

# ESES webinars 2021 - summary



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This is a brief summary of the talks presented during the 10 webinars organised in the spring of 2021.

The full programme is available on [www.eseswebinars.co.uk](http://www.eseswebinars.co.uk)

The recordings of these events are accessible on the ESES webpage.

# Bethesda Classification of Thyroid Cytology

- Higher than expected risk of malignancy in cytology B1-3, especially in young and middle aged patients and in men
- No big difference in the risk of malignancy between B3 and B4
- Ultrasound guided FNA decreases the number of false benign cytologies
- In patients with clinically-relevant cancer (excluding pT1a, N1b and M1)
  - Approximately 1/5 is operated without FNA (Eurocrine)
  - Approximately 1/10 have benign cytology (Eurocrine)

# Bethesda Classification of Thyroid Cytology

## Risk Assessment

- Basic (clinical variables)
  - Age
  - Sex
  - Family history
  - Radiation
  - Size of nodule
- Ultrasound classification (TIRADS-EU)
- Ultrasound guided FNA for cytology (Bethesda score)
- *Genetics (selected patients)*

**Correlating the Bethesda System for Reporting Thyroid Cytopathology with Histology and Extent of Surgery: A Review of 21,746 Patients from Four Endocrine Surgery Registries Across Two Continents.**

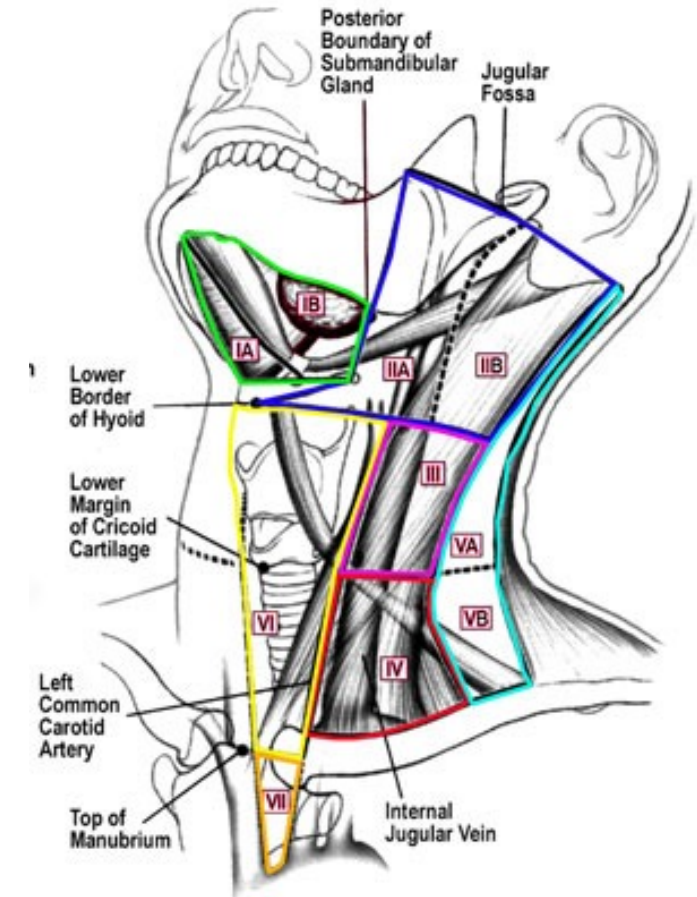
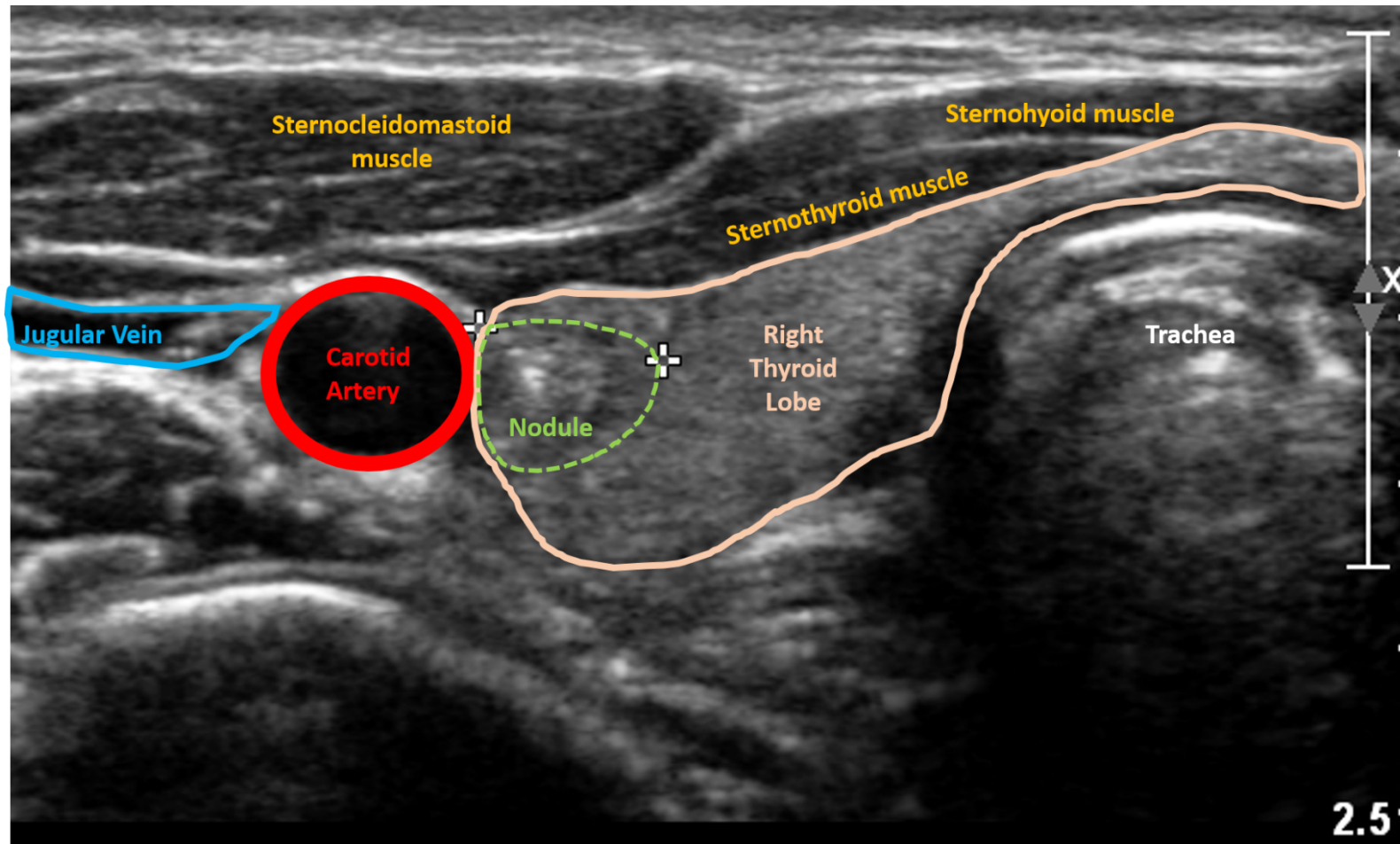
Inabnet WB 3rd, Palazzo F, Sosa JA, Kriger J, Aspinall S, Barczynski M, Doherty G, Iacobone M, Nordenstrom E, Scott-Coombes D, Wallin G, Williams L, Bray R, Bergenfelz A.

