DIAGNOSIS & TREATMENT OF DIFFERENTIATED THYROID CANCER IN BELGIUM: RESULTS OF THE 2014 BTC SURVEY

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Why a survey?
European consensus for the management of patients with differentiated thyroid carcinoma of the follicular epithelium

Furio Pacini, Martin Schlumberger, Henning Dralle, Rossella Elisei, Johannes W A Smit, Wilmar Wiersinga and the European Thyroid Cancer Taskforce

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Revised American Thyroid Association Management Guidelines for Patients with Thyroid Nodules and Differentiated Thyroid Cancer

The American Thyroid Association (ATA) Guidelines Taskforce on Thyroid Nodules and Differentiated Thyroid Cancer

ORIGINAL ARTICLE

Is the management of thyroid nodules and differentiated thyroid cancer in accordance with recent consensus guidelines? – Results of a national survey

A. Van den Bruel*, R. Moreno-Reyest†, M. Bex‡, C. Daumerie§ and D. Glinoer¶
## Thyroid cancer incidence in Belgium

### Thyroid cancer: age-standardised incidence (WSR) by sex and Region, 1999-2008

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WSR: age-standardised incidence rate, using the World Standard Population (n/100,000 person years)
Thyroid cancer incidence by district (2004-2006)
pT1(<1cm)  N1 or Nx  M0
pT1(1-2cm) N0 or N1 or Nx M0
pT2    N0    M0

Ablation with Low-Dose Radioiodine and Thyrotropin Alfa in Thyroid Cancer

## 2013:
**Mini survey**
- UZ Leuven
- UZ Brussel
- UZA
- UZ Gent
- AZ Sint Jan Brugge
- OLV Aalst

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Higher thyroid cancer incidence is paralleled by
✓ lower threshold for thyroid surgery in case of benign thyroid disease
✓ less thyroid cancer diagnosis after thyroid surgery
✓ less pre-operative FNAC & per-operative lymph node dissection after thyroid surgery with final thyroid cancer diagnosis

Van den Bruel A, Francart J, Dubois, C, Adam M, Vlayen J, De Schutter H, Stordeur S, Decallonne B
JCEM, 2013
More reasons for a national survey on thyroid cancer management

• diagnosis of thyroid cancer:
  – FNAC Belgium: current use?

• therapy of thyroid cancer:
  – surgery ongoing debate on surgical modalities
  – TKIs/EBRT/… Belgium: current use?

• thyroid cancer guidelines:
  – suffer from often weak levels of recommendation (related to quality of evidence)
  – still awaiting the revised version of the ATA guidelines (year 2015?)

→ discrepancies in current management of thyroid cancer are to be expected
→ no ‘right’ answers
Approach

• clinically active members of the BTC (based on e-mail list)

• electronic questionnaire:
  – sent 7 January 2014
  – reminder 24 January 2014
  – deadline response 31 January 2014

• questions
  – restricted to differentiated thyroid cancer (PTC, FTC)
  – restricted to diagnosis & initial therapy

• answers:
  – anonymous
  – 1 questionnaire per clinical BTC member
Categories:

- Respondent profile and location
- Activity load/centre
- Pre-surgical management: FNAC, scintigraphy
- Surgical management: 3 short clinical cases
- Post-surgical management (I131): 2 short clinical cases
- Other treatments: use of external radiation, TKI
- Other: referral, estimation of own expertise, use of guidelines, interest in network
answers (general)
• N = 78 respondents

• N = 41 centra

• N = 28 cities

• 9/10 provinces
  + Gr D Luxembourg

• all university hospitals (Belgium)

• 62% of all acute beds (Flanders)
  60% of the hospitals with > 300 beds (Flanders)
Profile individual responders

Profile centers
How many NEW patients with thyroid cancer do you follow individually / year?

75%
Which percentage of those (+/-) are unifocal T1a (<10mm) cancers?

N = 43 responses... (55%)
How many FNACs are performed in your centre / year?

