

# Clinical Guidance in Thyroid Cancers

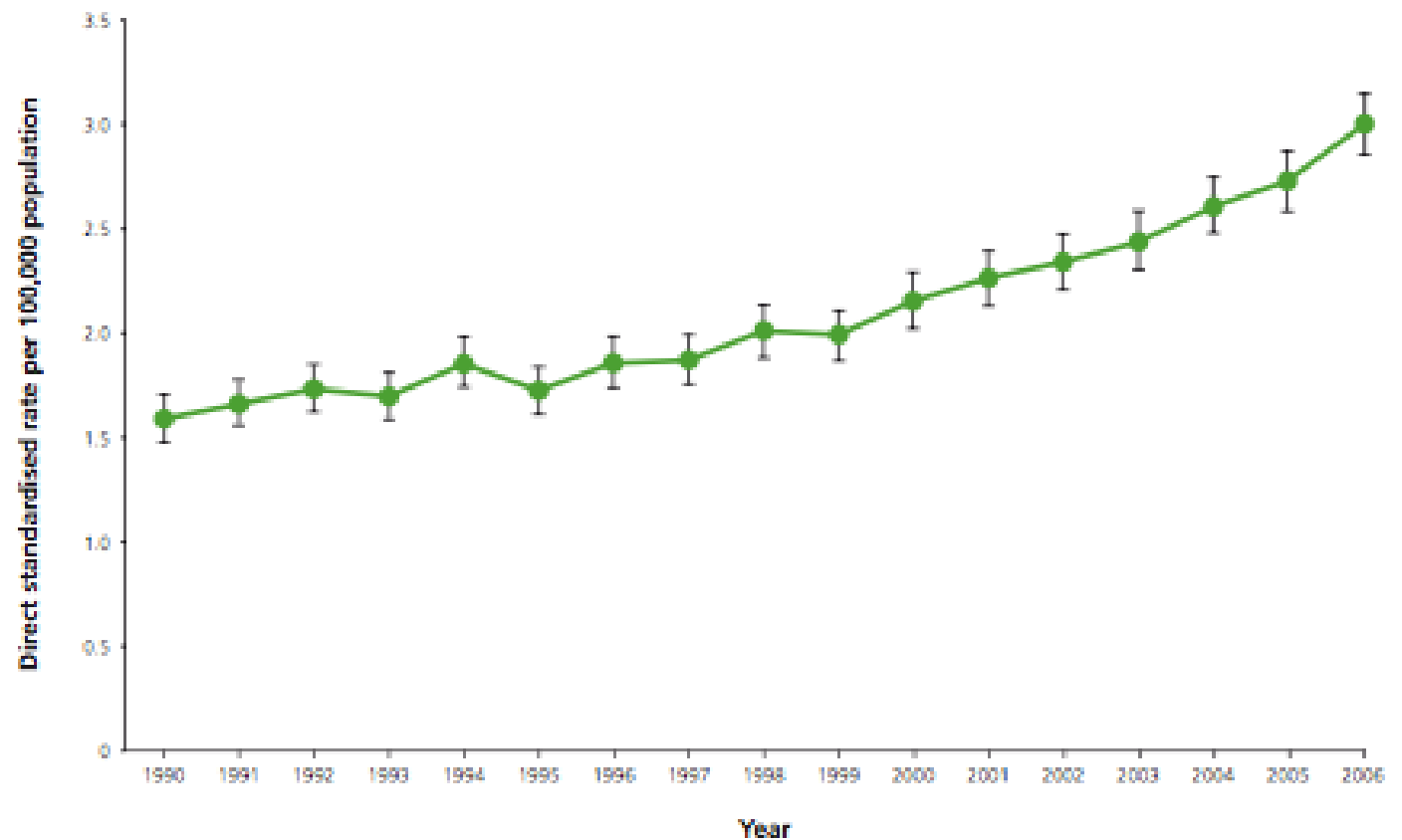
Stephen Robinson  
Imperial at St Mary's  
On behalf of BTA

# Background to thyroid cancer

- Incidence probably increasing slowly
- 1971-95; 2.3 women 0.9 men /100,000
- 2001; 3.5, 1.3
- Most common endocrine malignancy but 1% of all malignancies
- Outcome favourable

## Thyroid gland cancer (ICD-10 C73)

Trends in the  
incidence of  
thyroid gland  
cancer in England,  
1990–2006



OCIU Head and neck cancer report 2010

# Variation in survival of adult patients with thyroid cancer in Europe

- EUROCARE II, n=7504, 17 countries
- Age adjusted 5yr survival
- ♂ UK 64      Europe 67
- ♀ UK 74      Europe 78
- Finland, Iceland, Netherlands better

Teppo 1998 EJC 34:2248

CONSENSUS STATEMENT

## **European consensus for the management of patients with differentiated thyroid carcinoma of the follicular epithelium**

Furio Pacini, Martin Schlumberger<sup>1</sup>, Henning Dralle<sup>2</sup>, Rossella Elisei<sup>3</sup>, Johannes W A Smit<sup>4</sup>, Wilmar Wiersinga<sup>5</sup> and the European Thyroid Cancer Taskforce

*Section of Endocrinology and Metabolism, University of Siena, Via Bracci, 53100 Siena, Italy, <sup>1</sup>Service de Médecine Nucléaire, Institut Gustave Roussy, Villejuif, France, <sup>2</sup>Department of General, Visceral and Vascular Surgery, University of Halle, Germany, <sup>3</sup>Department of Endocrinology, University of Pisa, Italy, <sup>4</sup>Department of Endocrinology and Metabolic Disease, Leiden University Medical Center, The Netherlands and <sup>5</sup>Department of Endocrinology and Metabolism, University of Amsterdam, The Netherlands*

# European consensus for the management of DTC

- Consensus management
- European Thyroid Association
- 2006 EJE 154:787

# Guidelines for the management of thyroid cancer

Second edition

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**British Thyroid Association**

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**Royal College of Physicians**

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2007

# Guidelines for management of thyroid cancer, second edition

- RCP role in delivery high quality care by setting standards and promoting excellence
- Joint with British Thyroid Association
- BTA, RCP RCP 2007