***World J Surg.*** 2020 Feb;44(2):426-435. doi: 10.1007/s00268-019-05258-7

# Ultrasound-based risk stratification of thyroid nodules



## Thyroid US & LNs

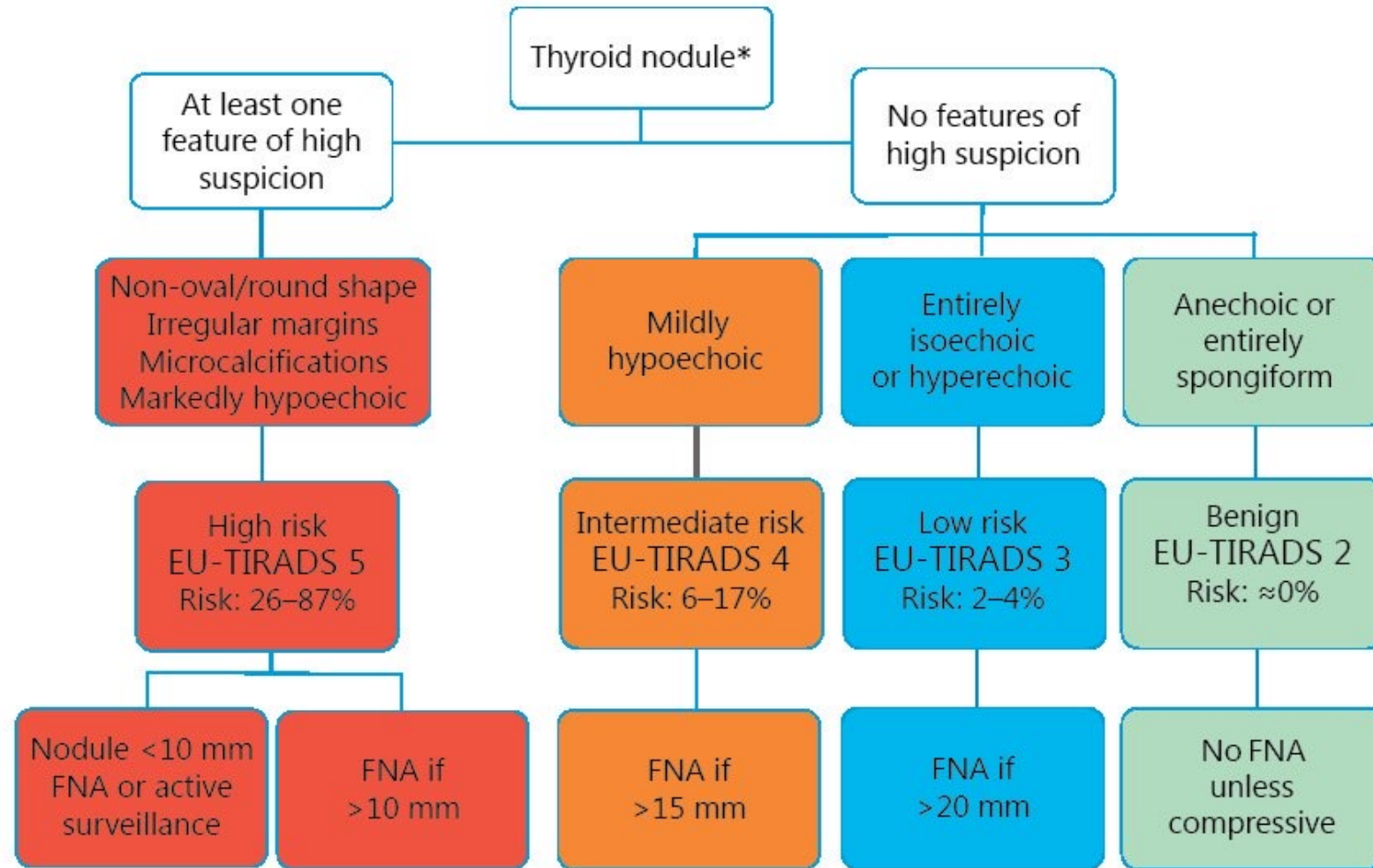


# EU-TIRADS categories and risk of malignancy

Category	US features	Malignancy risk, %
EU-TIRADS 1: normal	No nodules	None
EU-TIRADS 2: benign	Pure cyst Entirely spongiform	≅0
EU-TIRADS 3: low risk	Ovoid, smooth isoechoic/hyperechoic No features of high suspicion	2–4
EU-TIRADS 4: intermediate risk	Ovoid, smooth, mildly hypoechoic No features of high suspicion	6–17
EU-TIRADS 5: high risk	At least 1 of the following features of high suspicion: – Irregular shape – Irregular margins – Microcalcifications – Marked hypoechoogenicity (and solid)	26–87

EU-TIRADS, European Thyroid Imaging Reporting and Data System; US, ultrasound.

# Algorithm of EU-TIRADS for malignancy risk stratification and fine-needle aspiration (FNA) decision-making



# Ultrasound-based risk stratification of thyroid nodules



- Primary tumor
- LNs
- Concomitant parathyroid disease

FNA



Decision making

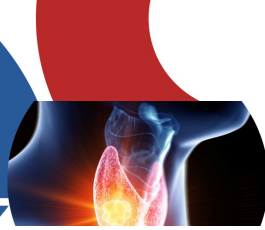
- Active Surveillance
- Surgery:
  - Lobectomy
  - Total thyroidectomy
  - LNs dissection



- Disease characteristics
- Patient preferences
  - Conventional
  - TOETVA
  - Robotic

Personalized surgery





# Primary hyperparathyroidism - diagnosis – surgery, indications and outcomes

- 90% sporadic; 85% single adenoma; 10% hereditary
- Diagnosis always biochemical; high "normal" calcium in combination with elevated or inappropriately "normal" PTH level
- iCa (ionised calcium) ~ 50% of total calcium; measurement sensitive to changes in pH levels
- Different scenarios:
  - iCa ↑ och PTH ↑ >85%
  - iCa ↑ och PTH ~ 10%
  - iCa ~ och PTH ↑ "Normocalcemic pHPT". <5%: exclude secondary hyperparathyroidism
    - Chronic kidney disease
    - Vitamin D deficiency
    - Hypercalcuria secondary to renal leak
    - Malabsorption syndromes
    - Drugs
- Differential diagnoses: malignancy (PTH ); renal insufficiency (eGFR), vitamin D deficiency, familial hypocalciuric hypercalcemia (24hU-Ca )





# Primary hyperparathyroidism - diagnosis – surgery, indications and outcomes

- **Surgery for PHPT - Indications:**

- symptomatic disease
  - DXA T-score  $<2.5$  at any site (lumbar spine, hip, radius)
  - eGFR  $<60$  ml/min
  - calcium  $>0.25$  mmol/L
  - hypercalciuria ( $>10$  mmol/24h)
  - $<50$  years
  - patients choice
- Preoperative localisation: useful to guide the surgical approach
    - Ultrasound: easy, examiner dependent, high specificity in trained hands
    - sestaMIBI SPECT/CT, 4D-CT, PET: combines functional and morphological imaging
  - **Anatomical and embryological knowledge, patience and strategy are prerequisites for successful parathyroid surgery**
    - Intraoperative PTH-measurement: enables detection of unrecognised multiple gland disease
  - Outcome: bone density improvement; reduced risk of recurrent kidney stones, preservation of bone and kidney function, possible improvements in quality of life, cognitive function and cardiovascular risk factors

# Genetic syndromes associated with adrenal disease

Cortex

Medulla

- Familial Hyperaldosteronism (FH)
- Primary Bilateral Macronodular Adrenocortical Hyperplasia (PBMAH, PMAH)
- McCune-Albright Syndrome
- Carney Complex
- Li-Fraumeni Syndrome
- Hereditary Non-Polyposis Colorectal Cancer (HNPCC; Lynch Syndrome)
- Familial Adenomatous Polyposis (FAP)
- Beckwith-Wiedemann Syndrome
- Multiple Endocrine Neoplasia Type 1 (MEN 1)
- MEN 2, VHL, NF1
- Pheochromocytoma Paraganglioma Syndrome
- Other Hereditary Pheochromocytoma Syndromes

# Genetic syndromes associated with adrenal disease

## Cortex

- With regard to adrenocortical tumors, the extent of surgery usually does not differ from sporadic forms.
- Regarding familial hyperaldosteronism, bilateral adrenalectomy is indicated in FH-III (*KCNJ5* mutations).
- Concerning hypercortisolism, unilateral adrenalectomy may be successful in many patients with PBMAH.

