BRING THIS TO YOUR DOCTOR · GREY PEPTIDES

Mifamurtide

Also called: Mepact; L-MTP-PE; Liposomal muramyl tripeptide phosphatidylethanolamine; CGP-19835

What it is

A liposomal muramyl tripeptide that activates macrophages, EU-authorised as Mepact (2009) for osteosarcoma; not FDA-approved.

Approval status

Not FDA Approved. Not approved by FDA. Authorised in the EU as Mepact on March 6, 2009, for children, adolescents and young adults with high-grade resectable non-metastatic osteosarcoma after complete resection, combined with postoperative chemotherapy (EMA medicines register, downloaded October 3, 2026).

Dosing, as printed in the page's Recommended Dosing box

Used in human trials

No manufacturer dose exists for this use: these are amounts given in published trials, not recommendations.

Protocol and source	Dose	Frequency	Duration	Route
Study: recurrent or metastatic osteosarcoma (patient-access programme) **[Human study]** PMID 23997016	2 mg/m²	Twice weekly, then weekly	Course of adjuvant therapy	Intravenous infusion

Educational information, not medical advice. Each dose above is tagged with its source: an approved label, a published human study, animal data, or amounts reported by users. None is a recommendation for you. An unapproved compound has no established safe or effective human dose, and products sold for "research use only" are not made or tested for people. Talk to a doctor before acting on anything on this site, including before you start, stop or change any medicine or dose.

Key human evidence

The first 3 of the 9 human studies carded on the page (15 study cards in all):

• **INT-0133: the pivotal trial** (Human, 2008). Among 662 patients with resectable, non-metastatic osteosarcoma randomised in a 2 x 2 design, adding muramyl tripeptide to chemotherapy raised 6-year overall survival from 70% to 78% (P = .03; hazard ratio 0.71); the gain in event-free survival was a trend only (P = .08). **PMID 18235123**

• **Metastatic patients in the same trial** (Human, 2009). In the 91 patients with metastatic disease at diagnosis, 5-year event-free survival was 42% with liposomal MTP-PE and 26% without, and overall survival 53% against 40%; neither difference was statistically significant (P = .23 and .27). **PMID 19637348**

• **Patient-access study in relapsed disease** (Human, 2014). 205 patients with recurrent or metastatic osteosarcoma, given 2 mg/m2 twice weekly then weekly, had 3,679 infusion-related events over 7,482 infusions, very rarely grade 3 or 4; the half-life was 2 hours and 2-year survival 45.9%, uncontrolled. **PMID 23997016**

Interactions

Human interaction studies found on PubMed (search of October 3, 2026):

• With high-dose methotrexate: no significant change in methotrexate exposure (median AUC24-72 67.6 vs 84.5 umol*h/L, P = 0.61) in 11 children given mifamurtide; retrospective, 21 patients (PMID 41999402)

Side effects and cautions

Reported side effects	Contraindications and cautions
• Fever, headache, flu-like symptoms and rigors, mostly short-term	• Used in the EU only for the authorised osteosarcoma indication, with chemotherapy

Five questions to ask

1. Mifamurtide is listed here as "Not FDA Approved". What does the evidence on this sheet mean for someone in my situation, and is there an approved treatment I should consider instead?
2. Here are the medicines and supplements I take. Do any of them interact with Mifamurtide? This sheet lists the interactions on record.
3. Which side effects should make me stop and call you, for example fever?
4. Do any of the cautions on this sheet apply to me, such as: Used in the EU only for the authorised osteosarcoma indication, with chemotherapy?
5. What should we check before I start and while I am on it (blood tests, blood pressure, weight), and how often?

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