# 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

David S. Cooper, M.D.<sup>1</sup> (Chair)\*, Gerard M. Doherty, M.D.,<sup>2</sup> Bryan R. Haugen, M.D.,<sup>3</sup>  
Richard T. Kloos, M.D.,<sup>4</sup> Stephanie L. Lee, M.D., Ph.D.,<sup>5</sup> Susan J. Mandel, M.D., M.P.H.,<sup>6</sup>  
Ernest L. Mazzaferri, M.D.,<sup>7</sup> Bryan McIVER, M.D., Ph.D.,<sup>8</sup> Furio Pacini, M.D.,<sup>9</sup> Martin Schlumberger, M.D.,<sup>10</sup>  
Steven I. Sherman, M.D.,<sup>11</sup> David L. Steward, M.D.,<sup>12</sup> and R. Michael Tuttle, M.D.<sup>13</sup>

# Revised ATA management guidelines

- EB guidance
- Contemporary optimal care
- 2009 Thyroid 19:1167



National  
Comprehensive  
Cancer  
Network®

**NCCN Clinical Practice Guidelines in Oncology™**

# **Thyroid Carcinoma**

V.1.2009

# NCCN National Comprehensive Cancer Network

- Practice guidelines in oncology v.1.2009
- Very practical didactic guidance
- From nodule evaluation to cancer management
- [www.nccn.org](http://www.nccn.org)

# Key BTA/RCP recommendations differentiated thyroid cancer

- Access to multidisciplinary team
- Patient focus
- Surgery
- Pathology
- Radioiodine and radiotherapy
- Aims of treatment
- Summary of management of DTC
- Follow up of DTC
- Medullary thyroid cancer

Specialist  
Nurse

Endocrinologist

Oncologist

Dedicated Surgeon

Biochemist

Multidisciplinary team

Cytology

Histology

Cross sectional imaging

Radioisotope imaging

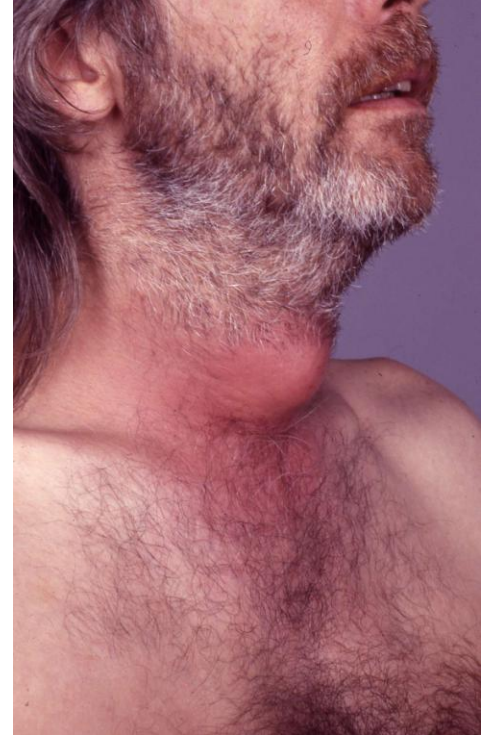
Palliative care

## Specific MDT

Rare malignancy with  
requirement of broad MDT

# Patient focused service

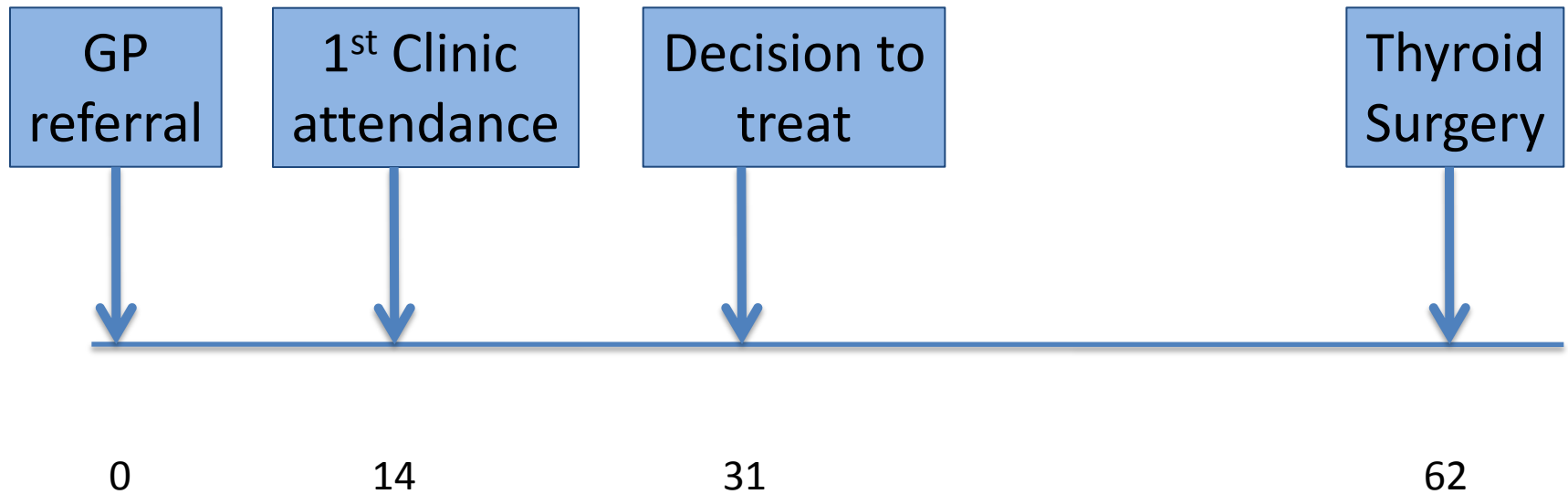
- Full information, verbal, written and Information prescription



- Access to MDT member



# Cancer waiting times



# Surgery

- Surgical preparation
- Surgeon should have training and expertise
- Complications
- Lymph node surgery

