

Leptin linked with more aggressive thyroid cancer in Middle Eastern region

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Leptin, a molecule linked with obesity, may play a crucial role in predicting poor prognosis from thyroid cancer, at least in the Middle Eastern region of the world, according to data presented at the American Association for Cancer Research Frontiers in Basic Cancer Research Meeting.

"Leptin receptor expression may be a useful [molecular marker](#) in predicting the level of aggression of Middle Eastern [thyroid cancer](#) that can help guide treatment options and follow-up care," said lead researcher Khawla S. Al-Kuraya, M.D., director of the research center at King Faisal Specialist Hospital and Research Center in Riyadh, Saudi Arabia.

Thyroid cancer is the eighth most common cancer among American women, but the second most common in Saudi Arabian women. This high prevalence is seen in all Gulf Council countries, according to Al-Kuraya.

Al-Kuraya said there is some evidence that thyroid tumors in the Middle East are unique on a molecular level, particularly an increased amplification of the PIK3CA gene.

For the current study, the researchers focused on measuring the level of leptin and its receptor in 536 human thyroid cancer samples. They found overexpression of the leptin receptor in 80 percent of the cases. This overexpression was significantly associated with poor disease survival.

Similarly, increased leptin receptor expression was linked with older age, larger tumor size, advanced stage and metastasis. Furthermore, the researchers have conducted numerous in vitro experiments on thyroid cancer cells in the lab and demonstrated that leptin works on the life process of cancer cells by stimulating growth and preventing death.

Leptin is the product of the "obesity gene" and regulates food intake and energy expenditure. Although this is the first study in which researchers have observed its role in thyroid cancer patients, it has previously been implicated in poor prognosis among patients with gastric, endometrial and [breast cancer](#).

Leptin receptor status can be easily assessed with a fine needle biopsy, according to Al-Kuraya.

"This information will be useful in predicting disease aggressiveness and making subsequent treatment decisions about type of surgery, follow-up and iodine dosage," said Al-Kuraya.

Source: American Association for Cancer Research ([news](#) : [web](#))

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