## Medulla

- In hereditary pheochromocytoma, extent of surgery (total/subtotal) depends on the risk of bilaterality and malignancy. Subtotal adrenalectomy should be aimed for in patients with a high risk for bilaterality and a low risk of malignancy (in particular MEN 2/VHL).

# Postoperative hypoparathyroidism – morbidity and mortality

- Hypoparathyroidism is by far the most important complication to total thyroidectomy
- The risk for permanent hypoparathyroidism after total thyroidectomy is high
  - 5.0 % for adults in benign disease, higher in thyroid cancer, especially for CLND
  - 7.3 % in children
- Adult patients operated for benign disease with total thyroidectomy and with permanent hypoparathyroidism have:
  - increased risk of death **HR 2.24**
  - increased risk for renal insufficiency **HR 4.88**
  - increased risk for CVD events **HR 1.88**
  - and possibly, increased risk for malignancy **HR 2.15**

# Postoperative hypoparathyroidism – morbidity and mortality

- **Morbidity in patients with permanent hypoparathyroidism after total thyroidectomy.**

Bergenfelz A, Nordenström E, Almquist M.

*Surgery*. 2020 Jan;167(1):124-128. doi: 10.1016/j.surg.2019.06.056

- **Mortality in patients with permanent hypoparathyroidism after total thyroidectomy.**

Almquist M, Ivarsson K, Nordenström E, Bergenfelz A.

*Br J Surg*. 2018 Sep;105(10):1313-1318. doi: 10.1002/bjs.10843.

- **Central lymph node dissection and permanent hypoparathyroidism after total thyroidectomy for papillary thyroid cancer: population-based study.**

Salem FA, Bergenfelz A, Nordenström E, Almquist M.

*Br J Surg*. 2020 Sep 16. doi: 10.1002/bjs.12028. Online ahead of print.

- **Permanent Hypoparathyroidism After Total Thyroidectomy in Children: Results from a National Registry.**

Nordenström E, Bergenfelz A, Almquist M.

*World J Surg*. 2018 Sep;42(9):2858-2863. doi: 10.1007/s00268-018-4552-7.



# Autofluorescence of the parathyroid glands (PG)

- In the Near Infrared range, PG are more autofluorescent than the adjacent tissue (excitation light 785 nm, emission light 820 nm)
- Autofluorescence can help the surgeon identify parathyroid glands in real-time.
- In most of the studies using autofluorescence<sup>1</sup>,
  - autofluorescence helps detect PGs earlier than with naked eyes (therefore helping to protect them during dissection ?)
  - More PGs are detected with autofluorescence than with naked eyes only
  - There were less PGs that go unnoticed to the pathologist with the thyroid specimen
- Normal PGs are more autofluorescent than diseased PGs<sup>2</sup>
- Does not help predict PG viability<sup>1</sup>

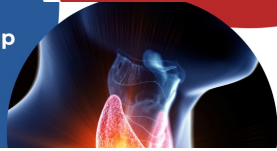
1: Solorzano CC, Surgery 2021, Apr; 169(4)

2: Demarchi MS, BJS Open 2021, Jan 8;5(1)



# Indocyanin Green « angiography » of the parathyroid glands

- PG have tiny vessels that are easily damaged during thyroidectomy, leading to hypoparathyroidism despite the preservation of the PG
  - >1/3 of the PG vessels are at very high risk to be damaged during meticulous thyroidectomy<sup>1</sup>
- ICG injection can
  - Help detect and protect PG vessels (ICG angiography before thyroid resection)<sup>2</sup>
  - Assess the perfusion of the PG after thyroidectomy, predicting the absence of hypoparathyroidism when at least one well perfused PG is demonstrated<sup>3</sup>
- Autofluorescence and ICG angiography can help decrease the rate of post-thyroidectomy hypoparathyroidism



## PREOP WORKOUP

- History
- Physical exam
- Thyroid function tests
- Ultrasound
- Fine-needle aspiration biopsy
- X-ray of the neck and chest
- Barium swallow
- Thyroid scan
- Cross sectional imaging
- Vocal folds assessment

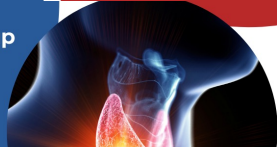
## FNAB

The 2017 Bethesda System

<i>Diagnostic category</i>	<i>Risk of malignancy if NIFTP ≠ CA (%)</i>	<i>Risk of malignancy if NIFTP = CA (%)</i>	<i>Usual management<sup>a</sup></i>
Nondiagnostic or unsatisfactory	5–10	5–10	Repeat FNA with ultrasound guidance
Benign	0–3	0–3	Clinical and sonographic follow-up
Atypia of undetermined significance or follicular lesion of undetermined significance	6–18	~10–30	Repeat FNA, molecular testing, or lobectomy
Follicular neoplasm or suspicious for a follicular neoplasm	10–40	25–40	Molecular testing, lobectomy
Suspicious for malignancy	45–60	50–75	Near-total thyroidectomy or lobectomy <sup>b,c</sup>
Malignant	94–96	97–99	Near-total thyroidectomy or lobectomy <sup>c</sup>

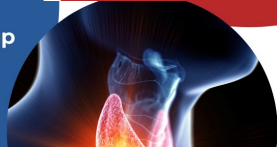
**Cibas ES, Ali SZ.** The 2017 Bethesda System for Reporting Thyroid Cytopathology. *Thyroid*. 2017 Nov;27(11):1341-1346.





Benefits and risks of total thyroidectomy versus hemithyroidectomy for benign euthyroid asymmetric nodular goitre.

	Total thyroidectomy	Hemithyroidectomy
Benefits	<ul style="list-style-type: none"> <li>• Obliterated risk of recurrence</li> <li>• No need for completion thyroidectomy in case of incidentally diagnosed thyroid cancer after the operation</li> </ul>	<ul style="list-style-type: none"> <li>• No need for thyroid replacement therapy (in 50–70% of patients)</li> <li>• Lower risk of RLN injury</li> <li>• No risk of permanent hypoparathyroidism after initial surgery</li> </ul>
Risks	<ul style="list-style-type: none"> <li>• Higher risk of RLN injury<sup>a</sup></li> <li>• Higher risk of hypoparathyroidism<sup>a</sup></li> <li>• Need for long-life thyroid replacement therapy</li> <li>• Impaired psychological well-being</li> <li>• Possible weight gain</li> </ul>	<ul style="list-style-type: none"> <li>• Need for reoperation for goitre recurrence (in one-third of patients)</li> <li>• Need for completion thyroidectomy in case of incidentally diagnosed thyroid cancer after the operation (in one-third of patients)</li> </ul>



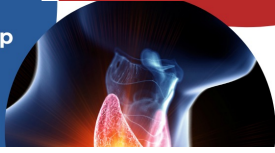
## Criteria for and against hemithyroidectomy for benign euthyroid asymmetric nodular goitre.