# Hospital volume influences choice of operation for thyroid cancer

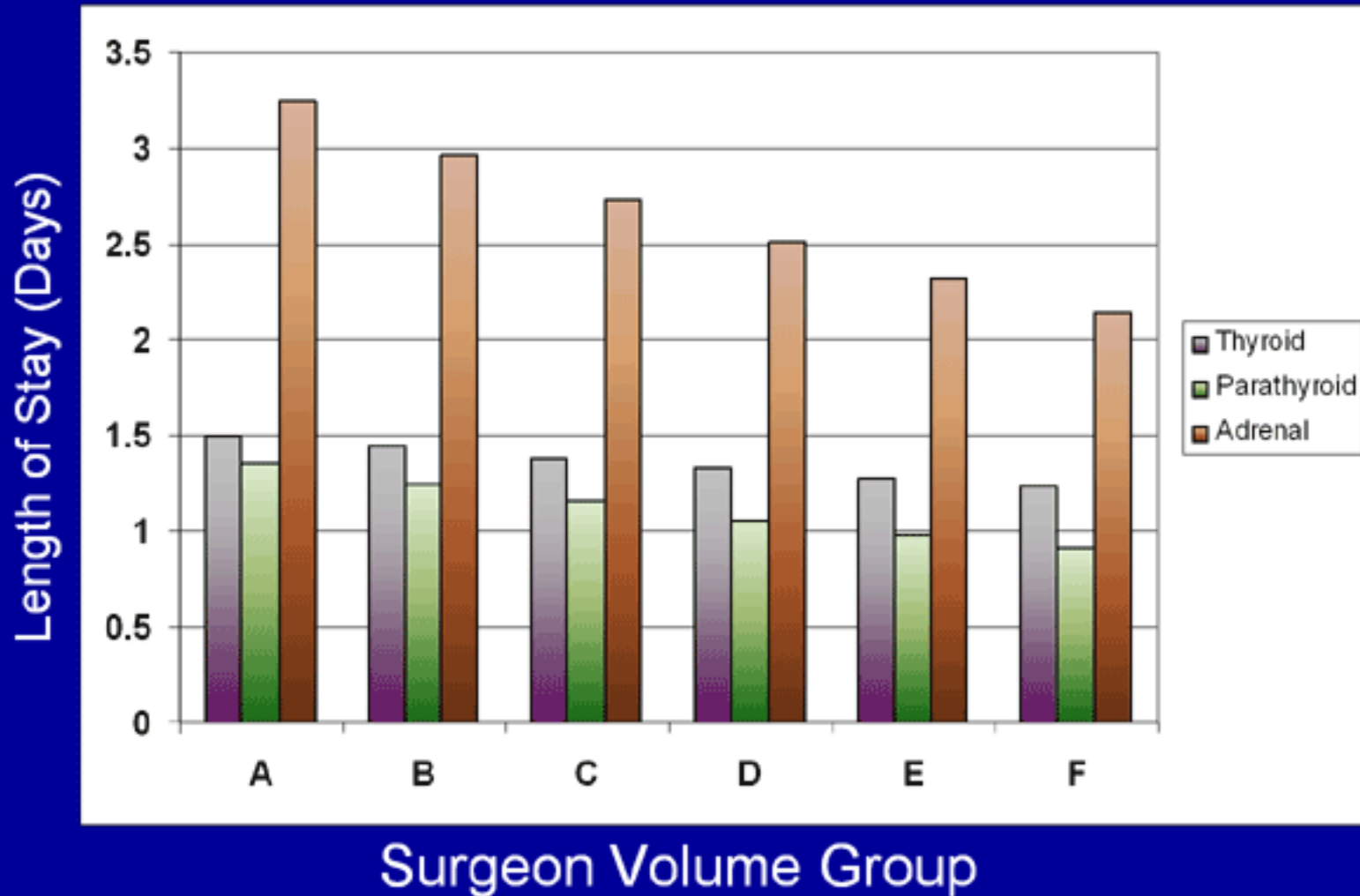
- France n=4006
- >100 thyroid ops cf <10 thyroid ops
- Low vol Risk of unilateral op 2.45 (1.63-3.71)
- Med vol Risk of unilateral op 1.56 (1.27-1.92)
- Significant effect hospital volume on appropriateness of thyroid surgery

## Adjusted complication rates

- Expected complication rates adjusted for patient age, admission status (inpt/outpt), and comorbidity score.
- Hospital volume not an independent predictor of outcomes.
- Adrenal complication rates not different between SVG.

| SVG | Cases/yr | Thyroid |      |      |         | Parathyroid |      |      |         |
|-----|----------|---------|------|------|---------|-------------|------|------|---------|
|     |          | O       | E    | O/E  | P value | O           | E    | O/E  | P value |
| A   | 1-3      | 4.65    | 3.42 | 1.36 | <0.05   | 9.13        | 5.02 | 1.82 | <0.001  |
| B   | 4-8      | 2.53    | 2.94 | 0.86 | NS      | 4.35        | 3.86 | 1.13 | NS      |
| C   | 9-19     | 2.59    | 2.90 | 0.89 | NS      | 3.51        | 3.88 | 0.90 | NS      |
| D   | 20-50    | 2.76    | 2.76 | 1.00 | NS      | 2.22        | 3.49 | 0.64 | NS      |
| E   | 51-99    | 2.90    | 2.54 | 1.14 | NS      | 2.43        | 2.72 | 0.89 | NS      |
| F   | ≥100     | 1.26    | 1.92 | 0.65 | <0.10   | 0.44        | 1.74 | 0.25 | <0.05   |

