MEDICINE INFORMATION

Carfilzomib (Kyprolis)

Information for patients and caregivers about carfilzomib: taking treatment, monitoring, side effects and everyday care.

Carfilzomib at a glance

Carfilzomib, with the verified brand Kyprolis, is a proteasome inhibitor. It interferes with the way cells break down proteins. Treatment is given by trained staff as an intravenous infusion; it is not a tablet or an injection under the skin.

Schedules vary. Some involve visits on two days each treatment week; others use one visit a week. There are also planned days without carfilzomib. The infusion itself usually takes 10 or 30 minutes, depending on the prescribed regimen, but the full appointment can take longer.

Blood pressure, blood counts, kidney function and liver tests need regular checks. Fluid intake requires a personal plan: enough fluid helps protect the kidneys, but too much can worsen heart problems or swelling. Tell the team about changes promptly, even between visits.

What carfilzomib is and how it works

Cells continually make and dispose of proteins. Proteasomes are part of their protein-disposal machinery. Carfilzomib blocks proteasome activity, allowing unwanted proteins to build up and disrupting processes needed for cell survival. This can damage myeloma cells.

This is a different mechanism from blocking a hormone or a single growth-factor receptor. A medicine can be targeted without requiring one particular gene mutation test before every prescription. The haematology team interprets the whole diagnosis and treatment history when deciding whether it is appropriate.

Healthy tissues can also be affected. The word targeted does not mean treatment is free of serious risks. Equally, having few side effects does not mean the medicine is ineffective. Response is assessed through planned examinations and tests, rather than how strongly you feel each dose.

How the team decides whether it is suitable

The team considers your disease assessment, earlier treatments, previous side effects, current symptoms and the medicines that will accompany carfilzomib. The purpose of this discussion is to choose a workable treatment plan and explain its expected benefits and uncertainties.

Heart and circulation problems deserve particular attention. Tell the specialist about heart failure, angina, heart attacks, irregular heartbeat, fainting, high blood pressure, blood clots or breathlessness with ordinary activity. Problems may occur even when heart function was normal before treatment. Older people and those with existing cardiovascular disease may need closer assessment.

Kidney disease, dialysis, liver disease, hepatitis B and previous serious infections also affect planning. Bring information about all regular medicines and allergies. A reduced dose, additional monitoring or a different treatment may be appropriate; these decisions cannot be made from an online dose table.

Approved uses by country

FDA (United States), EMA (European Union) and CDSCO (India).

Each treatment use is listed once. Eligibility can differ by country.

Approved by FDA, EMA and CDSCO

Carfilzomib with dexamethasone, with or without lenalidomide

- **US (FDA).** Multiple myeloma that has come back or stopped responding. With lenalidomide and dexamethasone, after one to three previous courses of treatment.
- **US (FDA).** Multiple myeloma that has come back or stopped responding. For adults with dexamethasone after one to three previous courses of treatment.
- **EU (EMA).** Multiple myeloma after previous treatment. With lenalidomide and dexamethasone, for adults after at least one previous treatment.
- **EU (EMA).** Multiple myeloma after previous treatment. With dexamethasone after at least one previous treatment, for adults.
- **India (CDSCO).** Multiple myeloma that has returned or stopped responding. With dexamethasone, or with lenalidomide and dexamethasone, after one to three previous lines of treatment.

Approved by FDA and EMA

Carfilzomib with daratumumab and dexamethasone

- **US (FDA).** Multiple myeloma that has come back or stopped responding. For adults with daratumumab and dexamethasone after one to three previous courses. The label includes daratumumab given into a vein or under the skin.
- **EU (EMA).** Multiple myeloma after previous treatment. With daratumumab and dexamethasone after at least one previous treatment, for adults.

Carfilzomib with isatuximab and dexamethasone

Multiple myeloma that has come back or stopped responding.

- **US (FDA).** For adults with isatuximab and dexamethasone after one to three previous courses of treatment.
- **EU (EMA).** With isatuximab and dexamethasone after at least one previous treatment, for adults.

Approved by FDA and CDSCO

Carfilzomib alone for previously treated multiple myeloma

Multiple myeloma that has returned or stopped responding.

- **US (FDA).** For adults as a single medicine after at least one previous treatment.

- **India (CDSCO).** As a single medicine after at least one previous line of treatment.

