Carboplatin, Pemetrexed, and Pembrolizumab

Patient Education Sheets
Understanding Your Cancer Treatment

Care Team Contact Information: _____

Pharmacy Contact Information: _____

Diagnosis: _____

- This treatment is used for non-small cell lung cancer (NSCLC) and a type of cancer that affects the lining of the lungs and chest wall, called malignant pleural mesothelioma (MPM).
- 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

Treatment Name	How the Treatment Works	How the Treatment is Given
Carboplatin (KAR-boh-pla-tin): Paraplatin (par-uh-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).
Pemetrexed (peh-meh-TREK-sed): Alimta (uh-LIM-tuh), Pemfexy (pem-FEK-see)	Stops cancer cells from making the instructions they need to grow and multiply, causing the cells to die.	Infusion into a vein (intravenous (IV) infusion).
Pembrolizumab (pem-broh-LIH-zoo-mab): Keytruda (kee-TROO-duh)	Boosts your immune system to help it attack cancer cells more effectively.	Infusion into a vein (intravenous (IV) infusion).

Note: Your care team may give you pembrolizumab and berahyaluronidase (Keytruda Qlex) instead of pembrolizumab. Pembrolizumab and berahyaluronidase is given as an injection under the skin (subcutaneous injection) into the stomach area (abdomen) or outer thigh over 1 to 2 minutes.

Treatment Administration and Schedule

Treatment is typically repeated every 3 weeks or every 6 weeks. This length of time is called a “cycle”. Your care team will tell you how many treatment cycles you will receive and how long you will continue taking pembrolizumab.

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Treatment Administration and Schedule (Continued)

☐ **Option 1: 3-Week Cycle**

- Carboplatin is given on Day 1.
- Pemetrexed is given on Day 1.
- Pembrolizumab is given on Day 1.

Treatment Name	Week 1								Next Week
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	…	Day 21	Day 1
Carboplatin	✓								✓
Pemetrexed	✓								✓
Pembrolizumab	✓								✓

☐ **Option 2: 6-Week Cycle**

- Carboplatin is given on Day 1.
- Pemetrexed is given on Day 1.
- Pembrolizumab is given on Day 1.

Treatment Name	Week 1								Next Week
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	…	Day 42	Day 1
Carboplatin	✓								✓
Pemetrexed	✓								✓
Pembrolizumab	✓								✓

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.

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Supportive Care to Prevent and Treat Side Effects

Description	Supportive Care Given at the Clinic or Hospital	Supportive Care Taken at Home
To help lower the risk of low blood cell counts and related side effects (vitamin B12 and folic acid)		
To help prevent or treat nausea and vomiting		
To help lower the risk of skin problems (corticosteroid)		
To help lower the risk of infusion-related reactions		
Other		

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Common Side Effects

Side Effect	Important Information
Low White Blood Cell (WBC) Count (Neutropenia) and Increased Risk of Infection (Boxed Warning)	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
Low Platelet Count (Thrombocytopenia) (Boxed Warning)	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) (Boxed Warning)	Description: Red blood cells carry oxygen throughout your body. Low levels can make you feel tired, weak, dizzy, or short of breath. 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

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Nausea and Vomiting (Boxed Warning)	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
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
Taste Changes	Description: Your sense of taste may change. Foods you used to like may not taste good. Some foods may taste strange or like metal. Recommendations: • Choose foods that look and smell good to you. • If food tastes like metal, try using plastic forks and spoons. • Use herbs, spices, or a little juice to add flavor. • Suck on mints or chew gum to freshen your mouth. • Brush your teeth with a soft toothbrush before and after eating. • Do not smoke. Talk to your care team if you have: • Trouble eating • Weight loss

