MEDICINE INFORMATION

KRd (carfilzomib, lenalidomide and dexamethasone)

A guide to the three-medicine myeloma treatment, with help keeping track of clinic and capsule days and understanding heart, kidney and blood clot checks.

At a glance

Treatment	Carfilzomib + Lenalidomide + Dexamethasone
When it may be used	For selected people with multiple myeloma, including when treatment is needed again after earlier therapy.
How it is given	Carfilzomib is given by drip into a vein. You take lenalidomide capsules and usually take dexamethasone tablets by mouth.
Before you start	Ask for your treatment calendar, fluid instructions, blood clot prevention plan and the hospital's 24-hour number.

What this treatment is and how it works

Multiple myeloma develops from plasma cells, the cells that make antibodies. Carfilzomib blocks a system that breaks down proteins inside cells. Lenalidomide affects the immune system and how myeloma cells grow. Dexamethasone is a steroid that also helps treat myeloma. Your team will check how the cancer responds and how well you tolerate the combination.

When it may be used

KRd can be an option after previous treatment for myeloma. The team considers the medicines you have already had, whether the myeloma responded to them, your kidney function, heart health and other treatment options. Ask why KRd is being considered now and which tests will show if it is helping.

Before treatment

Tell your team about heart problems, high blood pressure, breathlessness, swelling, kidney disease, blood clots or stroke. Bring a list of prescriptions and supplements, including aspirin or any blood thinner. Your team usually checks blood counts, kidney and liver function and blood pressure. Some people have a heart assessment before treatment.

Lenalidomide increases the risk of blood clots when used in this combination. Ask what clot prevention is appropriate for you. The team may also give medicine to prevent shingles. Lenalidomide can seriously harm a developing baby. If pregnancy is possible for you or a partner, ask the team about the pregnancy prevention programme and testing before treatment begins.

How treatment is given

You receive carfilzomib as a drip at the cancer unit. The number of visits can change as you move through treatment. Lenalidomide is taken at home on the dates prescribed, with planned rest days. Swallow the capsule whole and follow your pharmacist's instructions if you miss a dose. Dexamethasone may be given at the unit or taken at home. Ask for a calendar that shows all three medicines and which days they are due.

You may have extra fluid around early carfilzomib visits. The team adjusts fluid to your heart and kidney health. Ask how much to drink at home. Tell staff promptly about fever, chills, chest discomfort, dizziness or breathing changes during or after the drip.

Tests and monitoring during treatment

The team checks blood pressure, kidney function, blood counts and blood salts. It may check for fluid build-up or arrange further heart tests if symptoms develop. Tell them about breathlessness when lying down, rapid weight gain, ankle swelling or reduced urine. Ask which myeloma results the team follows and when you will discuss them.

Side effects

Common side effects

- **Tiredness and low blood counts.** Blood tests help detect problems early. Report fever, unusual bruises, dizziness or breathlessness.
- **Diarrhoea, constipation or nausea.** Ask for a plan and tell the team if you are struggling to drink.
- **Higher blood pressure.** If you monitor it at home, ask which readings you should report.
- **Trouble sleeping, increased appetite or higher blood sugar.** Dexamethasone can cause these effects. Follow your diabetes plan if you have one.
- **Aches or a rash.** Report a new rash early. A rash with blisters, peeling or mouth sores needs urgent assessment.

Less common and serious side effects

Carfilzomib can affect the heart, lungs or kidneys. New breathlessness, ankle swelling, rapid weight gain, chest symptoms or reduced urine need assessment. A painful swollen leg can be a sign of a clot. A clot in the lungs can cause sudden breathlessness or chest pain. Take your prescribed prevention medicine and ask what to do if you miss it.

When to seek urgent help

Call your hospital’s 24-hour cancer care number straight away for fever, shaking chills, sudden illness, new breathlessness, painful swelling in one leg, unexpected bleeding, very little urine or a worsening rash. Follow your hospital’s temperature instructions. If you have no written threshold, call at 37.5°C (99.5°F) or above, or below 36°C (96.8°F). Call if you feel very unwell even with a normal temperature.

Seek emergency care for sudden or severe breathlessness, chest pain, coughing up blood with breathing trouble, collapse, stroke symptoms, blistering or peeling skin with illness, or bleeding that will not stop. Tell staff you are receiving KRd.

