MEDICINE INFORMATION

CAP chemotherapy for thymoma

Patient information about CAP chemotherapy, including heart and kidney monitoring and the difference between CAP and capecitabine.

At a glance

Treatment	Cyclophosphamide + Doxorubicin + Cisplatin
When it may be used	The combination has been used for selected people with advanced thymoma, a tumour that starts in the thymus in the chest.
How it is given	Cisplatin, doxorubicin and cyclophosphamide are all given through a vein.
Before you start	Mention heart, kidney, bladder and hearing problems and past chemotherapy or chest radiotherapy.

What this treatment is and how it works

CAP combines three medicines that damage the genetic material cells use to multiply. CAP is an abbreviation for the three medicines in this regimen.

When it may be used

Ask what the team hopes treatment will achieve and whether surgery or radiotherapy is planned.

Before treatment

If you have myasthenia gravis, a condition that causes muscle weakness, tell the team about changes in swallowing or breathing.

How treatment is given

Extra fluids and anti-sickness medicines are given with cisplatin. Tell staff immediately about stinging or swelling during the drip.

Tests and monitoring during treatment

Blood counts, kidney function and salts such as magnesium are checked. A heart scan and hearing checks may also be needed. Ask how scans will be used to assess the tumour.

Side effects

Common or more frequent side effects

- **Changes in blood counts.** Treatment can lower the white cells that fight infection, the red cells that carry oxygen and the platelets that stop bleeding. You may feel tired or get breathless sooner than usual. Let the unit know about nosebleeds, new bruises or small red or purple spots. Fever or shaking chills needs a call to the urgent number even if your next blood test is already booked.
- **Nausea and vomiting after cisplatin.** Cisplatin can cause nausea on the treatment day and on later days. Keep the prescribed anti-sickness timetable after going home. Ask which medicine to use if nausea breaks through. Contact the unit if you cannot drink or take essential medicines. The team may need to check hydration and kidney function.
- **Urine colour after doxorubicin.** Doxorubicin can colour the urine red or orange temporarily. Pain, clots or urine that stays red need an assessment. Call the team if you are unsure whether the colour is from the medicine or if you see blood. The team will want to know when you last received the infusion.
- **Sore mouth and changes in eating.** Your mouth may feel tender or dry, and some foods may sting. A soft toothbrush and the mouth care your unit recommends can help. Tell the team about ulcers, a white coating, or trouble swallowing so it can assess for mouth infection and help with pain. If you cannot drink enough, contact the unit promptly.

Other reported side effects

Doxorubicin can briefly colour urine pink or red. Report persistent changes, blood or pain passing urine. Tell the team about ringing in the ears or numb fingers and toes.

Serious effects to recognise

- **Pain or swelling at the infusion site.** Some of the medicines used in this regimen can damage skin and tissue if they leak outside a vein. Tell staff immediately about burning, stinging, tightness, leaking fluid or swelling during a drip. Contact the unit if the site changes after you go home.
- **Effects on heart function.** Doxorubicin can affect the way the heart pumps during or after treatment. Tell the team about swelling, shortness of breath when lying flat or becoming more breathless doing usual activities. Check whether you need a heart scan or follow-up even when you feel well.

The team also checks kidney function because cisplatin can damage the kidneys. Report blood in urine, which can be a sign of bladder irritation from cyclophosphamide.

When to seek urgent help

Call your hospital's 24-hour cancer care number straight away for fever, shaking chills, bleeding, reduced urine, persistent vomiting or new weakness with swallowing or breathing difficulties. Follow your hospital's written 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 when your temperature is normal.

Seek emergency care for severe breathing difficulty, swelling of the face or throat, chest pain, collapse or bleeding that will not stop.

Practical advice for this treatment

Prepare for fluids and organ checks

Cisplatin often requires extra fluid before or after the drip. Check how long the hospital visit may take. Bring details of hearing, kidney or balance problems. Tell the team about previous doxorubicin or chest radiotherapy, as they may affect heart monitoring.

Ask who to call if your breathing or strength changes

Tell the team about myasthenia gravis if you have it. It is a condition that can affect muscle strength and is associated with some thymomas. New weakness affecting swallowing or breathing warrants prompt assessment. Discuss which team will manage your medicines for it during chemotherapy.

Watch the infusion site and urine

Report pain, burning or swelling at the drip site immediately. Doxorubicin can injure tissue if it leaks. If your urine is red and you have pain on urinating or see clots, call the hospital. Cyclophosphamide can irritate the bladder and cisplatin can affect kidney function.

Medicines, interactions and vaccinations

Bring a list of medicines, including treatments for myasthenia gravis if relevant. Check before using non-prescription painkillers, supplements or vaccines.

Everyday life

Follow the unit's fluid instructions. Call if drinking becomes difficult, particularly if you already have trouble swallowing.

Pregnancy, fertility and breastfeeding

Ask about contraception, fertility and breastfeeding before starting. Get written timing for precautions after your last doses.

After treatment

Ask which scans will be reviewed and if other treatment is being considered. Report ongoing numbness, hearing problems, swelling or breathlessness.

Frequently asked questions

Is CAP the same as capecitabine?

No. CAP here refers to three medicines given at the treatment unit.

What is the thymus?

It is a small organ in the chest, behind the breastbone.

Why do I need extra fluids?

They help protect the kidneys while cisplatin is given.

What if my hearing changes?

Report new ringing or reduced hearing promptly.

Why do previous chemotherapy records matter?

Previous doxorubicin and similar drugs can affect heart risk and monitoring.

What if muscle weakness worsens?

Tell your team about new drooping eyelids, slurred speech or trouble chewing or swallowing. Thymoma can occur with myasthenia gravis, a condition that causes muscle weakness. Seek emergency care if breathing becomes difficult or you cannot swallow safely.

What does CAP stand for in thymoma treatment?

For this use, CAP means cyclophosphamide, doxorubicin and cisplatin. The full names on your plan are more informative than the abbreviation, which can be used for other treatments.

Individual medicine guides

- Cyclophosphamide
- Doxorubicin
- Cisplatin

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

- Cyclophosphamide injection - UK SmPC
- Conventional doxorubicin injection - UK SmPC
- Cisplatin injection - UK SmPC

Additional sources

- NCI thymoma treatment evidence
- Study of CAP in advanced thymoma

Editorially approved by Dr (Prof) Vijay Agarwal

Professor and Lead Consultant - Medical Oncology

Review record updated: 14 November 2026 · Editorial review policy