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Liver Problems	Description: Treatment can cause liver injury. Your care team may check your liver with blood tests before and during treatment. Talk to your care team if you have: • 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
Diarrhea	Description: Diarrhea means having bowel movements more often than usual. Your stools may also be loose or watery. If you have diarrhea: • Keep track of how often you have diarrhea. • Drink 8 to 10 glasses of water or fluids each day. Do this unless your care team tells you otherwise. • Eat small meals with low-fiber foods. Try bananas, applesauce, potatoes, chicken, rice, or toast. • Avoid high-fiber foods. These include raw vegetables, fruit, and whole grains. • Avoid foods that may cause gas. These include broccoli and beans. • Avoid milk, yogurt, and other dairy foods. • Avoid spicy, fried, or greasy foods. • Your care team may recommend medicine for diarrhea. One example is loperamide (Imodium). Talk to your care team if you have: • An increase of 4 or more bowel movements than usual in one day • Dizziness or lightheadedness while you have diarrhea • Signs of dehydration, such as feeling very thirsty, dizzy, or having dark urine • Blood in your stool
Constipation	Description: Constipation means hard, dry stools or fewer bowel movements than normal. It can cause discomfort or pain. Recommendations: • Track how often you have bowel movements each day. • Drink 8 to 10 glasses of fluids daily, unless your care team says otherwise. • Stay active and exercise regularly. • Eat more high-fiber foods (such as raw fruits, vegetables, and whole grains) unless advised otherwise. • Your care team may recommend laxatives such as polyethylene glycol (MiraLAX) or senna. Talk to your care team if you have: • Constipation lasting 3 or more days • No bowel movement 48 hours after using a laxative

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Kidney Problems	Description: Treatment can cause kidney problems, including damage to the kidneys and decreased kidney function. Your care team will monitor your kidney function during treatment. Recommendations: • Drink 8 to 10 glasses of water or other fluids each day, unless your care team tells you otherwise. • Your care team may give you fluids and electrolytes with your treatment. Talk to your care team if you have: • Decrease in your amount of urine • Blood in your urine • Swelling of your ankles • Loss of appetite
Cough and Shortness of Breath	Description: During treatment, you may start coughing more than usual. You may also feel like you can't catch your breath or that breathing is harder. Recommendations: • Drink 8 to 10 glasses of water each day to help with mucus. • Avoid and stop smoking. • Use a humidifier to make the air moist. • Try slow, deep breathing. • Use extra pillows to keep your head up when you sleep. Talk to your care team if you have: • Trouble breathing • Chest pain or tightness • Cough
Numbness, Tingling, or Burning in Your Hands or Feet (Peripheral Neuropathy)	Description: Nerve pain and tingling are uncomfortable sensations from nerve damage or irritation. Pain may be sharp, burning, or deep. Tingling can feel like pins-and-needles or mild electric shocks, often in the hands, feet, arms, or legs. Recommendations: • Keep a daily log of pain and sensations, noting triggers and what helps or makes it worse. • Check your feet every day for cuts, sores, blisters, or color changes, especially if numbness reduces feeling. • Wear comfortable, well-fitting shoes and avoid walking barefoot if sensation is reduced. • Protect hands and feet from extreme heat or cold. • Your care team may recommend or prescribe medicines, topical treatments, physical therapy, or supplements to help with symptoms. Talk to your care team if you have: • 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

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<td>High Blood Sugar (Hyperglycemia)</td>
<td>Description: Treatment may cause high blood sugar levels. Your care team may perform blood tests to check for these changes and treat you if needed.
Recommendations:
• Eat a well-balanced diet.
• Limit sugary drinks and foods.
• Eat smaller, more frequent meals.
• Be physically active for at least 30 minutes most days.
• Your care team may ask you to check your blood sugar at home. If you are already doing this, they may ask you to do it more frequently.
Talk to your care team if you have:
• Frequent urination
• Drowsiness
• Increased thirst
• Loss of appetite
• Blurred vision
• Fruity smell on your breath
• Confusion
• Nausea, vomiting, or stomach pain
• It becomes harder to control your blood sugar</td>
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<td>Hair Loss (Alopecia)</td>
<td>Description: Hair loss or thinning may begin days to weeks after treatment starts and usually grows back later. New growth can be a different color or texture and may not look the same as before.
Recommendations:
• Consider a short haircut before treatment and use scarves, hats, or wigs for comfort and confidence.
• Keep your head covered outdoors to protect it from the sun and cold; use sunscreen on your uncovered scalp.
• Use gentle haircare: mild shampoo, soft brush, and avoid heat styling and harsh treatments.
• Ask your care team about wig prescriptions or resources for head coverings.
Talk to your care team if you have:
• No hair regrowth months after treatment ends
• Concern about hair changes or need help finding a wig or support resources</td>
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<td>Skin Problems</td>
<td>Description: Treatment can cause a rash with itchy, dry, red, or puffy skin.

