste with soap and water.
- Linens or clothing that are soiled with body fluids or body waste should be washed separately from other linens and clothing. If you do not have a washer, place the soiled linens in a plastic bag until they can be washed.
- Wash hands with soap and water after touching linens or clothing that may be soiled with body fluids.

Intimacy, sexual activity, contraception, and fertility

This treatment may cause changes that can affect intimacy and sexuality, including desire and body image. Maintaining physical closeness and/or intimacy with loved ones can be continued during treatment. Holding hands, hugging, and kissing can be done safely. It is recommended that you talk to your care team about any restrictions or questions you may have.

Some treatments can influence the ability to have children, also known as fertility. If you're interested in preserving fertility, talk to your care team before treatment. Ask your healthcare provider to determine when it is safe to become pregnant after your treatment. Patients of reproductive ability should not become pregnant or get their partners pregnant while receiving pembrolizumab. Some of the drugs you receive may be present in semen and vaginal secretion for many days after treatment. You should use barrier devices, such as condoms, during sexual activity to limit exposure to body fluids.

- Talk to your care team about birth control. Not all options may be right for your treatment or cancer. Effective contraception could include one or more of the following: barrier methods (e.g. condoms), hormone methods (e.g. birth control pills), or surgery.
- Tell your care team if you become pregnant or plan to breastfeed.

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Additional resources

Product website: <https://www.keytruda.com/>

Prescribing information link: https://www.merck.com/product/usa/pi_circulars/k/keytruda/keytruda_pi.pdf

Additional instructions

Important notice:

Updated – November 19, 2021

Important notice: The Association of Community Cancer Centers (ACCC), Hematology/Oncology Pharmacy Association (HOPA), National Community Oncology Dispensing Association, Inc. (NCODA), and Oncology Nursing Society (ONS) have collaborated in gathering information for and developing this patient education guide. This guide represents a brief summary of the therapy derived from information provided by the drug manufacturer and other resources. This guide does not cover all existing information related to the possible uses, directions, doses, precautions, warnings, interactions, adverse effects, or risks associated with this therapy and should not substitute for the advice of a qualified healthcare professional. Provision of this guide is for informational purposes only and does not constitute or imply endorsement, recommendation, or favoring of this therapy by ACCC, HOPA, NCODA, or ONS, who assume no liability for and cannot ensure the accuracy of the information presented. The collaborators are not making any representations with respect to the medications whatsoever, and any and all decisions, with respect to such medications, are at the sole risk of the individual receiving therapy. All decisions related to receiving this therapy should be made with the guidance and under the direction of a qualified healthcare professional.

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