### Criteria favouring hemithyroidectomy

- Low risk of clinically apparent recurrence (small contralateral lobe, one or just few contralateral subclinical lesions, no family history of nodular goitre, no iodine deficiency, no evidence of cancer)
- Largely asymptomatic patient
- Pre-existing ipsilateral RLN palsy
- Impaired general medical status (cardiopulmonary disease, elder age, short life expectancy)
- Personal risk factors (voice professional, low motivation for life-long thyroxine replacement therapy)

### Criteria favouring total thyroidectomy

- High risk of clinically overt recurrence (large contralateral lobe, palpable contralateral thyroid nodules, family history of nodular goitre, iodine deficiency, risk of cancer, young woman with plans for several pregnancies)
- Thyroiditis with subclinical or clinically overt hypothyroidism
- Personal preferences (no acceptance for second-stage surgery in case of symptomatic recurrence or diagnosis of cancer)



## Practice points

- There is no uniformly accepted consensus on the optimal extent of surgery for patients with benign euthyroid AMNG.
- Total thyroidectomy may be the preferred surgical approach for high-volume surgeons in order to reduce the risk of recurrent disease and the need for thyroid reoperation in the future.
- Hemithyroidectomy can be considered for some patients with AMNG and a low risk of recurrent disease as a safer alternative to total thyroidectomy since it is associated with a lower risk of surgical morbidity but requires life-long follow-up, involves a higher risk of recurrence and the need for revision thyroidectomy in selected patients.
- An individualised extent of thyroid resection for AMNG should be taken into consideration as a new standard of care rather than routine choosing total thyroidectomy.

# Total Thyroidectomy How I do it



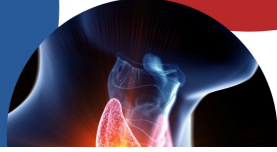
## Prerequisites:

1. Thorough knowledge of embryology (especially parathyroids and nerves)
2. Thorough knowledge of anatomy (including anatomical variants)
3. Thorough knowledge of surgical instrumentarium (advantages – disadvantages)

# Total Thyroidectomy How I do it

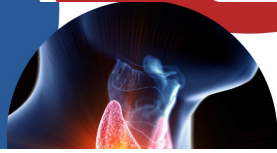
## Total Thyroidectomy – Retrosternal goiter

- High incision
- Mobilise the inferior border of Omohyoid muscle
- Divide strap muscles
- Start with upper poles and upper border of the isthmus
- Toboggan manoeuvre, control the RLN first
- Divide the isthmus early
- Mobilise the inferomedial border of the thyroid from the trachea
- Resist temptation to “dislocate” the inferior portion



# The difficult parathyroidectomy - Main Learning Points

- Parathyroidectomy is learned through an apprenticeship & has a long learning curve
- There is increasing unlocalised disease – Do not over-image
- Have a strategy for MEN, Lithium patients, Reoperations
- There are new approaches to ectopic glands - Thoracoscopic
- Do not remove normal glands
- Stop before you do harm



# The difficult parathyroidectomy - Main Learning Points

- Easy PTX are not always easy
- Unlocalised disease: have a strategy
- Reop PTX: get all the information, imaging is key
- MEN1 PTX tailored to patient
- In combined PTX & thyroidectomy do

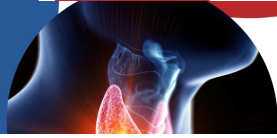
# Surgical options for adrenalectomy

- ‘Endoscopic adrenalectomy’ is the preferred approach...
- Surgeons should choose the approach they are most familiar with, have had training in, and have the best patient outcomes with...
- Adrenal-sparing adrenalectomy is the therapy of choice for those being at highest risk of adrenal insufficiency...
- For ACC, the best is an appropriate oncologic resection, incl. en bloc resection of any involved structures and regional lymphadenectomy. Thus, an open approach to resection may be best...



# Surgical options for adrenalectomy

- Learning curve between 20 – 40 cases...
  - *Conventional laparoscopic / retroperitoneoscopic / robotic*
- To prevent complications, detailed knowledge of anatomy and variations is of utmost importance...
- There are also specific complication related to:
  - Hormonactivity
  - Malignancy



# Secondary hyperparathyroidism



- SHPT is a **common complication of chronic kidney disease**
- Cause of **morbidity** (cardiovascular/calcifications/renal osteodystrophy/depression...)
- It also may occur in
  - long-term **lithium** therapy
  - gastrointestinal disorders
  - **Vitamin D deficiency**
  - Liver disease
- THPT is associated with clinically persistent hypercalcemia in patients after successful renal transplantation



# Secondary hyperparathyroidism



- **PTX** may represent a **definitive treatment** or may bridge until renal transplantation
- **Main indication** → resistant to medical therapy, severe **symptoms** or evidence of bone disease
- Procedures:
  - **TPTX + AU** → SHPT/ No prospect of kidney transplant
  - **SPTX** → SHPT/ Prospect of kidney transplant/ THPT

## ESES webinar 06

Surgery for advanced thyroid cancer – when is total thyroidectomy not enough?

Marco Raffaelli



ESES webinars 2021



# Adrenocortical cancer - diagnosis

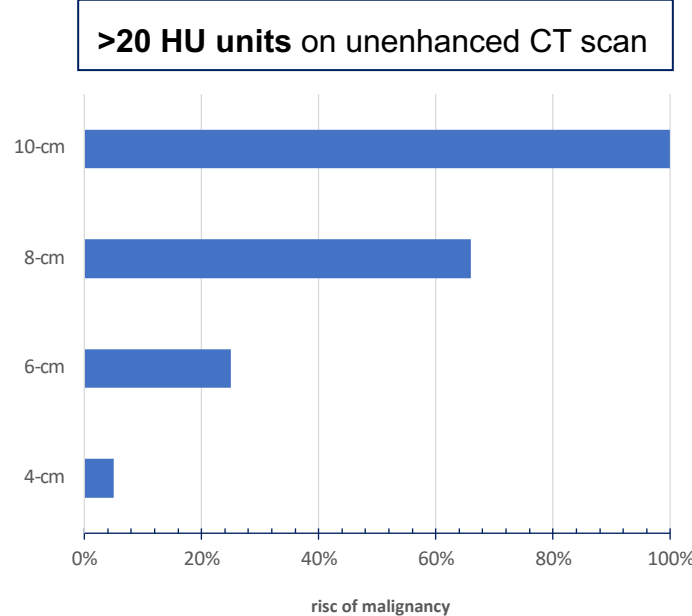


very rare tumour  
1/million population

## Clinical findings

Speed of onset of symptoms  
Androgen signs in women  
Oestrogen signs in men

## Radiological appearance



## Urine steroid profile

### **Steroidobolomics**

= combination of mass spectrometry-based urinary steroid metabolite profiling and machine-learning-based data analysis

THE LANCET  
Diabetes & Endocrinology

ARTICLES | VOLUME 8, ISSUE 9, P773-781, SEPTEMBER 01, 2020

Urine steroid metabolomics for the differential diagnosis of adrenal incidentalomas in the EURINE-ACT study: a prospective test validation study

Irina Bancos, MD \* • Angela E Taylor, PhD \* • Vasileios Chortis, MD • Alice J Sitch, PhD • Carl Jenkinson, PhD • Caroline J Davidge-Pitts, MD • et al. [Show all authors](#) • [Show footnotes](#)

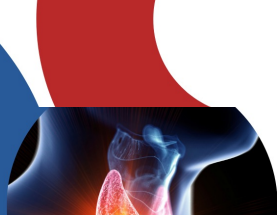
[Open Access](#) • Published: July 23, 2020 • DOI: [https://doi.org/10.1016/S2213-8587\(20\)30218-7](https://doi.org/10.1016/S2213-8587(20)30218-7) [Check for updates](#)

