Oncological outcomes for patients with well differentiated thyroid cancer

Nixon, I.J.

Citation for published version (APA):
Nixon, I. J. (2013). Oncological outcomes for patients with well differentiated thyroid cancer.

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: https://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
Chapter 11

English Summary
English Summary

Well differentiated thyroid cancer is increasing in incidence. Despite the fact that more patients present with disease, deaths due to disease remain stable, as this malignancy is rarely fatal. The vast majority of patients can be cured, and even those that suffer a recurrence can often still expect to be disease free following salvage therapy.

This thesis analyzes the outcomes of patients who present with well differentiated thyroid cancer. We report the factors which predict outcome within this group, and the mode of death for patients who recur and die of disease. We also report the results of treatment, with a particular focus on the role of individually selective therapy. Both surgical and non surgical treatments are analyzed in an attempt to define a balanced approach to the management of patients with this generally low risk disease.

The role of thyroid isthmusectomy and lobectomy are analyzed in patients with disease limited to the thyroid gland, and those patients with only microscopic spread of disease beyond the capsule of the gland. It is important to highlight that none of these patients died, irrespective of treatment modality. In addition, recurrence rates were under 5% at 10 years. With such excellent outcomes, the selection of appropriate therapy which balances rates of complication with outcomes is critical.

Over the past century, our understanding of thyroid cancer has improved and initial factors which predicted poor outcome, including advanced age, type of tumor, the presences of distant metastases, extra thyroid extension or tumor size over 4cms remain valid.

The US and international trend in management of thyroid cancer has been towards more aggressive surgery and adjuvant radioactive iodine therapy. Despite this, we show that in well selected patients, less aggressive surgery results in excellent outcomes. This approach is true for surgery on the thyroid, but also for surgical management of the surrounding lymph nodes. By being selective in the approach to surgery, the risk of damage to surrounding structures is minimized, without compromising oncological outcome.

Although previously death from thyroid cancer was commonly due to uncontrolled disease in the central neck, modern surgical management has almost completely eradicated that problem. With a selectively aggressive approach to treatment, around 1% of patients will die, all with disease which has spread beyond the neck.

Having performed surgery, selection of patients for further therapy is also crucial. In the USA there is wide variation in practice, largely because of the lack of high quality evidence to guide clinicians. There has been a general trend towards increasing use of radioactive iodine therapy, despite the lack of a strong evidence base to support that change. Our work shows that well selected patients have excellent outcomes when managed without the use of adjuvant radioactive iodine, and that features such as microscopic extra thyroid extension do not mandate the use of more aggressive therapy.

Although high risk patients are known to benefit from radioactive iodine, the role of this adjuvant therapy is less clear in low to intermediate risk patients. Over the past decade, the side effects of radioactive iodine have become apparent, with around 10% of patients suffering
from dry mouth and difficulty swallowing which interferes with long term quality of life. There is also a small increase in the rates of second cancers in patients treated with radioactive iodine. These findings highlight the importance of selecting only those patients who will benefit from a potentially morbid treatment.

For patients with advanced disease and those who have disease which has spread beyond the reach of surgical resection, outcomes remain poor. Our results show that only the highest risk patients with advanced cancers (pT3/T4) are at risk of death, and that recurrence rates in lower risk patients are <10% at 5 years. Those patients who are selected for management without radioactive iodine based on patient, tumor and nodal features have excellent outcomes with no deaths and <5% recurrence rates at 5 years.

The evidence we present can be used by disease management teams to support a less aggressive approach to therapy for the majority of patients who present with well differentiated thyroid cancer. By adopting a risk-adapted strategy to the selection of therapy for the majority of individual low risk patients, increased attention and resources can be focussed on those patients with high risk disease. This approach will minimize the chance of iatrogenic injury to the majority of patients, reduce costs to the health care provider and society, while optimizing oncological outcomes for all patients who present with well-differentiated thyroid cancer.