MEDICAL BREAKTHROUGHS
RESEARCH SUMMARY

TOPIC: CANCER PEN SAMPLES CELLS BEFORE SURGERY
REPORT: **MB #4739**

TESTING: There are 56,000 new cases of thyroid cancer in the US each year. When it comes to diagnosing thyroid cancer there are a lot of tests that people can take. There is a physical exam where a doctor examines the neck to feel for physical changes in the thyroid nodules. Blood tests may determine if the gland is working normally. Doctors also may remove a sample of the thyroid by using a fine needle aspiration biopsy. Ultrasound imaging is used to guide the needle through the nodule. Doctors send the section that is resected to a laboratory to look for any cancerous cells. Over 95 percent of the nodules taken out are benign. Doctors may also just use an ultrasound to look at the lower neck. This can be used to show if the nodule is likely to be benign or more cancerous.
(Source: https://www.mayoclinic.org/diseases-conditions/thyroid-cancer/diagnosis-treatment/drc-20354167)

TREATMENT: Surgery is the traditional treatment for thyroid cancer. Doctors also have the option of removing the cancer through the lip to avoid scarring. An ultrasound can be used as well to see if the lymph nodes also need to be removed. If the cancer is medullary, the lymph nodes are removed. Up to a week and a half after the thyroid has been removed, patients can have radioactive iodine therapy, which consists of taking a pill in a dose that is calculated specifically for each patient.
(Source: https://www.endocrineweb.com/conditions/thyroid-cancer/thyroid-cancer)

NEW PROCEDURE: The cancer pen, or MasSpec Pen, is a way for cancer surgeons to not only determine if a cancer is benign or cancerous but also where the tumor begins and ends. It was first presented at the American Chemical Society Fall 2019 National Meeting & Exposition. Principal Investigator Livia Eberline, Ph.D, from University of Texas at Austin, says the impetus for the creation of the device was to provide molecular information in the operating room. The device takes a small droplet of water on the tissue surface for about three seconds. That is then transferred to the mass spectrometer where molecules are identified. The device has also been tested on breast, brain and pancreatic cancer.

(Source: https://www.sciencedaily.com/releases/2019/08/190827084729.htm)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com