### **Tumour SUVmax :Liver SUVmax >1.5**

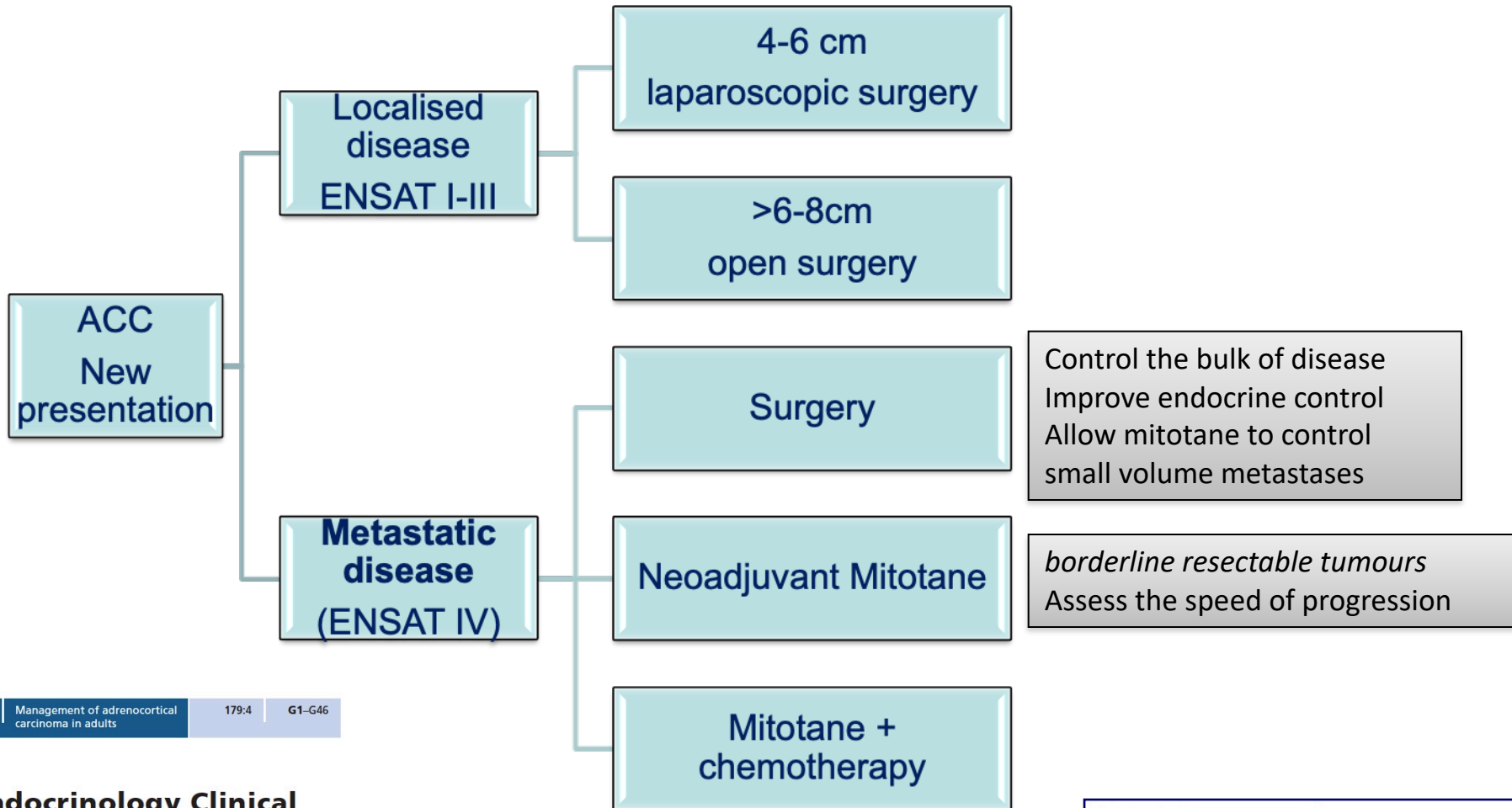
Sen=90.0%/Sp=92.6%/

PPV=69.2%/NPV=98.0%

Risk stratification of adrenal masses by [ 18 F]FDG PET/CT: changing tactics Clin Endocrinol (Oxf). 2020 Sep 25. doi: 10.1111/cen.14338. Online ahead of print.



# Surgery is the main treatment for ACC



**Clinical Practice Guideline** | M Fassnacht and others | Management of adrenocortical carcinoma in adults | 179:4 | G1-G46

**European Society of Endocrinology Clinical Practice Guidelines on the management of adrenocortical carcinoma in adults, in collaboration with the European Network for the Study of Adrenal Tumors**

Martin Fassnacht<sup>1,2</sup>, Olaf M Dekkers<sup>3,4,5</sup>, Tobias Else<sup>6</sup>, Eric Baudin<sup>7,8</sup>, Alfredo Berruti<sup>9</sup>, Ronald R de Krijger<sup>10,11,12,13</sup>, Harm R Haak<sup>14,15,16</sup>, Radu Mihai<sup>17</sup>, Guillaume Assie<sup>18,19</sup> and Massimo Terzolo<sup>20</sup>

**Guidelines**  
European Society of Endocrine Surgeons (ESES) and European Network for the Study of Adrenal Tumours (ENSAT) recommendations for the surgical management of adrenocortical carcinoma  
S. Gaujoux<sup>1,2,3</sup> and R. Mihai<sup>4</sup>, on behalf of the joint working group of ESES and ENSAT\*



# Adrenal metastases - treatment



synchronous metastases	metachronous metastases	metastases in multiple sites or extensive tumour burden,	non-surgical candidates
ADX <b>after</b> completion of curative treatment for the primary tumour	<b>?surgery:</b> time-to-recurrence (better outcomes when metastasis was diagnosed some 6-12 months after the initial treatment)	systemic chemotherapy or palliative supportive care  stereotactic body radiation therapy (SBRT)	<b>percutaneous image-guided ablation</b>  chemical ablation, radiofrequency cryoablation, and microwave ablation

no tumour breaching  
no fragmentation  
wide surgical margins  
*en bloc* excision of peri-adrenal fat

# New techniques for thyroid surgery

- There are safe and effective alternatives to open thyroidectomy...
- Not every case is suitable...
- There are procedure-specific complications...
- Experience in thyroid & endoscopic surgery matters...



# New techniques for thyroid surgery

- Learning curve differs from procedure to procedure...
- Make use of educational platforms (esp. cadaveric courses)...
- More evidence-based data is warranted...

## ESES webinar 07

International guidelines for surgical treatment of  
thyroid cancer: controversies

Thomas Musholt



ESES webinars 2021

# Calcitonin influences the extent of surgery for MTC

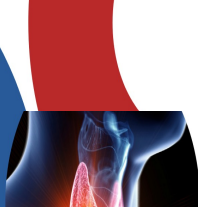


## Summary

- Calcitonin is an excellent marker to diagnose medullary thyroid carcinoma and to predict cure in the follow-up
- In MTC central compartment neck dissection is recommended
- Preoperative Calcitonin correlates with tumour size, lymph node metastasis and distant metastasis (tumor burden)
- The use of Calcitonin cut-off levels/thresholds alone seems not to be appropriate to decide extent of surgery of the lateral neck
- Preoperative ultrasound of the neck in expert hands
- Preoperative Calcitonin levels help us to discuss surgical strategies with the patients

## Future aspects

- Preoperative high-resolution ultrasound of the lateral neck
- Unilateral surgery in intrathyroidal sporadic MTC
- Staged surgery of the lateral neck
- Early detection by genetic screening
- Intraoperative detection of desmoplastic stroma reaction



