

Nivolumab and Ifosfamide, Carboplatin, and Etoposide (ICE)

Care Team Contact Information: _____

Pharmacy Contact Information: _____

Diagnosis: _____

- This treatment is often used for Hodgkin lymphoma.
- It may also be used for other reasons.

Goal of Treatment: _____

- Treatment may continue for a certain time period, until it no longer works, or until side effects are no longer controlled.

Treatment Regimen

Your treatment is often called “Nivolumab-ICE,” “NICE,” or “N-ICE”:

- **N:** Nivolumab
- **I:** Ifosfamide
- **C:** Carboplatin
- **E:** Etoposide

Treatment Name	How the Treatment Works	How the Treatment is Given
Nivolumab (nih-VOL-yoo-mab): Opdivo (op-DEE-voh)	Boosts your immune system to help it attack cancer cells more effectively.	Infusion into a vein (intravenous (IV) infusion).
Ifosfamide (i-FOS-fuh-mide): Ifex (I-fex)	Slows down or stops the growth of cancer cells by damaging the genetic material that cancer cells need to grow	Continuous infusion into a vein (intravenous (IV) infusion) over 24 hours.
Carboplatin (KAR-boh-pla-tin): Paraplatin (PAIR-ah-PLAT-in)	Slows down or stops the growth of cancer cells by damaging the genetic material that cancer cells need to multiply.	Infusion into a vein (intravenous (IV) infusion).
Etoposide (ee-toh-POH-side): Vepesid (Vah-PEH-sid)	Slows down or stops the growth of cancer cells by blocking the process that allows cancer cells to grow	Infusion into a vein (intravenous (IV) infusion).

Treatment Administration and Schedule: Treatment is typically repeated every 21 days. This length of time is called a “cycle”. You will have 6 to 8 cycles of treatment. Your care team will advise you of the number of treatment cycles you will have.

Option 1

- Nivolumab is given on Day 1.
- Ifosfamide is given on Day 2 with mesna.
- Carboplatin is given on Day 2.
- Etoposide is given on Days 1, 2, and 3.

Treatment Name	Cycle 1										Next Cycle	
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	...	Day 21	Day 1	Day 2
Nivolumab	✓										✓	
Ifosfamide		→										→
Carboplatin		✓										✓
Etoposide	✓	✓	✓								✓	✓
Mesna		✓										✓

Option 2

- Nivolumab is given on Day 1.
- Ifosfamide is given on Days 1, 2, and 3 with mesna.
- Carboplatin is given on Day 2.
- Etoposide is given on Days 1, 2, and 3.

Treatment Name	Cycle 1										Next Cycle	
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	...	Day 21	Day 1	Day 2
Nivolumab	✓										✓	
Ifosfamide	✓	✓	✓									✓
Carboplatin		✓										✓
Etoposide	✓	✓	✓								✓	✓
Mesna		✓										✓

Appointments

Appointments may include regular check-ups with your care team, treatment appointments, lab visits, and imaging tests. It's important to keep your appointments whenever you can. If you miss any appointments, call your care provider as soon as possible to reschedule your appointment.

Supportive Care to Prevent and Treat Side Effects

Description	Supportive Care Given at the Clinic or Hospital	Supportive Care Taken at Home
To help your body make white blood cells to fight infections		
To help lower the risk of infections		
To help prevent or treat nausea and vomiting		
To help lower the risk of infusion-related reactions		
Other		

