Hypercalcemia of Malignancy

Treatment of hypercalcemia of malignancy, calcitriol-mediated hypercalcemia, and hypercalcemia from parathyroid carcinoma in adults.

2023 Endocrine Society
Hypercalcemia of Malignancy Treatment Guideline
El-Hajj Fuleihan et al. · JCEM 2023;108:507–528

GRADE · 1 · Strong · 2 · Suggest For · 2- · Suggest Against · Ungraded / Best Practice

1 General Hypercalcemia of Malignancy

1 Treat with an **IV bisphosphonate or denosumab** rather than management without one.

2 **Denosumab preferred over IV bisphosphonate** as initial therapy.

2 For **severe HCM** (serum calcium >14 mg/dL), add **calcitonin** to the IV bisphosphonate or denosumab as initial therapy — limit calcitonin to **48–72 hours** (tachyphylaxis).

2 Refractory / Recurrent & Calcitriol-Mediated HCM

2 **Refractory/recurrent HCM on IV bisphosphonate:** add **denosumab**.

2 **Calcitriol-mediated HCM** (e.g., lymphoma) with persistent severe/symptomatic hypercalcemia despite glucocorticoids: add an **IV bisphosphonate or denosumab**.

3 Hypercalcemia From Parathyroid Carcinoma

2 Treat with a **calcimimetic or an IV bisphosphonate/denosumab** — start with a calcimimetic if mild + symptomatic; start with IV bisphosphonate/denosumab if moderate-to-severe (faster onset, better tolerability). Consider **surgery** once severe hypercalcemia is controlled, when feasible.

2 Not controlled on a **calcimimetic**: add an **IV bisphosphonate or denosumab**.

2 Not controlled on an **IV bisphosphonate or denosumab**: add a **calcimimetic**.

Remember — IV bisphosphonates and denosumab act faster and are generally better tolerated than calcimimetics, which have dose-related adverse effects.

El-Hajj Fuleihan G, Clines GA, Hu MI, et al. Treatment of Hypercalcemia of Malignancy in Adults: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab.* 2023;108(3):507–528.