Recommendations:
• Bathe or shower daily with warm (not hot) water and mild, unscented soap or body wash.
• Pat your skin dry with a towel instead of rubbing.
• Apply unscented lotion or moisturizing cream right after bathing to prevent dryness and cracking.
• Use lip balm for dry or chapped lips.
• Avoid direct sun when you can. Use a broad-spectrum sunscreen with a sun protection factor (SPF) of 30 or higher and reapply every 2 hours when outdoors.
• Use unscented, gentle laundry detergent to reduce skin irritation.
• Your care team may recommend medicine for skin problems.

Talk to your care team if you have:
• Skin rash
• Raised red bumps
• Redness of the skin
• Very dry skin that may affect the mucous membranes (such as mouth and eyes)</td>
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<td>Infusion-Related Reactions</td>
<td>Description: An infusion reaction is a bad response that can happen during or shortly after receiving medicine through a vein.

Recommendations:
• Your care team may prescribe medicines before your infusion to help reduce your risk of infusion reactions or make any infusion reaction less severe.
• You may be monitored for infusion reactions during each infusion.
• Your care team may slow down or stop your infusion, or completely stop treatment if you have an infusion reaction.

Get medical help right away if you develop any of the following during or after your infusion:
• 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</td>
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Changes in Electrolytes and Other Laboratory Results	Description: Treatment may cause low levels of calcium, sodium, and potassium, and high levels of potassium in your blood. Your care team will perform blood tests to check for these changes and will treat you if needed. Talk to your care team if you have: • Tingling or numbness around the mouth, hands, or feet • New weakness or trouble breathing • Fast, irregular, or pounding heartbeat • Seizures • Sudden weight gain • Swelling of your arms, hands, legs, or ankles • New or worsening drowsiness, or trouble thinking • Severe headache or nausea/vomiting • Sudden weakness, unsteadiness, or trouble walking • New or worsening muscle weakness, numbness, cramps, or spasms • Irregular, fast, or pounding heartbeat, or chest pain • Severe dizziness, fainting, near-fainting, or lightheadedness • Severe constipation or stomach-area (abdominal) pain • Fast, slow, irregular, or pounding heartbeats

Select Rare Side Effects

Side Effect	Talk to Your Care Team if You Have Any of These Signs or Symptoms
Allergic Reactions, Including Anaphylaxis (Boxed Warning)	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
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
Lung Problems	• Cough • Shortness of breath • Chest pain or tightness
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

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Hearing Loss	• New or worsening hearing loss • Ringing, buzzing, or other noises in your ears (tinnitus)	• Trouble understanding speech or needing higher volume on devices • Dizziness or balance problems
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

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 can 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 4 months after your last dose of pembrolizumab, and for 6 months after your last dose of pemetrexed.
        - 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, for 3 months after your last dose of pemetrexed, and for 3 to 6 months after your last dose of carboplatin.
- **Do NOT breastfeed** during treatment, for 1 week after your last dose of pemetrexed, and for 4 months after your last dose of pembrolizumab.
-

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 **pemetrexed**: (Note: Pembrolizumab 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.

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- 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.
  - Tell your care team if you have kidney problems and take a medicine that contains ibuprofen. Your care team may recommend to avoid taking ibuprofen for 2 days before, the day of, and 2 days after receiving treatment with pemetrexed.
- **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.
- **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.
- **Worsening side effects from radiation treatment**. Tell your care team if you have had or are planning to receive radiation therapy.
- **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

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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 to gather information and develop this patient education guide. This guide is a summary of the medication, based on information provided by the drug manufacturer and other sources.

This guide does not cover all information available on the possible uses, directions, doses, precautions, warnings, interactions, adverse effects, or risks associated with this medication. It should not be used as a substitute for the advice of a qualified healthcare professional. The provision of this guide is for informational purposes only. It does not constitute or imply endorsement, recommendation, or favoring of this medication by ACCC, HOPA, NCODA, or ONS, who assume no liability for and cannot ensure the accuracy of the information presented. All decisions regarding this medication should be made with the guidance and direction of a qualified healthcare professional.

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