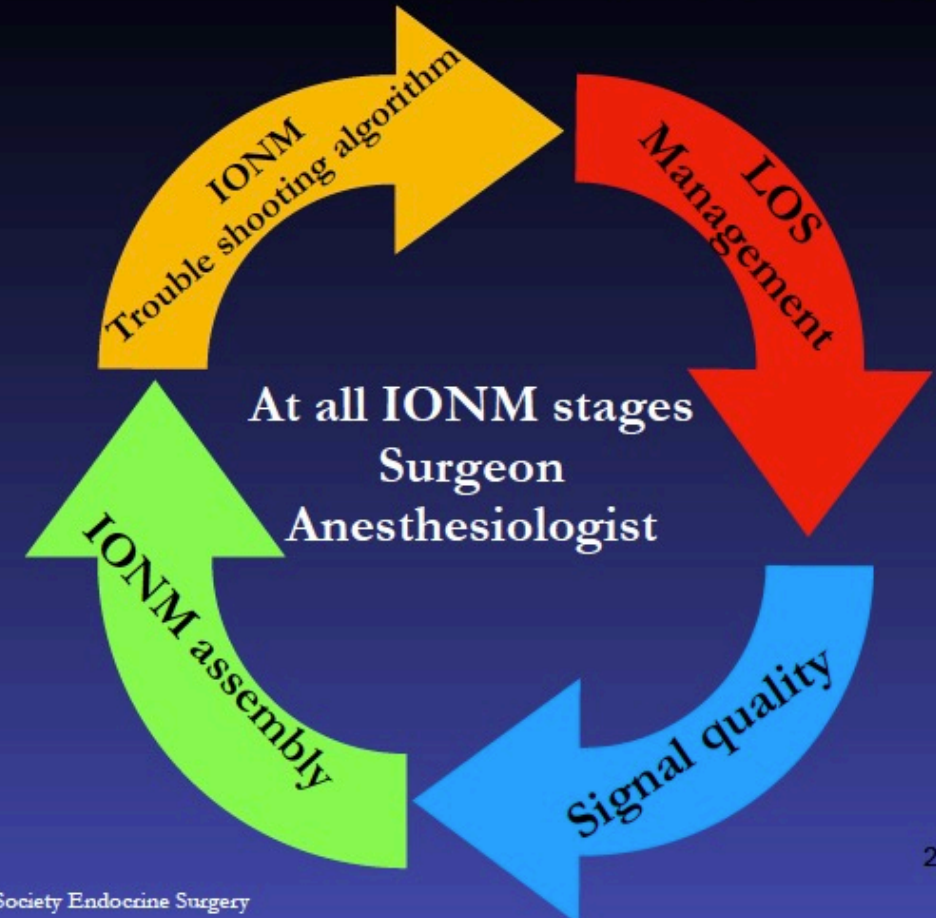
# Standardization of intraoperative nerve monitoring



## Standardization of IONM

1. L1 Pre-operative laryngoscopy
2. V1 Test VN before identification of RLN
3. R1 Test RLN when is identified
4. S1 EBSLN stimulation at identification
5. S2 EBSLN stimulation after STA ligation
6. R2 Test RLN after completely dissected
7. V2 Test VN after complete hemostasis
8. L2 Post-operative laryngoscopy

## Surgeon & Anesthesiologist play primary roles



# Standardization of intraoperative nerve monitoring



## EMG tube position verification tests

**Impedence Values**

1	Vocale 1 EndotrachealTube	(+) 1,1 kΩ	Δ 0,6 kΩ	✓
2	Vocale 2 EndotrachealTube	(-) 0,5 kΩ	Δ 0,4 kΩ	✓
	Messa & terra	0,8 kΩ		✓
	Ritorno STM 1	<0,1 kΩ		✓

**Respiratory Variation**

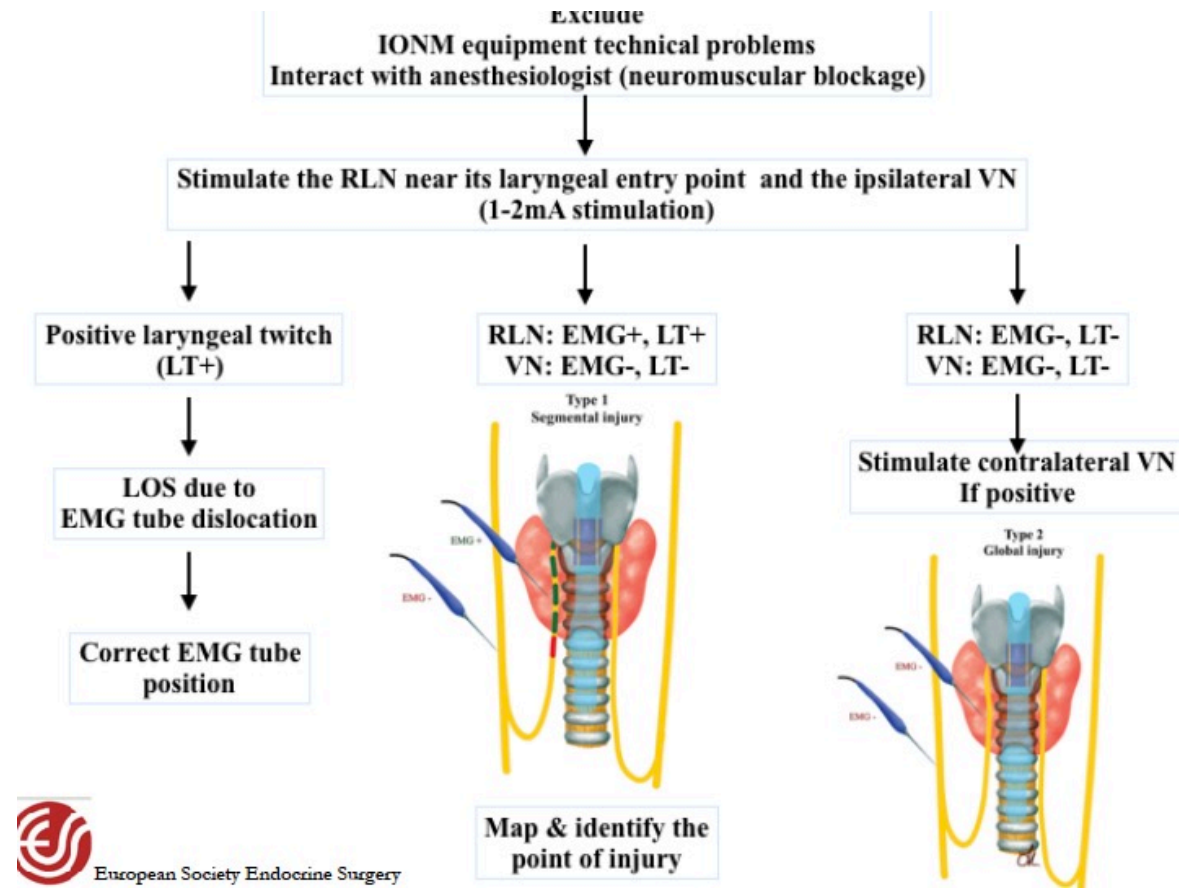
**V1 > 500 μV**

**Repeat Laryngoscopy**

**Tap Test**

## True LOS Using the information

- ✓ Prudence & experience
- ✓ Identification of site of lesion
- ✓ Stratification LOS 1 vs LOS 2 (prognosis)
- ✓ Elucidate mechanism of injury
- ✓ Corrective action (remove clip, ligature - RLN-RLN anastomosis)
- ✓ Predict the outcome (traction/thermal/section injury)
- ✓ Modificate surgical maneuver
- ✓ Wait & see (intraop. recovery of LOS)
- ✓ Steroid (iv/topic)
- ✓ Consideration of optimal contralateral surgery timing
- ✓ Inform anesthesiologist & patient (plan therapy)



# Primary hyperparathyroidism – avoiding failure in surgery

A: Make sure you have the correct diagnosis

B: Know the commonest causes of failure

- Ectopic gland: 50% - perform localisation
- Failure to recognise MGD: 40% - always think of this
- Missed adenoma in normal location
  - Tumours have a 3-dimensional appearance
  - Tumours are larger than 80mg
- Regrowth of previously resected tumour:  
be aware that tumours can be lobulated

