MEDICINE INFORMATION

EMA-CO chemotherapy

A guide to EMA-CO for gestational trophoblastic neoplasia, with information on the alternating medicines and hormone tests.

At a glance

Treatment	Etoposide + Methotrexate + Dactinomycin + Cyclophosphamide + Vincristine
When it may be used	This treatment is used for some higher-risk gestational trophoblastic tumours.
How it is given	Etoposide, methotrexate, dactinomycin, cyclophosphamide and vincristine are given through a vein. Folinic acid, a protective medicine, may be given by mouth or through a vein.
Before you start	Bring your pregnancy and treatment history and a list of medicines.

What this treatment is and how it works

EMA-CO has two parts. EMA uses etoposide, methotrexate and dactinomycin. CO uses cyclophosphamide and vincristine. The two parts alternate.

When it may be used

These tumours arise from tissue that normally develops into the placenta during pregnancy.

Before treatment

Ask how to keep track of human chorionic gonadotrophin (hCG), the hormone measured to monitor this condition.

How treatment is given

Your calendar shows which medicines you receive at each visit. Folinic acid is given after methotrexate to protect healthy cells. Ask how the team will supply it and what to do if you miss it.

Tests and monitoring during treatment

The team checks blood counts, kidney and liver function, and hCG. hCG can guide decisions even after symptoms settle. The team can explain why some treatment may continue after it reaches the expected range.

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.
- **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.
- **Constipation and nerve symptoms.** Some drugs in this regimen can slow your bowel and affect nerves. Write down how often you pass stools, and tell the team about tingling, weakness or a change in your balance. Ask about a bowel plan if you already take medicines that contribute to constipation. With severe belly pain, vomiting or a swollen abdomen, call urgently.
- **Taste and appetite changes.** Your favourite foods may taste different. Try smaller meals that suit you and ask the team for nutrition support if you are losing weight or avoiding most foods. Call if you cannot keep liquids down, you are taking much less than usual, or your urine becomes very scant.

Other reported side effects

Ask about early help with mouth sores, difficulty eating or constipation. Tell the nurse about burning around the drip site.

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.

Serious infection and bleeding can occur when counts are low. Unexpected or heavy vaginal bleeding needs prompt assessment, especially with pain, faintness or dizziness.

When to seek urgent help

Call your hospital’s 24-hour cancer care number for fever, shaking chills, new bleeding, severe belly pain, worsening constipation with vomiting or inability to drink. Heavy vaginal bleeding, bleeding that will not stop, or bleeding with faintness needs emergency care. 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

Follow the alternating timetable

The EMA part contains etoposide, methotrexate and dactinomycin. The CO part contains cyclophosphamide and vincristine. Ask when each part of your cycle is due and when blood for the pregnancy hormone human chorionic gonadotrophin (hCG) will be taken. The hormone is used here as a marker of gestational trophoblastic disease. If a session is postponed, check how the following appointments move.

Check folinic acid and practical arrangements

Folinic acid, also called leucovorin, protects healthy cells after methotrexate. If you are taking any rescue doses at home, check when each dose is due before you leave. Call the unit if you miss or vomit a dose. Report sore mouth or trouble swallowing, because this can affect drinking and taking tablets.

Get advice about bowel changes early

Vincristine can slow the bowel. Ask what to use for constipation and which symptoms need quick assessment. Tell the team if you have tingling, start tripping or find daily tasks difficult.

Plan follow-up before stopping treatment

Ask how long you will continue hCG tests and when it will be safe to try for a pregnancy. A pregnancy raises hCG, which can otherwise be used to look for return of the disease. Your follow-up team will explain which contraceptive options suit you.

Medicines, interactions and vaccinations

Tell the team about non-prescription painkillers, antibiotics and supplements. Check before vaccinations. Follow the exact folinic acid instructions given by your team.

Everyday life

Keep the hCG testing dates and hospital appointments in the same calendar. Ask for help with transport or time away from work if the frequent visits are difficult.

Pregnancy, fertility and breastfeeding

Follow your specialist’s written contraception plan. A new pregnancy raises hCG and can make follow-up results harder to interpret. Ask when to plan a pregnancy safely.

After treatment

Continue hCG checks as advised. Ask for a follow-up schedule, whom to call for abnormal bleeding and when to discuss a future pregnancy.

Frequently asked questions

What does hCG tell the team?

It helps measure the activity of the tumour and monitor response and recovery.

Why are there two groups of medicines?

The EMA and CO portions use different medicines on different days. Your team gives you a calendar.

Why do I need folinic acid?

It helps protect healthy cells from methotrexate. Follow the timing your team gave you.

Can treatment continue after hCG is normal?

Yes. Planned chemotherapy can continue after the pregnancy-related hormone human chorionic gonadotrophin (hCG) returns to normal. Ask the team for the expected final treatment date and the blood-test calendar afterwards. Follow the team's advice about pregnancy during follow-up because a pregnancy also raises hCG.

What if I have new vaginal bleeding?

Tell your treatment team. Seek urgent help for heavy bleeding or feeling faint.

When can I try for a pregnancy?

Ask your specialist for a plan based on the end of treatment and hCG monitoring.

Individual medicine guides

- Etoposide
- Methotrexate
- Dactinomycin
- Cyclophosphamide
- Vincristine

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

- Etoposide infusion - Irish HPRA SmPC
- Methotrexate injection for systemic use - UK SmPC
- Dactinomycin (Cosmegen) - UK SmPC
- Cyclophosphamide injection - UK SmPC
- Vincristine injection - UK SmPC
- Folinic acid (calcium folinate) tablets - UK SmPC
- Folinic acid (calcium folinate) injection - UK SmPC
- Intravenous etoposide - US prescribing information

Clinical protocols and other references

- eviQ EMA-CO clinical protocol and monitoring
- eviQ EMA-CO protocol for high-risk gestational trophoblastic disease

Additional sources

- eviQ patient guide for EMA-CO

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