## Adjusted Length of Stay

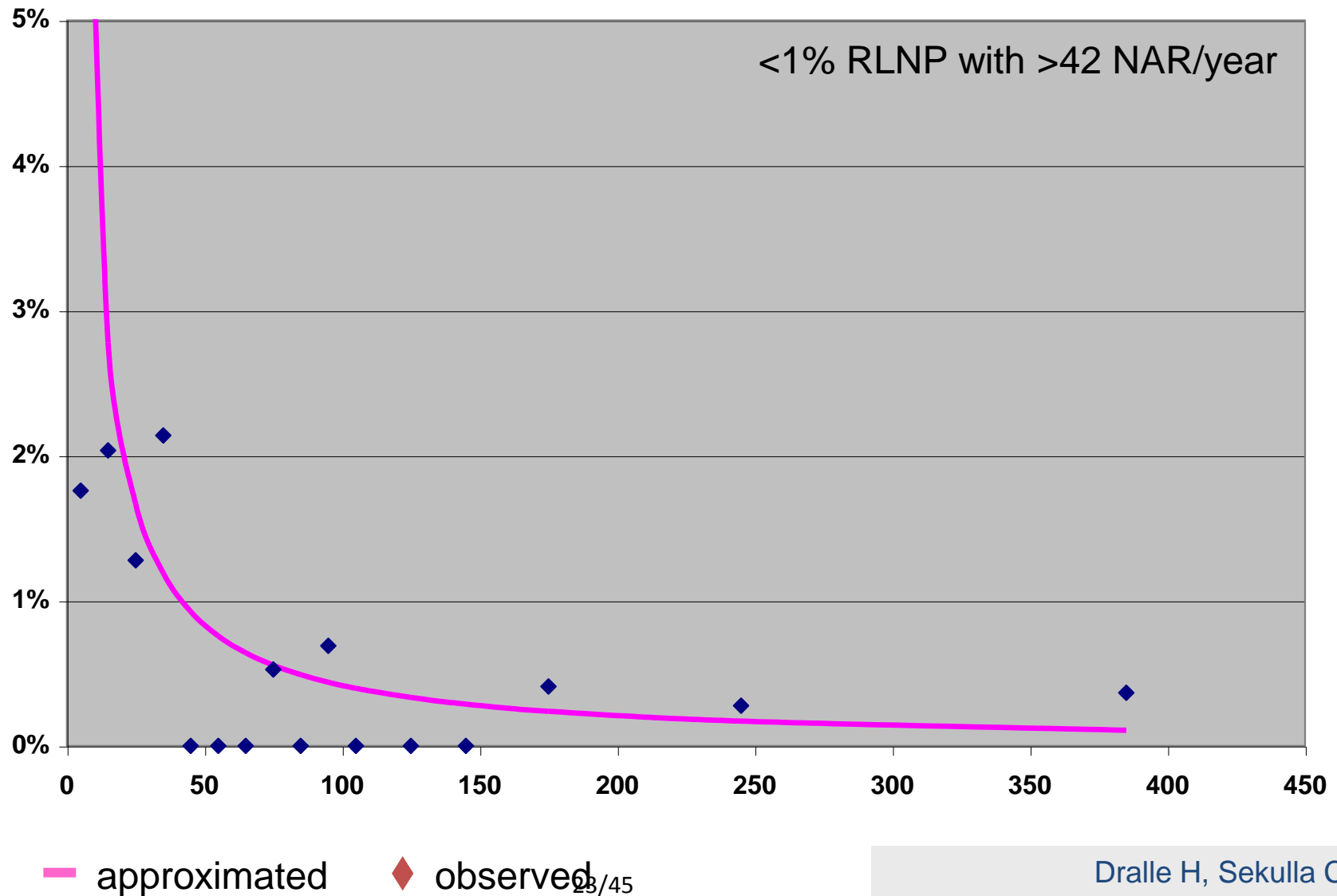


# Surgeon volume as a predictor of outcome in endocrine surgery

- USA, n=13,997
- A=1-3, B=4-8, C=9-19, D=20-50, E=51-99, F>100
- A more complications OR 1.65  $p<0.001$
- F less OR 0.52  $p<0.001$
- Hospital volume negligible effect

