

**THYROID CANCER****Lenvatinib is effective in advanced medullary thyroid cancer****BACKGROUND**

Medullary thyroid cancer is a relatively rare type of thyroid cancer that often runs in families. Unlike the more common papillary and follicular thyroid cancers, surgery is the only initial therapy as radioactive iodine therapy is ineffective because the cells do not take up the radioactive iodine. Until recently, there was little therapy available to treat patients who have persistent or recurrent medullary thyroid cancer that cannot be removed by surgery. Lenvatinib is a new chemotherapy drug that can block multiple targets that cause cancers to grow. These drugs typically are not curative, but can delay the time to progression of the cancer. In an international multicenter clinical trial, Lenvatinib showed improved progression-free survival (PFS) for patients with metastatic papillary and follicular cancers unable to be treated with the usual therapies such as surgery or radioactive iodine therapy. Lenvatinib has since been approved by the FDA for use in papillary and follicular thyroid cancer. This report is a Phase 2 clinical trial to determine whether Lenvatinib is effective to treat metastatic medullary thyroid cancer.

THE FULL ARTICLE TITLE

Schlumberger M et al. A phase 2 trial of the multi-targeted tyrosine kinase inhibitor lenvatinib (E7080) in advanced medullary thyroid cancer (MTC). *Clin Cancer Res.* August 26, 2015 [Epub ahead of print].

SUMMARY OF THE STUDY

A total of 59 patients with unresectable or metastatic medullary thyroid cancer were included in the trial. A total

of 44% of patients enrolled had been treated with another drug prior to enrolling in the trial. Lenvatinib was given starting at 24 mg daily dose for 8 cycles, each for 28-days. The dose was decreased for side effects or toxicities.

Of the patients who completed 8 cycles of Lenvatinib, 44% showed a 36% objective response to the study drug within 3.5 months of starting the drug. Calcitonin and CEA, cancer markers for medullary thyroid cancer, decreased in all subjects. The median time to progression of medullary thyroid cancer was 9 months. A total of 60% of patients required lower doses of Lenvatinib due to toxicity or side effects and 24% of patients had to stop the drug for severe side effects.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The study showed that Lenvatinib can be an effective drug in patients with metastatic or unresectable medullary thyroid cancer, including those patients who had already been treated ineffectively with another chemotherapy drug. More studies need to be done to figure out which patients will best respond to Lenvatinib but this study is hopeful for the treatment of metastatic medullary thyroid cancer since there is not yet a cure.

—Wendy Sacks, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid/>

ABBREVIATIONS & DEFINITIONS

Medullary thyroid cancer: a relatively rare type of thyroid cancer that often runs in families. Medullary cancer arises from the C-cells in the thyroid.

Clinical trials: when a new drug is developed, it must undergo an extensive series of steps, called phases, to prove that it is more effective in patients than the drugs that are currently available to treat the condition. A Phase I trial tests a new drug or treatment in a small

group of people for the first time to evaluate its safety, determine a safe dosage range and identify side effects. A Phase II trial gives the drug to a larger group of people to see if it is effective and to further evaluate its safety. A Phase III trial gives the drug to large groups of people to confirm its effectiveness, monitor side effects, compare it to commonly used treatments and collect information that will allow the drug or treatment to be used safely.

**THYROID CANCER**, continued

Calcitonin: a hormone that is secreted by cells in the thyroid (C-cells) that has a minor effect on blood calcium levels. Calcitonin levels are increased in patients with medullary thyroid cancer.

Carcinoembryonic antigen (CEA): a protein that can be made by certain cancers such as colorectal cancer and medullary thyroid cancer. CEA may be measured with a blood test.

Thyroid Awareness Monthly Campaigns

The ATA will be highlighting a distinct thyroid disorder each month and a portion of the sales for Bravelets™ will be donated to the ATA. The month of November is **Hyperthyroidism Awareness Month** and a bracelet is available through the [ATA Marketplace](#) to support thyroid cancer awareness and education related to thyroid disease.

