

# Trends and outcomes in management of thyroid cancer in Ireland

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## Background:

Management of thyroid cancer has undergone a paradigm shift in the recent past with some jurisdictions advocating for observation of low-risk lesions. The use of radioactive iodine (RAI) has been rationalised due to observational evidence demonstrating little impact on survival.

## Methods:

A retrospective cohort study of National Cancer Registry of Ireland data, 1994-2019.

## Results:

Where therapeutic treatment was undertaken, surgery was used in 95.7% of cases (n=3,587). RAI was used in 27.6% (n=1035) while 7.4% (n=277) underwent external beam radiotherapy (EBR). The use of RAI rose significantly from the 2000s for all stages of papillary thyroid cancer (PTC) but has declined significantly in use since 2014. Disease-specific survival (DSS) was improved in PTC treated with RAI in T3 (HR 0.28, p=0.013) and T4 (HR 0.23, p=0.047) disease. In both instances almost all of the benefit was in patients aged over 55 years. Anaplastic carcinoma DSS is improved by surgery (HR 0.63, p=0.013) and EBR (0.67, p=0.02) but not by chemotherapy (HR 0.98, p=0.943). DSS did not vary based on treatment location.

## Conclusion:

Surgery remains the mainstay of treatment for thyroid cancer in Ireland. The use of RAI has changed in line with international evidence.