Stavrakis 2007 Surgery 142:887

## Relationship between surgeon volume and rate of permanent unilateral RLNP in hemithyroidectomy for benign disease



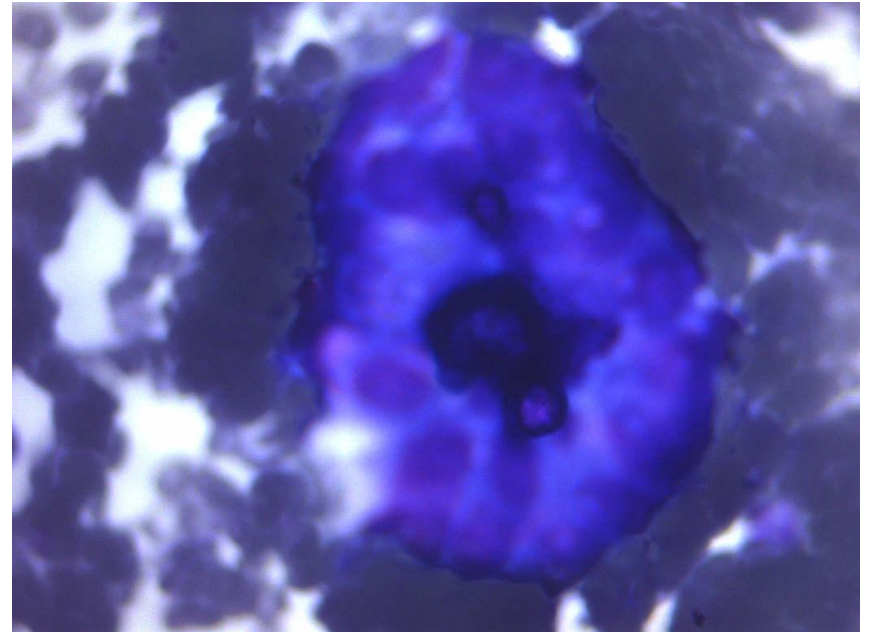
Specific surgeon

Expertise necessary in  
short and long term

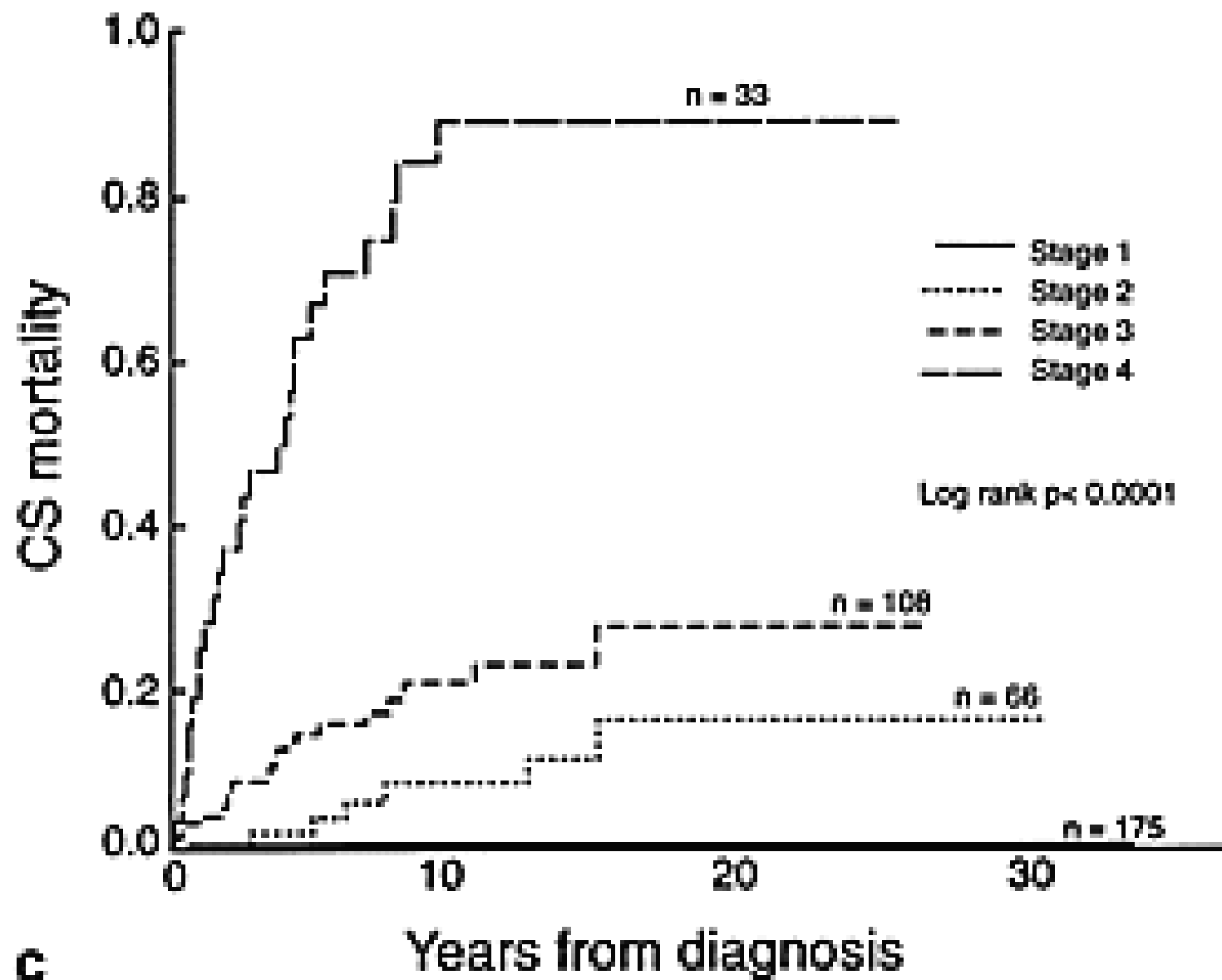


# Pathology

- Pathologists should have Thyroid cytology and histopathology expertise and interest
- Tumour Node and distant metastasis
- Assigned to risk group



# TNM Staging



# Radioiodine ablation and therapy

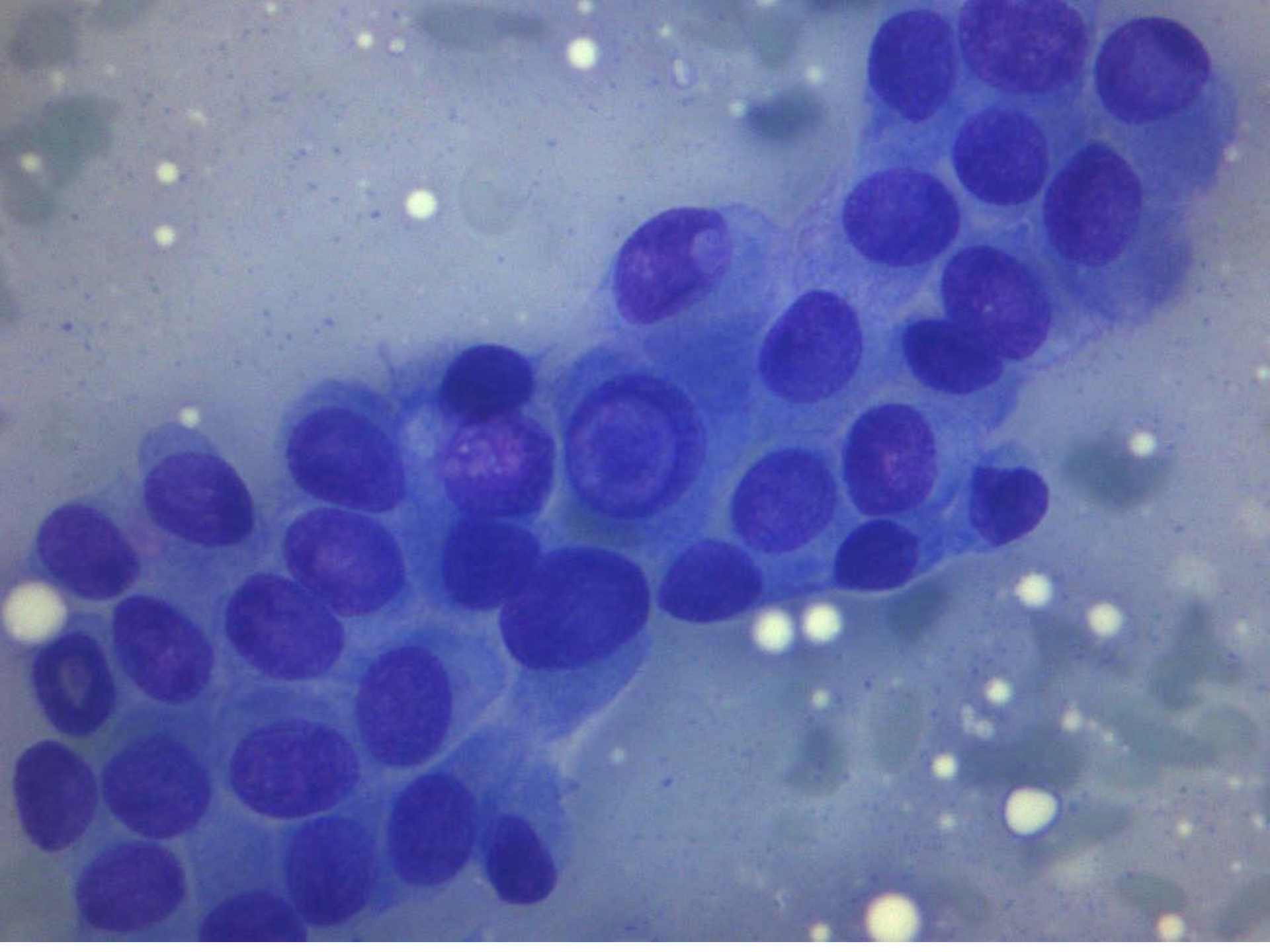
- Oncologist with thyroid expertise and interest with ARSAC certificate
- RAI therapy in appropriate facility