Practical advice for this treatment

Ask about fluids, blood pressure and heart checks

Carfilzomib can affect heart function and blood pressure. Tell the team if you have heart or kidney disease. Report increasing breathlessness, new ankle swelling or rapid weight gain. Ask whether the team recommends tracking weight or blood pressure at home.

Keep the lenalidomide capsule instructions separate

Check which days you take capsules and which are breaks, including when the cycle changes. Follow the pregnancy prevention programme and arrange any required testing before your next supply. Ask how to handle unwanted capsules safely.

Agree on clot prevention

Tell the team if you have had a clot or take an anticoagulant. Lenalidomide with dexamethasone can increase clot risk, and your team uses your other conditions and blood counts to decide on prevention. Let it know urgently about a new painful swollen limb.

Medicines, interactions and vaccinations

Check new medicines and supplements with the cancer pharmacist. Tell them if you take a blood thinner or medicines for blood pressure. Follow your instructions for clot prevention and antiviral treatment. Ask about vaccines and which ones to delay.

Everyday life

Keep a calendar for infusion days, capsule days and blood tests. If your team asks you to track weight or blood pressure, write down your readings and ask when to call. Arrange help with transport if the visits are tiring. Return unused lenalidomide capsules as instructed and follow pharmacy advice for safe handling.

Pregnancy, fertility and breastfeeding

Follow the lenalidomide pregnancy prevention programme. It may include pregnancy tests, specific contraception and precautions for partners. Ask the team for written dates for each medicine. Contact them immediately if a pregnancy is possible during treatment. Discuss breastfeeding and fertility before you start.

After treatment

Ask which medicines and checks will continue after KRd stops or changes. Keep taking clot prevention or antiviral medicine for as long as your team advises. Report ongoing swelling, breathlessness or fatigue.

Frequently asked questions

Why do some medicines have different rest days?

Each medicine has its own schedule. Ask for a calendar that shows when each one is due.

What if I miss a lenalidomide capsule?

Check the instructions for your product or call the unit. Tell them when the dose was due so they can advise you.

Can I open a capsule if swallowing is difficult?

Ask your pharmacist for help. Lenalidomide capsules should be swallowed whole.

Why am I offered a blood thinner or aspirin?

The combination can increase clot risk. Your team will choose prevention based on your own clotting and bleeding risks.

How much water should I drink?

Ask your team how much to drink before and after carfilzomib. You may also have fluids through the drip. The team adjusts the plan if you have heart or kidney problems or a fluid limit. Report new swelling, rapid weight gain or breathlessness promptly.

Should I report ankle swelling?

Yes, particularly if it is new or increasing, or if you are also breathless or gaining weight quickly.

Why does my blood pressure need checking?

Carfilzomib can raise blood pressure. Measurements help the team detect changes early.

Is shortness of breath expected?

There are several causes and some need urgent treatment. Call for new symptoms and seek emergency care if they are sudden or severe.

What if I feel unwell later on the day of an infusion?

Call the unit for advice. Tell them when you received carfilzomib and what symptoms have started.

Why does lenalidomide have extra pregnancy rules?

It can seriously harm a developing baby. The programme explains what precautions and tests apply to you.

Can I take a steroid in the evening?

Follow your schedule. If it disturbs sleep, ask the team whether the time can be changed.

How will I know whether KRd is working?

The team looks at myeloma blood or urine tests and your symptoms. Ask when you will review the results.

Does everyone get the same number of visits?

The carfilzomib schedule can vary and can change later in treatment. Check your current calendar.

Can I keep taking other myeloma support medicines?

Check with the team. It will explain which bone, infection or clot prevention treatments are part of your current plan.

Individual medicine guides

- Carfilzomib
- Lenalidomide
- Dexamethasone

Sources and further reading

Read this guide alongside your hospital's plan. Ask your pharmacist to confirm the exact product dispensed in India and follow the instructions for that product.

Summary of Product Characteristics (SmPC) and prescribing information

- Carfilzomib (Kyprolis) - EU SmPC
- Lenalidomide (Revlimid) - EU SmPC
- Dexamethasone tablets - UK SmPC
- Dexamethasone injection - UK SmPC

Clinical protocols and other references

- ASPIRE trial of carfilzomib, lenalidomide and dexamethasone

Additional sources

- Macmillan Cancer Support, KRd
- Cancer Research UK, KRd
- eviQ, KRd patient information

Editorially approved by Dr (Prof) Vijay Agarwal

Professor and Lead Consultant - Medical Oncology

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