Before treatment starts

Expect a medical assessment, blood pressure measurement and blood tests, including blood counts, kidney function, liver function and electrolytes. Electrolytes are salts, such as potassium, that help muscles, nerves and the heart work normally. The team may also check uric acid because rapid cancer-cell breakdown can disturb blood chemistry.

Your cardiovascular risk will be assessed. An ECG, heart ultrasound or cardiology advice may be needed according to your history and clinical findings. Ask which tests are planned for you; an identical heart-scan schedule is not required for everyone. Blood pressure should be controlled before treatment.

European product information recommends hepatitis B screening before treatment. Previous infection matters even if it caused no symptoms or happened many years ago. Positive results may lead to specialist advice, antiviral treatment or monitoring during and after therapy.

When pregnancy is possible, arrange pregnancy testing and contraception advice before the first dose. Discuss fertility preservation early if future parenthood matters to you. Obtain your written treatment calendar, fluid instructions and day-and-night hospital contact numbers before leaving the first appointment.

How carfilzomib is given

Your infusion schedule

Carfilzomib is prepared, stored and handled by the treatment service; it is not a medicine to mix or inject at home. A nurse gives it through a cannula or another suitable intravenous line. Doses are calculated using body surface area, a measurement based on height and weight. The number written as mg/m² is not the amount you should calculate or prepare yourself.

Treatment normally starts with a lower dose before increasing if tolerated. Current US schedules include 20 mg/m² followed by 70 mg/m² once weekly, with a 30-minute infusion. Twice-weekly schedules use 20 mg/m² followed by either 27 mg/m² over 10 minutes or 56 mg/m² over 30 minutes, according to the regimen. European information reviewed describes the twice-weekly schedules. These schedules are not interchangeable.

A common cycle lasts 28 days. A weekly plan may use days 1, 8 and 15; a twice-weekly plan may use days 1, 2, 8, 9, 15 and 16. Later cycles and combination medicines can follow different patterns. Use your dated calendar rather than assuming every week or every medicine follows the same timetable.

Fluids and medicines around the infusion

Fluids before treatment are particularly important during the first cycle. Some are taken by mouth and some may be given through the drip. The team balances kidney protection against fluid overload, taking account of heart disease, kidney function and other infusions. Do not force large volumes of water or change a prescribed fluid restriction yourself.

Dexamethasone helps reduce infusion reactions. US instructions specify giving it 30 minutes to four hours before all first-cycle doses, and again if reactions develop or return later. It may also be a continuing part of the combination itself. Follow the exact instructions about taking it at home or receiving it in hospital.

An antiviral medicine may be prescribed to reduce shingles risk. US guidance recommends medicine to prevent blood clots during combination treatment; European guidance bases this on an individual benefit-risk assessment. Do not start aspirin or another blood thinner yourself: prevention must account for bleeding risk, platelet counts and the other medicines prescribed.

Delays, vomiting and organ problems

If you cannot attend, contact the unit so staff can rearrange safely. Do not assume a missed infusion can be added to the next visit. Treatment may be delayed or reduced for abnormal results or side effects; this is part of safe care.

Vomiting after an infusion does not remove medicine already given into the bloodstream. You do not need a replacement infusion. If you vomit an accompanying oral medicine, ask the team what to do and do not automatically repeat it. Report persistent vomiting or inability to drink.

For people receiving haemodialysis, carfilzomib is given after dialysis. Liver-related dosing instructions differ: US information specifies a starting reduction for mild or moderate hepatic impairment, while European information does not require an initial adjustment for these categories but stresses monitoring. Your specialist must use the applicable product instructions.

Monitoring and checking response

Blood tests look for low blood counts, changes in kidney or liver function and electrolyte disturbances. Platelets, which help blood clot, may fall within a cycle and recover before the next one. Attend tests even when you feel well. A previous normal result does not rule out a new problem.

European information specifies kidney checks at least monthly or according to clinical guidance, liver tests at the start and monthly, and potassium checks monthly or more often when needed. US information emphasises regular kidney, liver and potassium monitoring and frequent platelet checks. Your own test calendar may be more intensive.

Blood pressure is checked regularly. The team also asks about breathing, chest discomfort, weight change, swelling and urine output. If home blood-pressure or weight monitoring is advised, obtain clear instructions about when to measure and which changes require a call. Do not adjust heart or blood-pressure medicines on your own.