# Aims of treatment

- Removal of all tumour
- Elimination of clinical radiological and biochemical evidence of recurrence
- Minimisation of unwanted effects of treatment

# Management

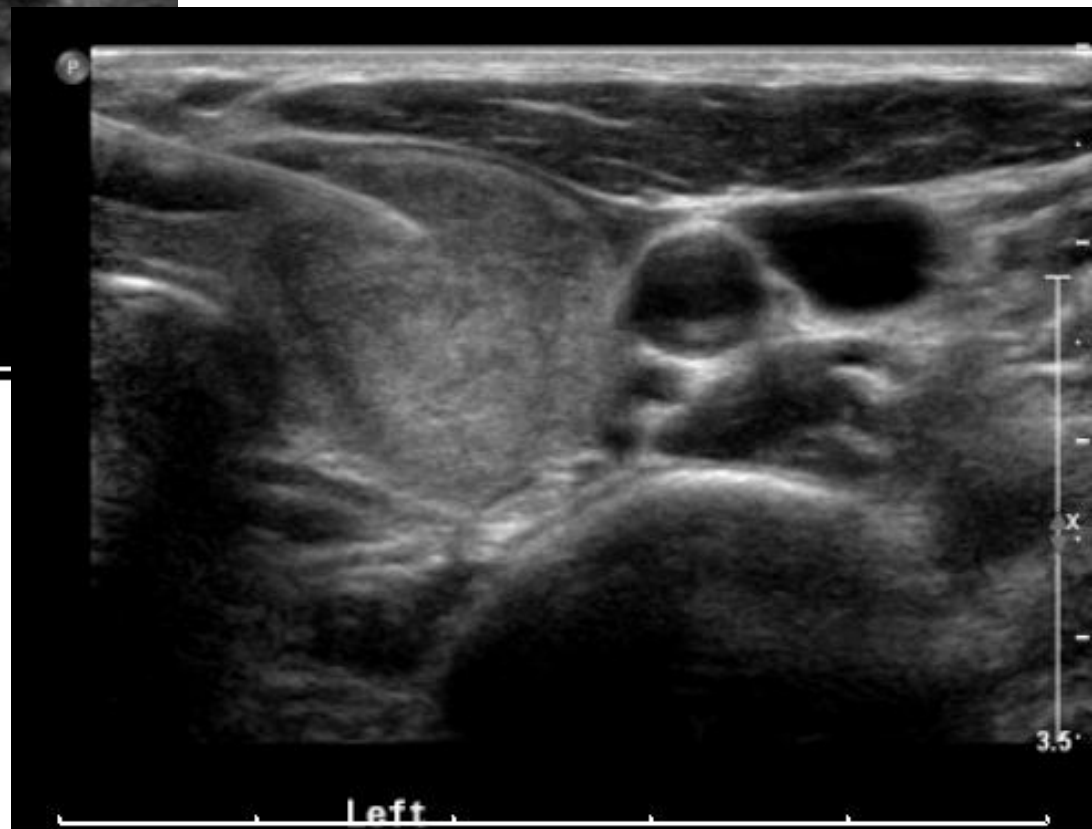
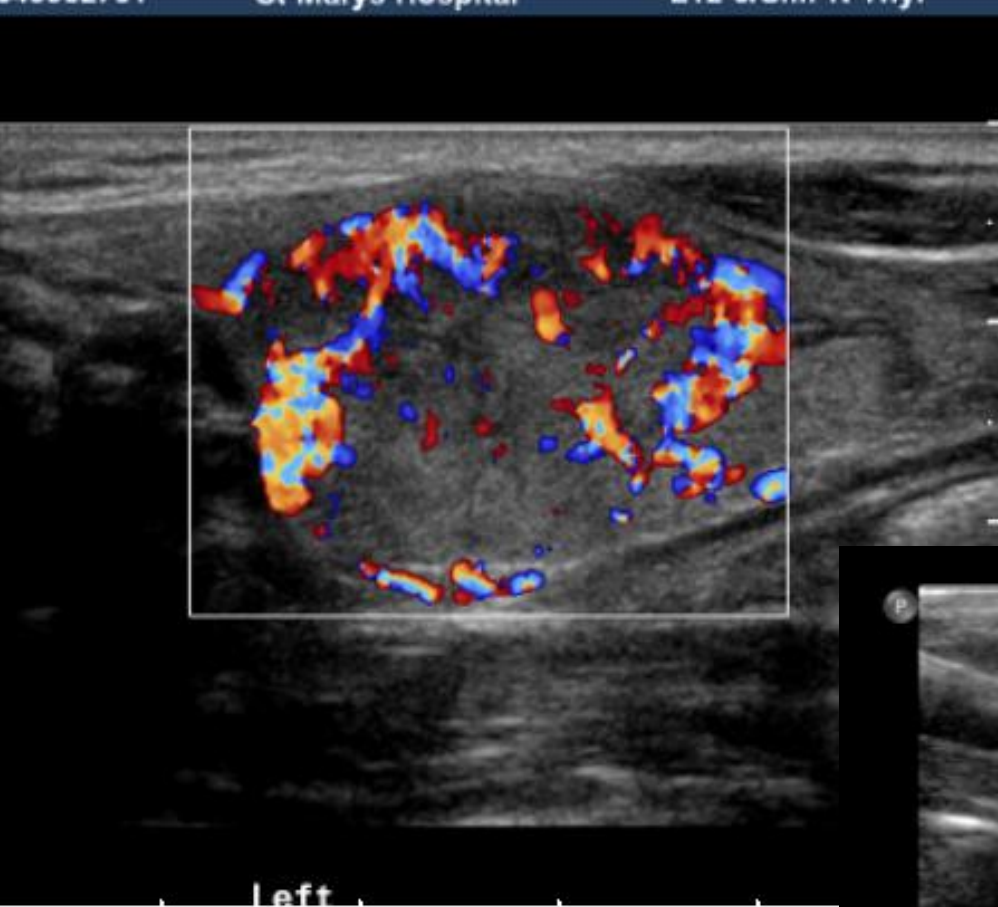
- MDT treatment plan
- Fine needle aspiration cytology and ultrasound, to plan surgery
- >1cm PTC or high risk DTC would need total thyroidectomy
- Thyroglobulin measurement



