

RAI-refractory DTC

A DIFFICULT AND PERSISTENT THYROID CANCER¹

What is Progressive, RAI-refractory DTC?



RAI-refractory DTC, which stands for radioactive iodine-refractory differentiated thyroid cancer (DTC), is DTC that **NO LONGER RESPONDS TO RADIOACTIVE IODINE (RAI) THERAPY**. DTC includes papillary and follicular (including Hürthle Cell) thyroid cancers.

Some Patients' Differentiated Thyroid Cancers May Persist or Recur After Surgery and RAI^{1,2}



WHILE MOST DTC PATIENTS RESPOND TO SURGERY AND RADIOACTIVE IODINE

TREATMENT, **IN SOME PATIENTS THE CANCER CAN CONTINUE TO PROGRESS.**²

THESE PATIENTS ACCOUNT FOR APPROXIMATELY **5%**

of the nearly 43,800 patients diagnosed with thyroid cancer in the United States in 2022.^{2,3}

Some Patients Become Refractory to RAI

RAI-refractory DTC can be classified in the following basic ways:⁴

1. When malignant/metastatic tissue does not concentrate RAI (no uptake outside the thyroid bed at the first therapeutic whole-body scan)
2. The tumor tissue loses the ability to concentrate RAI after previous evidence of RAI-avid disease (in the absence of stable iodine contamination)
3. RAI is concentrated in some lesions but not in others
4. Metastatic disease progresses despite a significant concentration of RAI

PATIENTS WHO SHOW RADIOGRAPHIC EVIDENCE OF DISEASE PROGRESSION AND ARE RADIOACTIVE IODINE REFRACTORY MAY BE IN NEED OF A SYSTEMIC TREATMENT.⁴

Significant Need

THE PROGNOSIS FOR THESE PATIENTS WHOSE DTC PERSISTS OR RECURS AFTER SURGERY AND RAI IS POOR⁷



THERE ARE A LIMITED NUMBER OF TREATMENT OPTIONS AVAILABLE^{5,6}

References:

1. Gild M et al. Multikinase inhibitors: a new option for the treatment of thyroid cancer. *Nature Reviews Endocrinology*. 2011; 7: 617-624.
2. Bible K et al. Efficacy of pazopanib in progressive, radioiodine-refractory metastatic differentiated thyroid cancers: Results of a phase 2 consortium study. *Lancet Oncology*. 2010; 11(10): 962-972.
3. SEER Cancer Statistics Factsheets: Thyroid Cancer. National Cancer Institute. Bethesda, MD. Available at <https://seer.cancer.gov/statfacts/html/thyro.html>.
4. Haugen B et al. 2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer. 2016; 26(1)
5. Kunadharaju R, Goyal G, Rudraraju A, Silberstein PT. New Treatment Options for Metastatic Thyroid Cancer. *Fed Pract*. 2015; 32(Suppl 7): 21S-26S.
6. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines[®]) for Thyroid Carcinoma V.2.2022. ©National Comprehensive Cancer Network, Inc. 2022. All rights reserved. Accessed July 4, 2022.
7. Durante C, Haddy N, Baudin E, et al. Long-term outcome of 444 patients with distant metastases from papillary and follicular thyroid carcinoma: benefits and limits of radioiodine therapy. *J Clin Endocrinol Metab*. 2006 Aug;91(8):2892-9