Common Side Effects

Side Effect	Important Information
Low White Blood Cell (WBC) Count (Neutropenia) and Increased Risk of Infection	Description: WBCs help protect your body from infections. A low WBC count increases your risk of infection. Recommendations: - Wash your hands often and bathe regularly. - Avoid crowded places and close contact with people who are sick. - Follow food safety and wound care advice from your care team. - Your care team may prescribe medicine to help your WBCs recover. Talk to your care team if you have: - Fever of 100.4°F (38°C) or higher - Chills - New or worsening cough or sore throat - Painful urination or signs of a urinary infection - Feeling much more tired than usual - Red, swollen, warm, or painful areas on the skin (possible skin infection)
Low Platelet Count (Thrombocytopenia)	Description: Platelets help your blood clot and wounds heal. A low platelet count increases your risk of bruising and bleeding. Recommendations: - Blow your nose gently and avoid picking it. - Brush your teeth gently with a soft toothbrush and keep good oral hygiene. - Use an electric razor for shaving and a nail file instead of nail clippers. - Avoid over-the-counter medicines that can increase bleeding risk (for example, nonsteroidal anti-inflammatory drugs (NSAIDs) like ibuprofen). - Talk with your care team or dentist before medical or dental procedures — you may need to pause treatment. Talk to your care team if you have: - A nosebleed lasting more than 5 minutes despite pressure - A cut that continues to bleed - Heavy gum bleeding when brushing or flossing - Sudden or severe headache - Blood in your urine or stool - Blood in your spit after coughing
Low Red Blood Cell (RBC) Count and Hemoglobin (Hgb) (Anemia)	Description: RBCs and Hgb carry oxygen to your body's tissues and remove carbon dioxide. Low RBC or Hgb (anemia) can make you feel weak, very tired, or look pale. Recommendations: - Aim for 7 to 8 hours of sleep each night. - Do not drive, operate heavy machinery, or do other dangerous activities if you are very tired. - Balance activity and rest — stay as active as you can, but rest when needed. - Eat a balanced diet and follow any nutrition or supplement advice from your care team. Talk to your care team if you have: - Shortness of breath - Dizziness or fainting - Fast or irregular heartbeats - Sudden or severe headache

Fatigue	Description: Fatigue is a constant and sometimes strong feeling of tiredness. Recommendations: • Routine exercise can help reduce fatigue. Talk with your care team to find the right type and amount of activity for you. • Ask family and friends for help with daily tasks and for emotional support. • Try healthy ways to feel better, such as meditation, journaling, yoga, or guided imagery, to reduce anxiety and improve well-being. • Aim for 7 to 8 hours of sleep each night. Limit daytime naps to help you sleep better at night. • Do not drive, operate heavy machinery, or do other potentially dangerous activities if you are very tired. Talk to your care team if you have: • Tiredness that affects your daily life or prevents you from doing normal activities • Tiredness that does not get better with rest • Dizziness or weakness along with severe tiredness
Nausea and Vomiting	Description: Nausea is an uncomfortable feeling in your stomach or the need to throw up. You may or may not vomit. Recommendations: • Eat smaller, more frequent meals. • Avoid fatty, fried, spicy, or highly sweet foods. • Eat bland foods at room temperature and drink clear liquids. • If you vomit, start with small sips of water, broth, or other clear liquids. If these stay down, try soft foods (such as gelatin, plain cornstarch pudding, yogurt, strained soup, or strained cooked cereal) and gradually return to solid foods. • Your care team may prescribe medicine for these symptoms. Talk to your care team if you have: • Vomiting for more than 24 hours • Nonstop vomiting • Signs of dehydration (very thirsty, dry mouth, dizziness, or dark urine) • Blood or coffee-ground-like appearance in your vomit • Severe stomach pain that does not go away after vomiting

Muscle, Bone, or Joint Pain	Description: Muscle pain is soreness, aching, cramps, stiffness, tenderness, or weakness in one or more muscles. Joint pain is pain, stiffness, swelling, or reduced movement where two bones meet. Bone pain is a deep, aching or sharp pain in or around a bone that may worsen with movement or pressure. Recommendations: - Keep a pain diary: note pain levels, locations, and activities that make it better or worse. - Do gentle exercise (walking, stretching, yoga) to maintain mobility and strength. Check with your care team before starting a new activity. - Use a warm compress for stiff muscles or a cold pack to reduce swelling and numb pain—use what helps the area. - Your care team may recommend or prescribe medicines, including over-the-counter pain relievers. Talk to your care team if you have: - Pain you cannot control with usual measures - Swelling, redness, or warmth in a joint - New weakness - Trouble walking or moving
Changes in Electrolytes and Other Laboratory Results	Description: Treatment may cause low levels of calcium, magnesium, and potassium in your blood. Your care team will do blood tests to check you for these changes and will treat you if needed. Talk to your care team if you have: - Severe, new, or worsening muscle cramps, spasms or weakness - Tingling or numbness around the mouth, hands, or feet - New weakness or trouble breathing - Fast, irregular, or pounding heartbeat, or chest pain - Confusion, fainting, or seizures - Sudden weight gain - Swelling of your arms, hands, legs, or ankles - Extreme fatigue - Muscle twitches or tremors - Numbness or tingling in your fingers or toes - Nausea, vomiting, or loss of appetite - Seizures - Severe dizziness or lightheadedness - Severe constipation or stomach-area (abdominal) pain