Response assessment is separate from safety monitoring. Ask the team which disease measurements and investigations it will use. Ask what is being measured, when results will be discussed and how improvement or progression will be recognised. No single symptom or side effect can answer whether treatment is working.

Common side effects and practical care

Tiredness and low blood counts

Fatigue may fluctuate across the cycle. Plan essential tasks for better periods, accept practical help and balance rest with activity you can manage. Tell the team if tiredness suddenly worsens or comes with breathlessness, dizziness or a racing heart; anaemia or another treatable problem may contribute.

Low white blood cells can increase infection risk. Wash hands regularly and avoid close contact with people who are clearly unwell. These measures do not replace urgent assessment for fever or feeling suddenly ill. Low platelets can cause bruising, nosebleeds or bleeding gums; report these rather than waiting for the next blood test.

Nausea, bowel changes and appetite

Take prescribed anti-sickness medicines as directed. Smaller meals may be easier when appetite is poor. Tell the team if you are losing weight or struggling to eat so nutritional support can be arranged. Persistent vomiting can disturb hydration and kidney function.

Diarrhoea or constipation may occur. Record bowel changes and follow the unit's advice about medicines and fluids. Call for persistent diarrhoea, dizziness, reduced urine, blood in the stool or significant abdominal pain. Do not treat severe abdominal symptoms as ordinary constipation or diarrhoea.

Headache, sleep and nerve symptoms

Report persistent headache or dizziness. Severe headache with visual changes, confusion or seizures needs emergency assessment. Sleep disturbance can occur during combination treatment, including from dexamethasone. Ask about timing and symptom management rather than stopping the steroid independently.

Tingling, numbness or discomfort in hands and feet should be reported, especially if walking or everyday tasks become difficult. Explain whether symptoms were present before treatment. The team needs to distinguish treatment effects from other causes.

Less common but serious side effects

Heart, lungs and blood pressure

Carfilzomib can cause or worsen heart failure, reduced blood supply to the heart and other serious cardiac problems. New ankle swelling, rapid weight gain, difficulty breathing when lying down or unusual breathlessness needs prompt assessment. Heart problems can occur early and are not excluded by normal baseline tests.

Serious lung inflammation, respiratory failure and raised pressure in the lung circulation can occur. Breathlessness may also come from infection, anaemia, fluid overload or a clot. Because symptoms overlap, do not decide at home that it is simply a common treatment effect. Severe hypertension can also require emergency care.

Kidneys, tumour lysis and liver

Acute kidney injury can occur. Report reduced urine, persistent vomiting, worsening swelling or marked weakness. Tumour lysis syndrome happens when rapid cell breakdown releases substances into the blood, potentially affecting the kidneys and heart. Preventive fluids and sometimes additional medicine are used according to risk.

Liver inflammation or failure is possible. Yellow skin or eyes, dark urine, right-sided upper abdominal pain or unusual drowsiness needs urgent advice. Hepatitis B can reactivate; the preventive or monitoring plan may continue after carfilzomib ends.

Clots, bleeding and neurological problems

A clot can cause one-sided leg pain or swelling, chest pain or sudden breathlessness. Serious bleeding can occur even with a normal platelet count or without blood-thinning medicine. Vomiting blood, black stools, coughing blood or a sudden severe headache needs immediate assessment.

Damage to small blood vessels can cause thrombotic microangiopathy, affecting blood cells and kidneys. Posterior reversible encephalopathy syndrome (PRES) can cause headache, visual changes, confusion or seizures. Progressive multifocal leukoencephalopathy (PML) is a serious brain infection that can cause progressive changes in movement, vision, speech or thinking. These symptoms need urgent investigation before further infusions. The team stops or withholds carfilzomib when these conditions are suspected; restarting requires specialist assessment.

Infusion reactions

Reactions can begin during treatment or up to 24 hours afterwards. Symptoms include fever, chills, flushing, swelling, weakness, chest tightness or breathing difficulty. Tell the nurse immediately during an infusion. After leaving, use the urgent contact plan; severe symptoms require emergency care. Premedication reduces risk but does not eliminate it.