# Neck Ultrasound

- Mandatory
- Features of nodule
- Remaining thyroid
- Can be used as FNA guide

Marqusee 2000 AIM 133:696





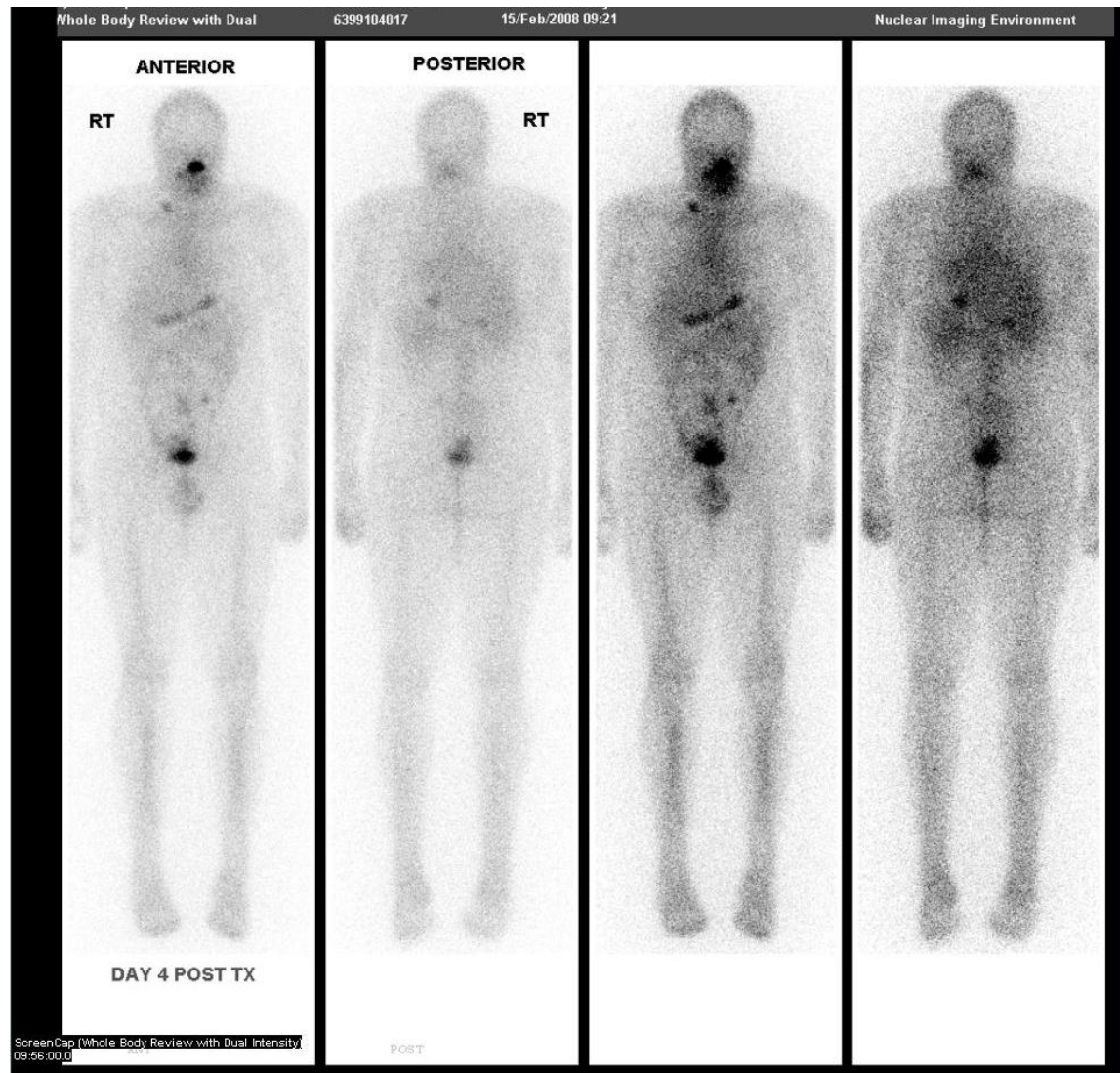
# Management continued

- Ablative  $^{131}\text{I}$
- Post ablation scan
- Thyroxine treatment
- Ultrasound

Specific team

Histo-cytopathology, Imaging,  
oncology, endocrinology

# Activity in the right side of the neck



# Lifelong follow up

- Long natural history
- Late recurrence treatable
- Monitor treatment
- T4 suppression
- Late effects of treatment
- Pregnancy

