

UNTANGLING HYPERCALCEMIA OF MALIGNANCY

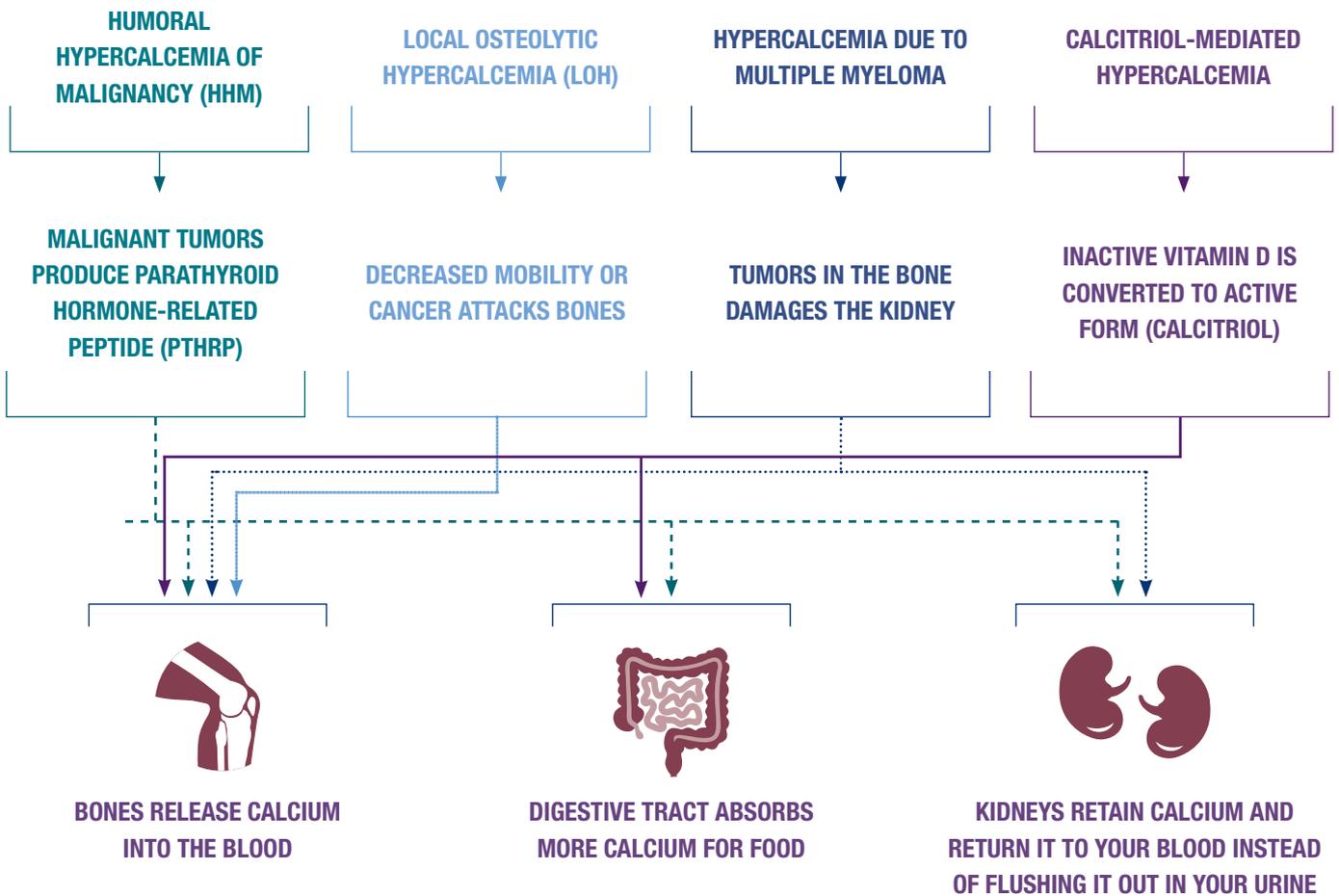
Hypercalcemia of malignancy (HCM) is a condition that leads to increased blood calcium levels which is the result of an underlying cancer. This condition, if not treated, can lead to a decreased function in several organs. There are several treatment options available to assist with management, but the best treatment will be treating the underlying cancer.



In patients with cancer, there is approximately 10-30% of patients who will develop hypercalcemia. This incidence can vary among the various cancer groups with more aggressive cancers that have progressed to a stage IV, having a higher chance of developing hypercalcemia.



CAUSES OF HYPERCALCEMIA OF MALIGNANCY



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 Developed for patients based on *Treatment of Hypercalcemia of Malignancy in Adults: An Endocrine Society Clinical Practice Guideline*

SYMPTOMS

		MILD HCM	MODERATE HCM	SEVERE HCM
	Cardiovascular	Fatigue	Irregular heartbeat	Dangerous irregular heart rhythms
	Gastrointestinal	Constipation and decreased appetite	Constipation, abdominal pain, nausea, vomiting	Constipation, stomach pain, nausea, vomiting, decreased appetite
	Renal	Increased urine output	Increased urination and decreased renal function, and kidney stones can also develop	Rapid kidney failure, pain with urination, increased or decreased urination
	Neurological	Mild confusion/fatigue, and anxiety/depression	Increased fatigue and mild altered mental status, and anxiety/depression	Lethargy (severe fatigue) and altered mental status (confusion)
	Musculoskeletal	Mild bone and muscle pain	Moderate muscle and bone pain	Increased bone and muscle pain

TREATMENT RECOMMENDATIONS

Your treatment will depend on the cause of your high blood calcium. In general, the best treatment is to take care of the condition that is causing the high blood calcium, such as starting anti-cancer therapy. However, there are several medicines that can help lower blood calcium, independent of the cause, including:

-  **BISPHOSPHONATE:** Works by preventing the destruction of old bone which means calcium will not be released in the blood thereby preventing the blood calcium level from increasing
-  **DENOSUMAB:** Works similar to bisphosphonates and prevents bones by breaking down
-  **HYDRATION:** Increasing water intake will help the body get rid of extra calcium
-  **CALCITONIN:** A hormone made by the thyroid gland, which tell your kidneys and bones to change how they handle calcium thereby decreasing calcium levels

QUESTIONS TO ASK YOUR HEALTHCARE PROVIDER

What is the reason my calcium level is high?

How can we treat my calcium level?

Will I need surgery? If so, who are the leading surgeons that perform this type of surgery?

What can I do to prevent my calcium from increasing again?

If I need dental surgery or any dental procedure, do I need to tell you before I receive treatment for HCM?



Patients have questions. We have answers.

Endocrine Society is your trusted source for endocrine patient education.

Our free, online resources are available at endocrine.org/patient-engagement