When to get urgent help

Seek emergency assessment now for severe breathlessness, chest pain, collapse, a seizure, sudden weakness, major bleeding or swelling of the face or throat with breathing difficulty. Use local emergency services or the nearest emergency department. Do not drive yourself if seriously unwell.

Call your treating hospital immediately for fever at its stated threshold, shivering, feeling suddenly unwell, new cough or breathlessness, one-sided leg swelling, reduced urine, jaundice or persistent vomiting. If no threshold was provided, a temperature of 37.5°C (99.5°F) or above, or below 36°C (96.8°F), needs urgent contact. Feeling unwell without fever can also be serious.

Keep the medicine name, last infusion date and combination medicines available. Tell emergency staff you are receiving anticancer treatment. Do not wait for the next appointment or rely on a general website contact form for urgent medical advice.

Other medicines, supplements and vaccines

Give the pharmacist a complete list of prescriptions, non-prescription products, vitamins, herbal remedies and traditional medicines. Medicines that affect kidney function, blood pressure, fluid balance or bleeding may need particular consideration. Do not stop prescribed medicines without a plan.

Check before using ibuprofen, aspirin or other painkillers, especially if kidney function or platelets are abnormal. A blood thinner prescribed to prevent clots is different from choosing aspirin yourself. Tell dentists and other clinicians about treatment before procedures so bleeding, infection and timing can be considered.

Discuss vaccinations with the cancer team. Whether a vaccine is suitable and when it should be given depends on immune suppression and the full regimen. Do not arrange a live vaccine without specialist advice. Household vaccination questions should also be checked with the team rather than avoiding all contact with vaccinated people.

Everyday life during treatment

Plan transport and allow time for tests, fluids and accompanying medicines. Consider having someone available after early visits, when you are learning how treatment affects you. Keep a simple record of symptoms and the dates they occur; this can reveal patterns across the cycle.

Eat as regularly as possible and follow your personalised fluid plan. Swelling does not automatically mean you should stop drinking, and diarrhoea does not automatically mean you should drink several extra litres. Contact the team when your usual plan no longer seems manageable.

Gentle activity can help wellbeing, but stop and seek advice for new breathlessness, chest discomfort or dizziness. Do not drive or operate machinery when dizzy, faint, unusually tired or otherwise impaired. Discuss work, travel and alcohol with your team in light of blood counts, liver function and appointment needs.

Fertility, pregnancy, contraception and breastfeeding

Carfilzomib may harm an unborn baby. Tell the team immediately if pregnancy occurs or is suspected in you or a partner during the relevant precaution period. Do not wait until the next routine visit. Treatment decisions require specialist discussion.

Contraception instructions differ between reviewed labels. US information advises effective contraception for patients who can become pregnant during treatment and for six months afterwards; European information specifies one month afterwards. For male patients, precautions continue during treatment and for three months afterwards when the partner can become pregnant; European instructions also explicitly cover a pregnant partner. Obtain a written plan appropriate to your product and all accompanying medicines.

European information warns that oral contraceptive effectiveness may be reduced and advises avoiding hormonal methods associated with clot risk. Ask for an alternative effective method if you currently use one of these methods; do not assume the pill alone is sufficient. If lenalidomide is part of treatment, its separate pregnancy-prevention requirements also apply.

Do not breastfeed during treatment. US information specifies two weeks after the last dose; European information specifies at least two days. Ask the team to confirm the applicable interval, taking account of every medicine in your regimen. Effects on human fertility are uncertain, but fertility may be affected; discuss preservation options before starting when possible.

After treatment or a treatment break

Ask which tests, antiviral medicines, clot-prevention medicines and reproductive precautions need to continue. A break in carfilzomib does not automatically mean every accompanying medicine should stop. Conversely, do not keep taking a medicine indefinitely simply because it was once prescribed with an infusion.

Continue reporting new or persistent symptoms. Heart, kidney, infection or neurological concerns still need assessment after a recent dose or during a break. If treatment restarts, the team will decide the dose and schedule from the reason for interruption and your recovery. Never infer a restart plan from the original calendar.

Frequently asked questions

1. Is carfilzomib the same as Kyprolis?

Kyprolis is the verified brand of carfilzomib in the reviewed sources. Ask staff to confirm both names on your treatment plan so you can recognise them in hospital records.

