

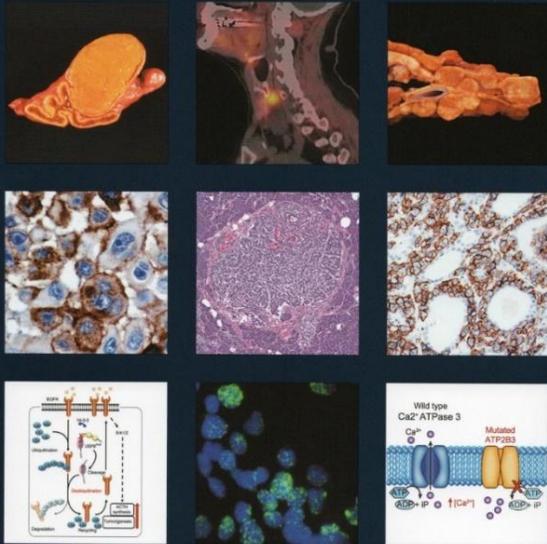
Thyroid Nodule Practice: Asian Perspectives

Reducing Overdiagnosis and Overtreatment

The IAC Webinar on 19th of March, 2026

WHO Classification of Tumours of Endocrine Organs

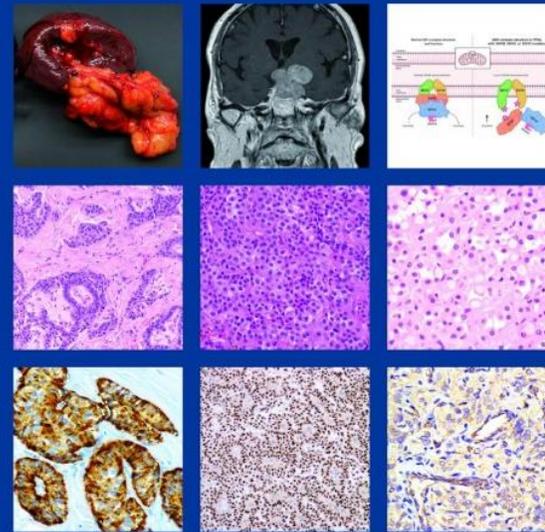
Edited by Ricardo V. Lloyd, Robert Y. Osamura, Günter Klöppel, Juan Rosai



WHO Classification of Tumours • 5th Edition

Endocrine and Neuroendocrine Tumours

Edited by the WHO Classification of Tumours Editorial Board



International Agency for Research on Cancer
World Health Organization

Kennichi Kakudo · Zhiyan Liu ·
Chan Kwon Jung · Mitsuyoshi Hirokawa ·
Andrey Bychkov · Chiung-Ru Lai *Editors*

Thyroid FNA Cytology

Differential Diagnoses and Pitfalls
Third Edition

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The Bethesda System for Reporting Thyroid Cytopathology

Definitions, Criteria,
and Explanatory Notes

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Third Edition

Springer

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Disclosure: I have nothing to disclose.

The views expressed are personal views and do not represent official positions of affiliated institutions or the World Health Organization.

Lecture Outline

- 1. Overdiagnosis and overtreatment of thyroid cancer**
- 2. Why Nordic countries diagnose less**
- 3. Japanese clinical guidelines and Asian practice**
- 4. Active surveillance and cytopathology**
- 5. Lobectomy as default surgery**
- 6. Health-system context and implementation**

Part 1:

Overdiagnosis and overtreatment of thyroid carcinomas.