Select Rare Side Effects

Side Effect	Talk to Your Care Team if You Have Any of These Signs or Symptoms	
Heart Problems and Heart Rhythm Problems (Cardiac Arrhythmia)	- Swelling of your stomach area (abdomen), legs, hands, feet, or ankles - Shortness of breath - Nausea or vomiting - New or worsening chest discomfort, including pain or pressure	- Weight gain - Pain or discomfort in your arms, back, neck, or jaw - Protruding neck veins - Breaking out in a cold sweat - Feeling lightheaded or dizzy - Fast or irregular heartbeat

Intestinal Problems	• Diarrhea (loose stools) or more frequent bowel movements than usual	• Stools that are black, tarry, sticky, or have blood or mucus • Severe stomach-area (abdominal) pain or tenderness
Liver Problems	• Yellowing of your skin or the white part of your eyes (jaundice) • Severe nausea or vomiting	• Pain on the right side of your stomach area (abdomen) • Dark, tea-colored urine • Bleeding or bruising more easily than normal
Kidney Problems	• Decrease in your amount of urine • Blood in your urine	• Swelling of your ankles • Loss of appetite
Lung Problems	• Cough • Shortness of breath	• Chest pain or tightness
Brain Problems	• Headache • Dizziness • Confusion • Memory problems • Difficulty concentrating • Fatigue	• Seizures • Muscle weakness • Tremors • Changes in mood or behavior • Sensory disturbances (such as tingling or numbness)
Hormone Gland Problems	• Headaches that will not go away, or unusual headaches • Eye sensitivity to light • Eye problems • Rapid heartbeat • Increased sweating • Extreme tiredness • Weight gain or weight loss • Feeling more hungry or thirsty than usual	• Urinating more often than usual • Hair loss • Feeling cold • Constipation • Your voice gets deeper • Dizziness or fainting • Changes in mood or behavior, such as decreased sex drive, irritability, or forgetfulness
Skin Problems	• Rash • Itching	• Skin blistering or peeling • Painful sores or ulcers in the mouth or nose, throat, or genital area
Problems in Other Organs and Tissues	• Chest pain, irregular heartbeat, shortness of breath, swelling of ankles • Confusion, sleepiness, memory problems, changes in mood or behavior, stiff neck, balance problems, tingling or numbness of the arms or legs	• Double vision, blurry vision, sensitivity to light, eye pain, changes in eyesight • Persistent or severe muscle pain or weakness, muscle cramps • Low red blood cells, bruising

Numbness, Tingling, or Burning in Your Hands or Feet (Peripheral Neuropathy)	- New or worsening “pins and needles,” burning, or numbness in your hands or feet - Trouble moving your arms or legs or weakness - Problems with balance or frequent falls
Allergic Reactions, Including Anaphylaxis	Get emergency medical help right away if you develop any of the following signs or symptoms: - Swelling of your lips, mouth, tongue, or throat - Trouble breathing or swallowing - Raised red areas on your skin (hives) - A very fast heartbeat - You feel dizzy or faint
Infusion-Related Reactions	- Chills or shaking - Itching, rash, or flushing - Trouble breathing, wheezing, or tongue swelling - Dizziness or feeling faint - Feeling of impending doom - Fever of 100.4°F (38°C) or higher - New or severe pain in your back or neck
Tumor Lysis Syndrome (TLS)	Tumor lysis happens when cancer cells break apart and release large amounts of substances into your bloodstream faster than your body can handle. TLS is a group of conditions that affect your heart, kidneys, and muscles. - Severe nausea, vomiting, or diarrhea - Urinating smaller amounts or having dark-colored urine - Muscle cramps or twitching - Rapid heartbeats or chest pain - Confusion or weakness - Seizures
Risk of New Cancers	There is a risk of developing new cancers during or after treatment. Talk with your care team about this risk, and ask about the signs and symptoms of new cancers.