- Shen et al Arch Surg 1996; 131: 861-867
- Rothmund BJS 1999; 86: 725-6
- Bagul et al World Journal of Surgery 2014; 38: 534
- World Journal of Surgery 2008; 32: 774
- Iacobone et al Lang Arch Surg 2019; 404: 919
- Bergenfelz et al BJS 2020; DOI: 10.1002/bjs.12025

# Primary hyperparathyroidism – avoiding failure in surgery

C: There are clues to avoid missing MGD

- Hereditary HPT: upto 100%
- Double negative localisation 20% MGD:  
– perform BNE
- Low gland weight: <200mg – 40% MGD:  
perform BNE
- ioPTH most useful for occasions when  
one scan positive and one negative

D: Know the steps when struggling  
(set out by Rothmund)

1. The location of superior gland
2. Rule of symmetry
3. Sites of ectopia
  1. Posterior and caudal descent of superior gland
  2. Thymus
  3. Upper thyroid vessels
  4. Carotid sheath
4. Inferior gland may be very high
5. 'intrathyroidal' are usually in a valley between two thyroid nodules

## ESES webinar 09

How to improve quality and safety in endocrine surgery?  
Marcin Barczyński

How to present your surgical outcomes registered in  
Eurocrine using Power BI  
Thomas Clerici

19 April 2021 | 17:00 GMT

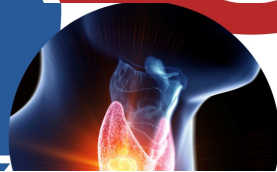
A project supported by **Medtronic**  
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 European Society of Endocrine Surgeons



## ESES webinar 09

How to present your surgical outcomes registered in  
Eurocrine using Power BI  
Thomas Clerici



ESES webinars 2021



# Quality & Safety: a symbiotic relationship



**QUALITY**



**PROCESS  
ORIENTED**

**SAFETY**



**PATIENT  
CENTERED**



# Searching for best endocrine surgeon

## Rationale

- To find the best surgeon, you may need to consider traveling to a university hospital or medical center outside of your immediate area.
- It should have a high-volume surgical unit specializing in thyroidectomies.
- A surgeon who exclusively performs thyroid/parathyroid surgery is almost always a better choice than a general surgeon or a head/neck surgeon.

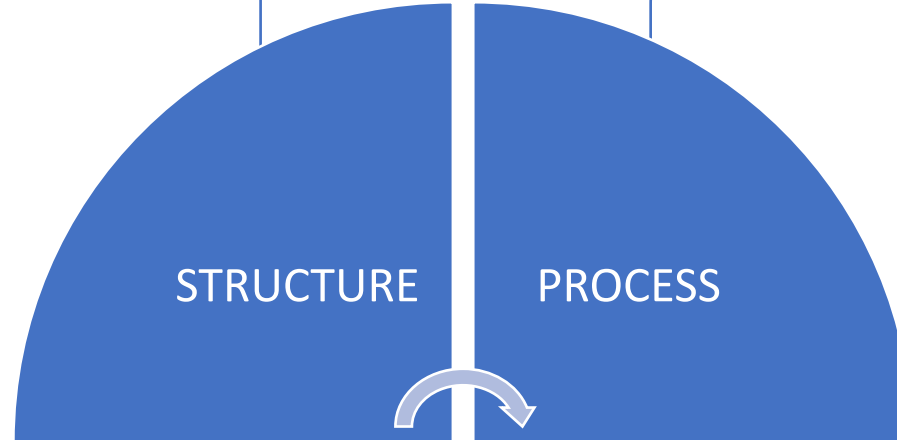
## Questions

- What kind of training have you received?
- How many thyroidectomies do you perform in a year?
- What are your complication rates?
- What results do you usually see?
- Do you have outcomes data to share?
- How frequently do you encounter complications from the surgery?
- What do you do to avoid complications or correct them if they occur?

# Excellence in endocrine surgery



- Qualifications:
  - FEBS in Endocrine Surgery
- Hospital volume
- Novel technologies:
  - IONM
  - PGs NIR imaging
  - EBDs
  - IOPTH
  - MIS



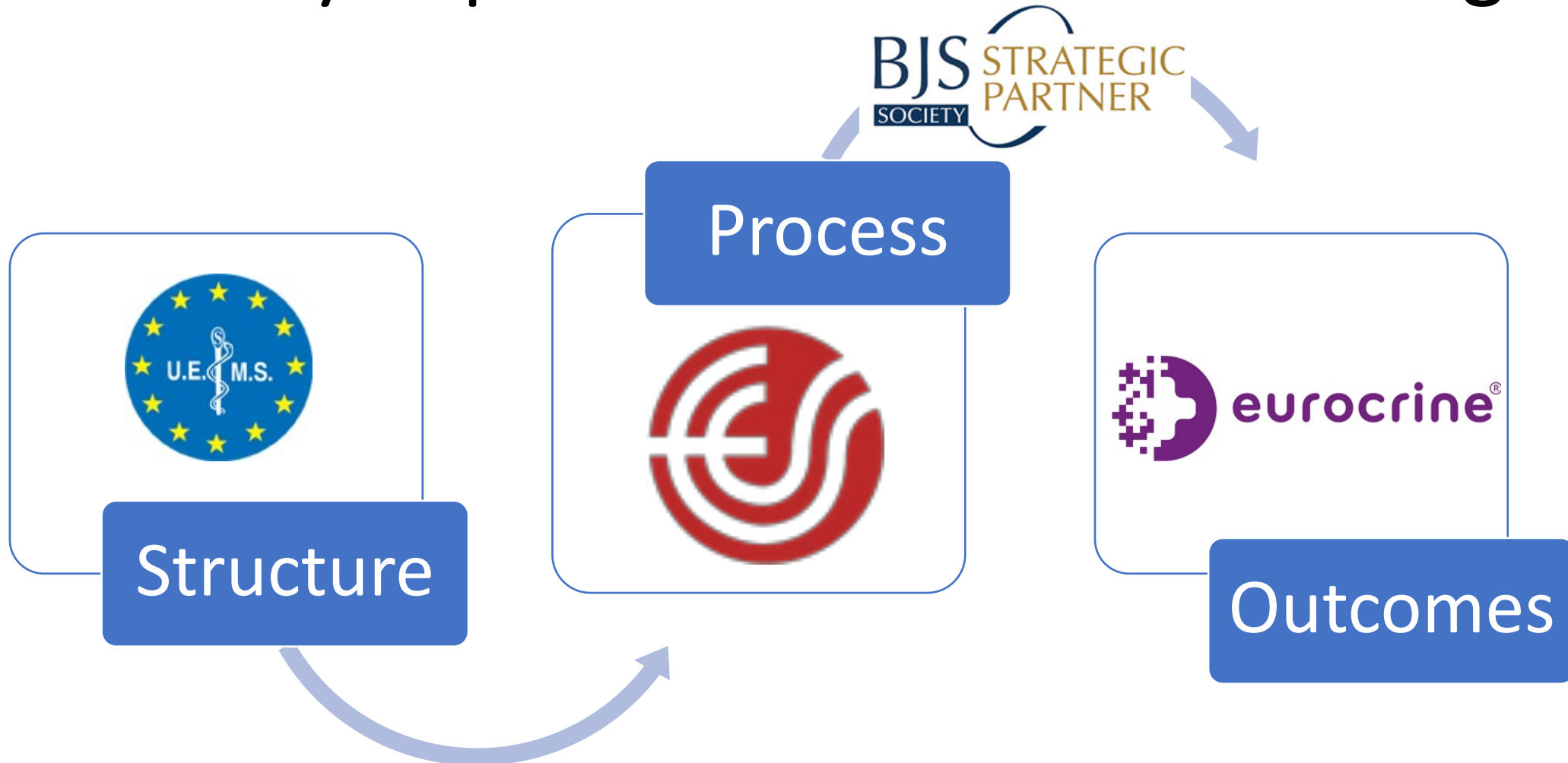
- Standards and Guidelines in Endocrine Surgery
- Patients referral pathways
- MDT
- CME



