Doctors at the National Institutes of Health (NIH) seek patients with thyroid cancer that spread outside the thyroid – to the lymph nodes, lungs or bones. The standard treatment in such situation is therapy with radioactive iodine (RAI).

In this study, doctors will assess a new imaging tool - $^{124}$I PET/CT, which enables evaluation of how much iodine goes into the tumor. The study goal is to compare how much iodine goes into cancer cells after two different methods of stimulation of RAI uptake:

1) A shot of a recombinant human thyroid stimulating hormone (TSH) called Thyrogen
2) Stimulation with your own TSH, which is achieved by stopping thyroid hormone medication for 4 weeks.

The imaging will be followed by therapy with RAI dose individualized to each patient, based on the tumor uptake measured by $^{124}$I PET/CT.

Study-related procedures and medications are provided at no cost.

Who can participate?
- 18 or older who have thyroid cancer that has spread outside the thyroid

Participation Includes:
- Two admissions to the NIH Clinical Center, about 4 weeks apart
- A low iodine diet for two weeks before each admission, to make cancer cells “hungry” for iodine
- Therapy with radioactive iodine, if indicated, and evaluation of response to treatment at least yearly for the next 5 years

NIH- Clinical Center
Office of Patient Recruitment
1-800-411-1222 (Refer to study# 19-DK-0050)
TTY users call via MD Relay 7-1-1
Se habla español
PRPL@cc.nih.gov
Online: https://go.usa.gov/xy5cx

The NIH Clinical Center, America’s Research Hospital is located in Bethesda, Maryland, on the Metro red line (Medical Center).