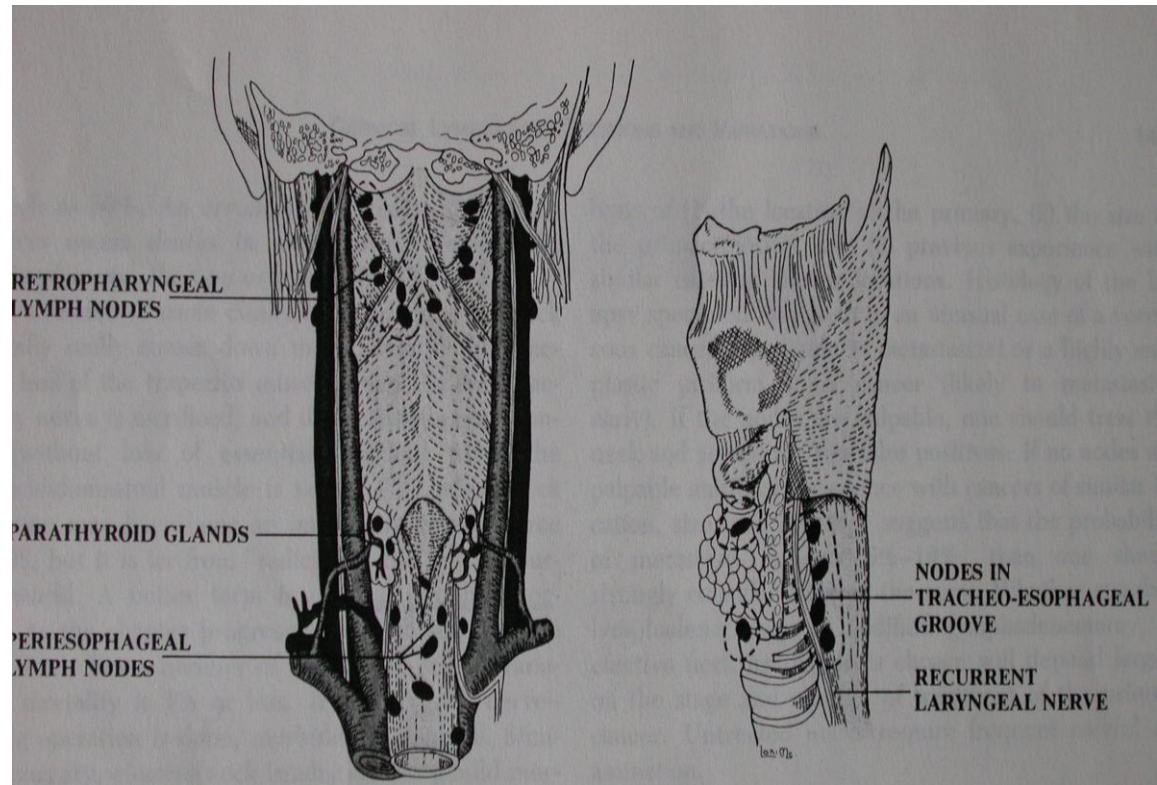
# Medullary thyroid cancer

- FNAC calcitonin
- Genetics All exons
- Counseling
- MEN2A 2B
- Minimum thyroidectomy and level VI node
- Prophylactic surgery
- Lifelong follow up

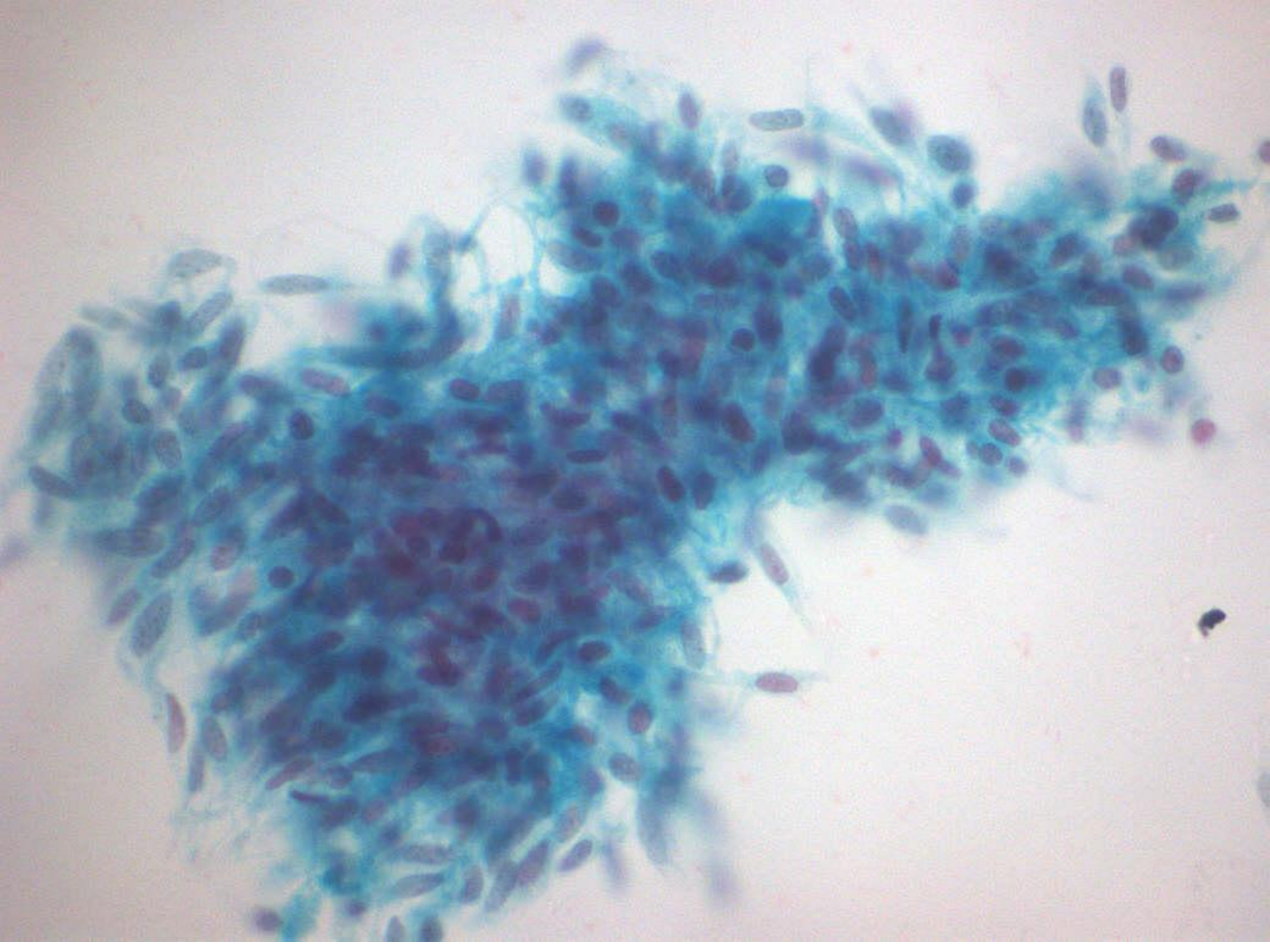
# Lymphatic Drainage

## Thyroid Gland: Primary

- Pretracheal (VI)
- Paratracheal (VI)
- Lower Jugular (IV)







# Database

- Use at point of care
- Specific fields for thyroid cancer
- Utility for individual patient and audit



Specific database

Importance of thyroid  
specific fields

# Conclusions

- Implementation of guidance
- Specialist Thyroid Surgeons
- Specialist Thyroid Multi disciplinary team
- Database with appropriate fields with update at point of care
- Lifelong follow up