**eurocrine<sup>®</sup>**

- Surgical morbidity
- Perioperative mortality
- Oncological outcomes

# Quality Improvement in Endocrine Surgery





# What is Microsoft Power BI ?

## Why is it an important add-on in the EUROCRINE registry ?



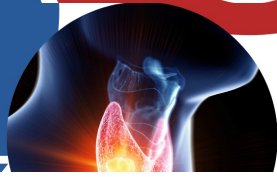
Power BI is a business analytics program created by Microsoft. It provides interactive visualizations and business intelligence capabilities with an interface simple enough for end users to create their own reports and dashboards. All clinics participating in the EUROCRINE registry get Power BI licence for free. With this measure, EUROCRINE wants to enable

### ▪ participating clinics

- to analyse and visualize their own clinic data at any time for any time period themselves
- to independently generate reports and presentations in order to show the quality and outcome of their operations at any time
- to validate the quality of their data entry

### ▪ national societies

- to analyse and visualize their aggregate national data at any time for any time period themselves
- to independently generate reports and presentations in order to show national results and outcomes at any time
- + to issue benchmark reports to every clinic comparing clinic results with the aggregate national results in their country



- Microsoft Power BI is really a powerful tool !
- meant to be a business intelligence tool, it represents also a perfect tool for clinicians to analyse and visualize their work and outcomes
- Power BI is the ideal extension of a user-friendly, surgical database
- from expert user to the casual user, everyone will find an application form that suits them (Power BI Desktop, Power BI service, Power BI App)
- pre-prepared EUROCRINE standard reports enable clinics without specific knowledge to nevertheless analyze and present all their results at any time
- it adds considerably to the “Return On Investment” (annual fee) for participating clinics

## ESES webinar 10

**C-IONM in thyroid surgery: state of art and current evidence**

Rick Schneider

**TOETVA: why and how I do it?**

Gianlorenzo Dionigi

**Laser ablation of thyroid tumours: why, when and how I do it?**

Marcin Barczyński

**26 April 2021 | 17:00 GMT**



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ESES webinars 2021



# Laser ablation of thyroid tumours

## Thyroid tumors:

- are common,
- most often benign,
- remain asymptomatic,
- do not require treatment.

European  
Thyroid Journal

### Guidelines

Eur Thyroid J  
DOI: 10.1159/000508484

Received: April 24, 2020  
Accepted: May 7, 2020  
Published online: June 8, 2020

## 2020 European Thyroid Association Clinical Practice Guideline for the Use of Image-Guided Ablation in Benign Thyroid Nodules

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50%

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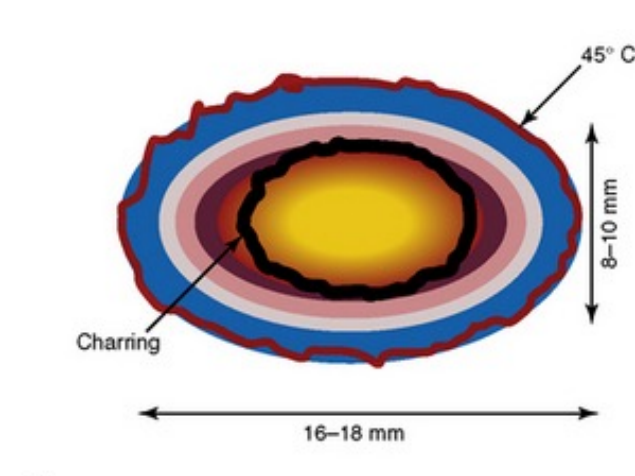
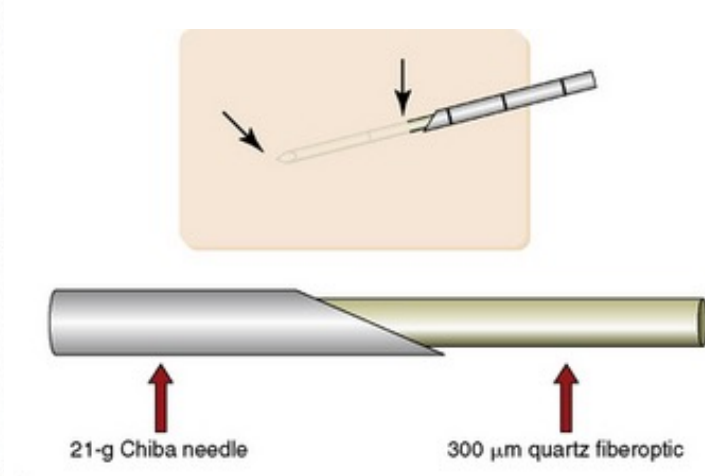
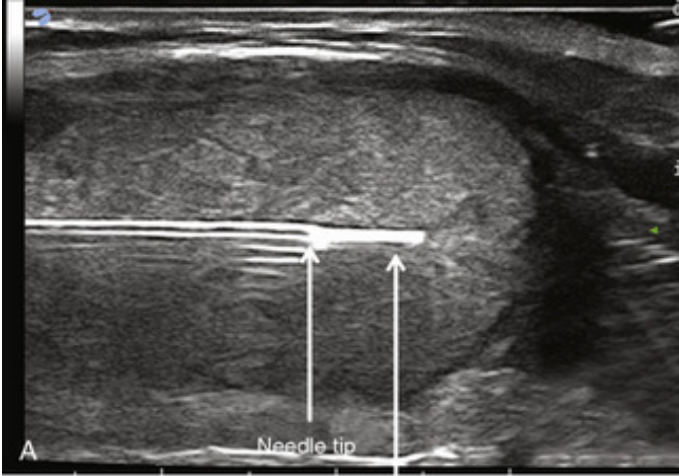
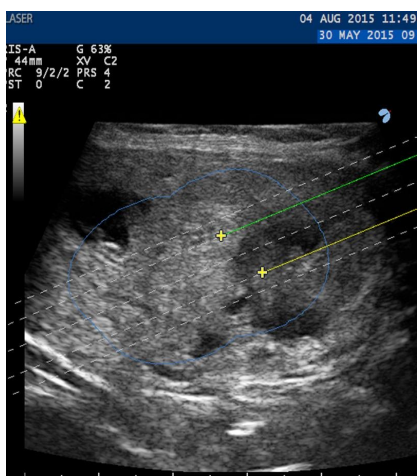
**Table 2.** Modalities, technical characteristics, and estimated costs of thermoablation treatment

	Laser	RFA	HIFU	MWA
Disposables, G	21	15–18		14–16
Active tip, mm	5	5–20		20–40
Mean power, W	3–7 per fiber	35–60	30–40	30–50
Duration, min	15–30	15–40	45–60	10–20
Average price in EUR (excl. tax)				
Device	30,000	17,000–25,000	>250,000	20,000–25,000
Disposables	1 fiber ~300–500	Electrode 700–900	Kit ~500	Antenna 1,000–1,250
Contraindications, besides clotting disorders		Pacemaker Pregnancy	Cystic component	
Comments	Two operators No need for moving-shot	Experience in moving-shot or multiple overlapping technique	Management of movements and pain Long duration	Limited experience in Europe

**Papini E, Monpeyssen H, Frasoldati A, Hegedüs L.** 2020 European Thyroid Association Clinical Practice Guideline for the Use of Image-Guided Ablation in Benign Thyroid Nodules. *Eur Thyroid J.* 2020;9:172-185.



# Laser ablation of thyroid tumours



A

B