- **≤ 2 FNACs / week**
  - 0%
  - 0%
  - 25%
  - 40%
  - 45%

- **≥ 2 FNACs / week**
  - 5%
  - 10%
  - 15%
  - 20%
  - 25%
  - 30%
  - 35%
  - 40%
  - 45%
  - 50%

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Which percentage of FNAC is performed under US guidance in your centre?

- 0%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%
Which cyto classification is used in your centre?
Which proportion of newly diagnosed patients with thyroid cancer (>10 mm) underwent a preoperative FNAC?
How many thyroid surgeries are performed in your centre/year

- 0
- 1-49
- 50-99
- 100-199
- 200-.....

- 0% (1-49)
- 50% (50-99)
- 25% (100-199)
- 15% (200-.....)
How many thyroid surgeries are performed in your centre/year

- 1-49
- 50-99
- 100-199
- 200-

GENERAL

ACADEMIC
Which department coordinates the treatment of thyroid cancer in your centre?
Which department coordinates the treatment of thyroid cancer in your centre?
How many patients with radio-iodine refractory DTC do you or your team treat with tyrosin kinase inhibitor per year?
cases
In case of a patient with a solid thyroid nodule and a normal serum TSH, do you perform a thyroid scintigraphy before proceeding to FNAC?
In case of a cytology protocol “(suspicious for) follicular neoplasm” from a solitary solid thyroid nodule with a diameter of 30 mm, what do you generally propose as surgery?
In case of a solitary nodule with a diameter <10 mm, cytologically proven to be a papillary thyroid cancer (PTC) but clinically and radiologically N0, what do you generally propose as surgery?
In the context of cytologically proven PTC with a diameter > 10 mm but clinically and radiologically N0, do you generally propose to perform a prophylactic central neck dissection?
A 55 yo women is diagnosed with a PTC T1b (14 mm, classical variant) N1, and underwent a total thyroidectomy plus bilateral central lymph node dissection. Pathology shows 6/30 + lymph nodes (max. diameter 9 mm, ipsilateral, no capsule rupture). Which modality of radioiodine ablation do you generally propose?
A 35 yo women is diagnosed with a PTC T3 (45 mm, classical variant) N0, and underwent a total thyroidectomy plus bilateral central lymph node dissection. Pathology confirms N0 status (pN0).

Which modality of radioiodine ablation do you generally propose?
In which situation do you decide to postoperatively treat with external radiation therapy? (excl. cases of non-DTC, e.g. anaplastic thyroid cancer and medullary thyroid cancer)
expertise
Which are the difficulties that you observe in treating patients with thyroid cancer. Please give a score from 1 to 5 (ranging from not difficult to very difficult)
difficulties with expertise (mean) / centre

- expert cyto
- expert histo
- expert US
- expert surg
- expert TKI

The graph shows the mean difficulty levels for different types of expertise. The circles highlight the expert in cytology (cyto) and the one with the highest difficulty level.
Are you interested in the creation of a thyroid oncology network that allows you to get a second opinion for difficult cases of FNAC, pathology, or treatment?
Conclusions

• Large variety in activity load:
  – number of FNAC,
  – number of new thyroid cancer cases / y,
  – number of thyroid surgeries /y

• Cases: discrepancies in pre/per/postsurgical management
  some expected, some unexpected

• Expertise with cytology remains problematic
• Expertise with surgery: not perceived as problematic (?)
• Expertise with TKI & EBRT: usually low

• Need for a thyroid oncology network for difficult cases
Limitations

• It is only a survey... but
  → idea of management at a certain moment in time
  → ‘snapshot’ of health care reality
  → policies are constantly changing

• Underrepresentation of surgeons and pathologists

• Underrepresentation of geographical areas & probably major centres

• Individual answers might not represent the centre
The future

- Need for a network for difficult thyroid cancer cases
- Need for updated international guidelines
- Need for national centre-based standardised data on current thyroid cancer management
  → implementation of guidelines
  → ideas for improvement of organisation of care
  → “reality and patients matter”
- Additional treatments in case of aggressive DTC (e.g. EBRT, TKI):
  less centers with more expertise?
- New BTC surveys!
  (insight in current practice; generation of discussion & ideas for future studies)