

30-year study shows that moderate hormone suppression may be enough in thyroid cancer

July 17 2015, by Garth Sundem

A study of long-term thyroid cancer outcomes shows, among other findings, that moderate suppression of thyroid-stimulating hormone (TSH), which drives the disease, may be as beneficial as more extreme hormone suppression. Extreme TSH suppression is associated with increased side effects including osteoporosis and heart rhythm irregularities. Results are published online ahead of print in the journal *Thyroid*.

"In these patients, if TSH levels are elevated, recurrence rates are higher. Moderate TSH suppression tends to bring the level just below the normal range and what we show is that heavily suppressing TSH even further may have diminishing returns," says Bryan Haugen, MD, investigator at the University of Colorado Cancer Center, professor and head of the Division of Endocrine, Metabolism & Diabetes and Kern Chair of Endocrine Neoplasms Research at the University of Colorado School of Medicine. Haugen is also chair of a task force currently updating guidelines that define the standard of care for the treatment of thyroid cancer.

The international, multi-center study, which began in 1987, collected data from 4,941 thyroid cancer patients.

"This is a unique data resource," Haugen says. "Previous studies have been limited to the small number of patients that could be enrolled at a single center or to studies that mine data from more general cancer registries. Because we combined the patient data from about 14

participating centers and collected the data ourselves, we have a large set of high-quality, prospectively collected data."

For example, Haugen points out, the group could be sure that terms like "progression-free survival" and "recurrence" were measured the same way for every patient.

"Basically, because we built the database ourselves, we could be sure we were comparing apples to apples," Haugen says.

Additional findings include confirmation of previous, smaller studies showing that patients with stage III and IV disease had improved survival when treated with radioactive iodine after surgery. Also, while the study showed that extreme hormone suppression offered no additional survival benefit in high-risk patients, it showed that mild suppression was useful even with low-risk patients.

"In my mind, this study might give doctors pause when prescribing long-term, extreme TSH suppression in thyroid cancer patients. Contrary to our results, there is evidence from previous studies that extreme suppression may help in high-risk patients, but maybe then after a few years, when there is no evidence of disease recurrence, this study suggests that doctors could back off when we wouldn't have before," Haugen says.

In Haugen's opinion, this study shows the necessity of a prospective, randomized control trial testing extreme versus moderate TSH suppression in high-risk [thyroid cancer patients](#).

More information: *Thyroid*,
www.ncbi.nlm.nih.gov/pubmed/26171797

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