2. Is it an injection under the skin?

No. Carfilzomib is infused into a vein. An accompanying medicine may be given under the skin, but that does not change the route of carfilzomib itself.

3. Why does another patient attend once weekly while I attend twice?

Different regimens use different schedules and doses. Neither calendar should be copied without the specialist changing the prescription. Your combination medicines also affect the plan.

4. Why is the first dose lower?

Reviewed schedules use a lower initial dose before increasing when tolerated. This is a planned part of dosing, not evidence that your first treatment was incomplete.

5. Does a 10-minute infusion mean a 10-minute appointment?

No. Blood results, assessments, fluids, premedication and other treatments add time. Ask the unit how long your particular visit is likely to take.

6. How much water should I drink?

Use the amount agreed with your team. Hydration protects the kidneys, but excessive fluid can worsen heart failure or swelling. Report vomiting, diarrhoea or fluid intolerance promptly.

7. Why do I need dexamethasone before treatment?

It helps reduce infusion reactions and may also be part of the anticancer combination. Ask whether to take it at home or receive it in the unit.

8. Can a reaction happen after I have gone home?

Yes. Infusion reactions can occur up to 24 hours after administration. New chest tightness, breathing problems or swelling needs urgent assessment; do not dismiss it because the infusion has finished.

9. What if I miss my appointment?

Call the treatment unit. Staff will decide how to rearrange the calendar safely; do not assume the next infusion should contain an extra dose.

10. Do I need another infusion if I vomit afterwards?

No. The medicine has already entered your bloodstream. Report vomiting and ask separately about any oral medicine you could not keep down.

11. Is breathlessness a side effect I can watch at home?

New or worsening breathlessness needs prompt advice because several serious causes are possible. Severe breathlessness or associated chest pain needs emergency assessment.

12. Can heart problems occur if my previous scan was normal?

Yes. Normal baseline heart function does not remove the risk. Continue reporting swelling, chest discomfort, difficulty lying flat or unexpected breathlessness.

13. Why do I need repeated blood tests?

Blood counts, kidney function, liver function and electrolytes can change during treatment, sometimes before symptoms develop. Results help determine whether the next infusion is safe.

14. Should I start aspirin to prevent clots?

No. The team selects clot prevention after considering your regimen and bleeding risk. Aspirin is not suitable for everyone and should not be added independently.

15. Why might I receive an antiviral medicine?

It may be prescribed to reduce shingles risk. A separate antiviral or monitoring plan may be needed for previous hepatitis B. Follow the duration specified by your team.

16. Can I receive treatment while on dialysis?

A specialist may prescribe it with appropriate monitoring. Carfilzomib is administered after haemodialysis, so the dialysis and cancer teams need to coordinate appointments.

17. Does a dose reduction mean treatment has failed?

No. Reductions or delays may help manage toxicity and make continued treatment possible. Response is assessed separately using your disease results and clinical condition.

18. Can I rely on my usual contraceptive pill?

Ask for specialist advice. European information raises possible reduced pill effectiveness and hormonal clot risk. The full combination may impose additional pregnancy-prevention requirements.

19. When can I breastfeed again?

Confirm this with the team. Reviewed US and European carfilzomib intervals differ, and an accompanying medicine may require a longer wait than carfilzomib alone.

20. Which information should I carry when travelling?

Carry your medicine list, last infusion date, treatment calendar and urgent hospital contacts. Discuss travel first if appointments, low blood counts or symptoms could make it unsafe.

Sources and review information

Sources checked: 1 October 2026. Read with the leaflet for your prescribed formulation and your hospital's treatment plan.

- Macmillan Cancer Support Carfilzomib (Kyprolis)
- Cancer Research UK Carfilzomib and dexamethasone
- Amgen Kyprolis US prescribing information
- DailyMed Kyprolis prescribing information
- Cancer Research UK Vaccinations, immunisations and cancer treatment

Additional sources

Summary of Product Characteristics (SmPC)

- Kyprolis (carfilzomib): Summary of Product Characteristics - EMA product information, Annex I (PDF)

Regulatory references

- FDA prescribing information for Kyprolis
- EMA Summary of Product Characteristics for Sarclisa

Patient information and practical support

- Cancer Research UK patient guide to KRd

Regulatory references

- CDSCO 2018 marketing approval list for carfilzomib, entry 35

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