Before starting treatment, ask your care team when to call 9-1-1 or seek emergency help.
If you experience any new, worsening, or uncontrolled side effects, contact your care team immediately.

Intimacy, Fertility, Pregnancy, and Breastfeeding

- Treatment may **change how you feel about intimacy and your body**. However, physical closeness—such as holding hands and hugging—remains safe. It is common to have questions about intimacy. If needed, talk to your care team for guidance.
- Treatment may affect your **ability to have children**. It may damage your reproductive organs or stop them from working. If you are worried about fertility, talk to your care team before starting treatment.
- Treatment may **harm an unborn baby**.
 - If you are able to become pregnant:
 - Take a pregnancy test before starting treatment.
 - Use an effective method of birth control during treatment, for 3 to 6 months after your last dose of carboplatin, for 5 months after your last dose of nivolumab, for 6 months after your last dose of etoposide, and for 12 months after your last dose of ifosfamide.
 - If you think you might be pregnant or if you become pregnant, tell your care team right away.

- If your partner is able to become pregnant, use an effective method of birth control—such as condoms—during treatment with nivolumab, ifosfamide, carboplatin, and etoposide, for 3 to 6 months after your last dose of carboplatin, for 4 months after your last dose of etoposide, and for 6 months after your last dose of ifosfamide.
- **Do NOT breastfeed** during treatment with nivolumab, ifosfamide, carboplatin, and etoposide, for 1 week after your last dose of ifosfamide, and for 5 months after your last dose of nivolumab.

Handling Body Fluids and Waste

Some drugs you receive may stay in your urine, stool, sweat, or vomit for many days after treatment. Because many cancer drugs are toxic, your body waste may also be dangerous to touch. To help protect yourself, your loved ones, and the environment, **follow these instructions** for at least **48 hours** after each dose of **carboplatin** and **etoposide**, and for at least **3 days** after each dose of **ifosfamide**: (Note: Nivolumab does not require special handling of body fluids and waste.)

- People who are pregnant should avoid touching anything that may be soiled with body fluids from the patient.
- You can use your usual toilet. Always close the lid and flush to discard all waste. If you have a low-flow toilet, flush twice.
- If the toilet or seat is soiled with urine, stool, or vomit, clean the surface after each use before others use it.
- Wash your hands with soap and water for at least 20 seconds after using the toilet.
- If you need a bedpan, inform your caregiver so they can wear gloves and assist with cleanup. Wash the bedpan with soap and water daily.
- If you cannot control your bladder or bowels, use a disposable pad with a plastic back, a diaper, or a sheet to absorb waste.
- Wash any skin exposed to body waste with soap and water.
- Wash soiled linens or clothing separately from other laundry. If you don't have a washer, place them in a plastic bag until they can be washed.
- Wash your hands with soap and water after touching soiled linens or clothing.

Additional Information

- **Tell your care team about all the medicines you take.**
This includes prescriptions, over-the-counter drugs, vitamins, and herbal products. Before starting any new medicine, supplement, or vaccine, ask your care team first.
- **Your treatment may cause side effects that need medicine or a break from treatment.** Your care team may give you corticosteroids or hormone medicines to help. Sometimes, they may need to delay or stop your treatment if you have certain side effects.
- **Tell your care team about all your health problems.** This includes issues with your immune system, like Crohn's disease, ulcerative colitis, or lupus. Also, tell them if you have had an organ transplant, like a kidney or eye transplant. Let them know if you had a stem cell transplant from a donor, had radiation to your chest, or have a nerve problem like myasthenia gravis or Guillain-Barré syndrome.
- **This Patient Education Sheet may not describe all possible side effects.**
Call your care team for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

Notes

Updated Date: August 6, 2026

Scan the QR code below to access this education sheet.



Important notice: The Association of Cancer Care Centers (ACCC), Hematology/Oncology Pharmacy Association (HOPA), Network for Collaborative Oncology Development & Advancement, 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 medication derived from information provided by the drug manufacturer and other resources.

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