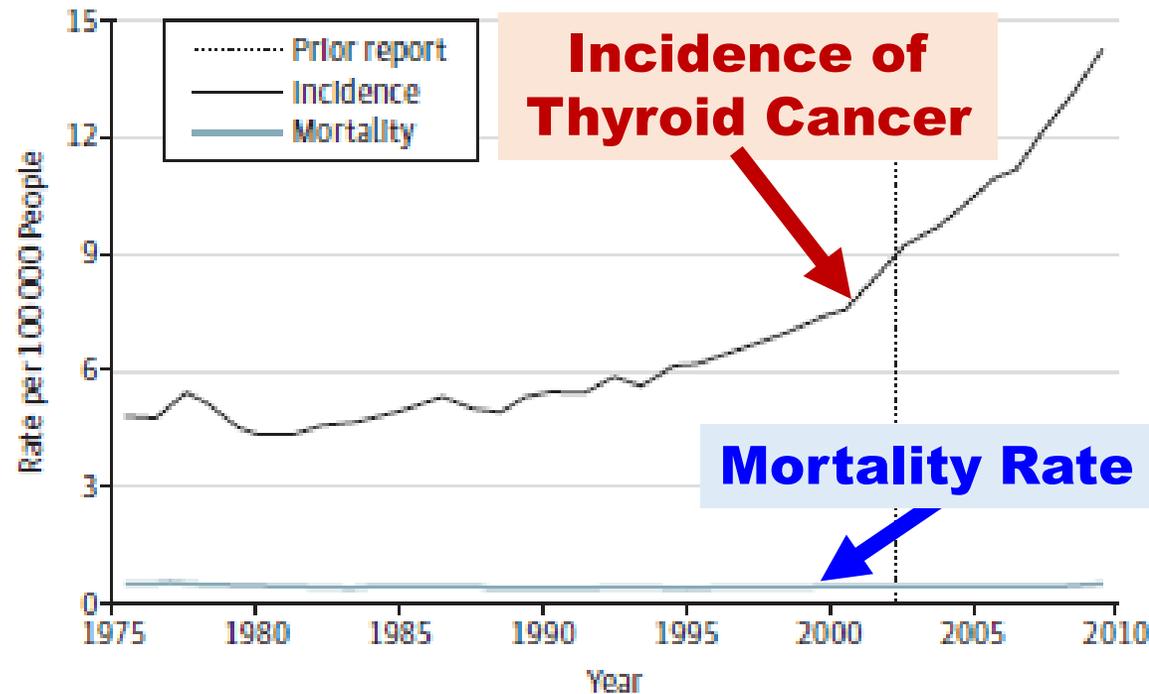
Why This Topic Matters

**“Overdiagnosis” causes harm—
not only **medical harm**, but also
psychological burden, reduced quality of life,
and unnecessary healthcare costs.**

The incidence of thyroid cancer has nearly tripled in the USA from 1975 to 2009. The mortality rate from thyroid cancer was stable between 1975 and 2009 (approximately 0.5 deaths per 100,000).

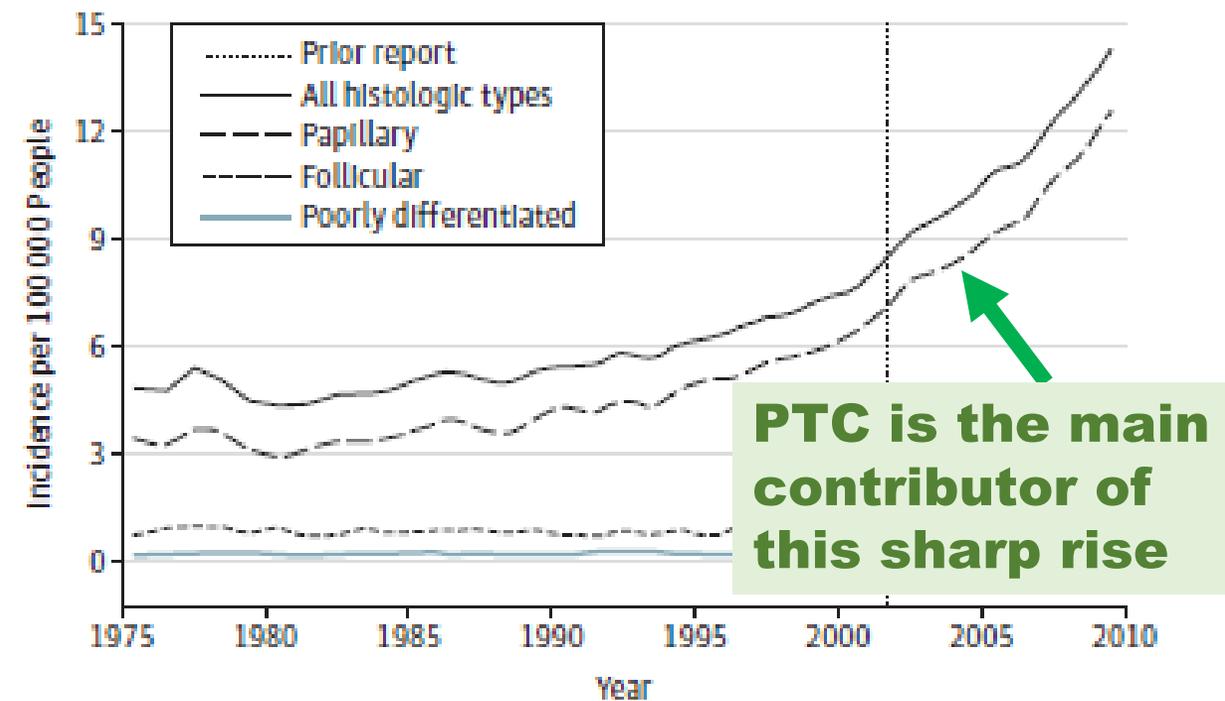
Davies L, et al. JAMA Otolaryngol Head Neck Surg 140; 317-22, 2014.

Figure 1. Thyroid Cancer Incidence and Mortality, 1975 to 2009



Trends are shown for thyroid cancer of all histologic types. Incidence data are from Surveillance, Epidemiology, and End Results (SEER) 9, 1975 to 2009, maintained by the National Cancer Institute, National Institutes of Health, released April 2012, based on the November 2011 submission. Mortality data are from the National Center for Vital Statistics.

Figure 2. Thyroid Cancer Incidence by Histologic Type, 1975 to 2009



Trends are shown for thyroid cancer of all histologic types and for the 3 major histologic groups: papillary, follicular, and poorly differentiated cancers (anaplastic and medullary). Data are from Surveillance, Epidemiology, and End Results (SEER) 9, 1975 to 2009, maintained by the National Cancer Institute, National Institutes of Health, released April 2012, based on the November 2011 submission.

Why Early Detection Saves Lives in Lung Cancer —but **NOT** in Low-Risk Thyroid Cancer

Underlying Disease Biology

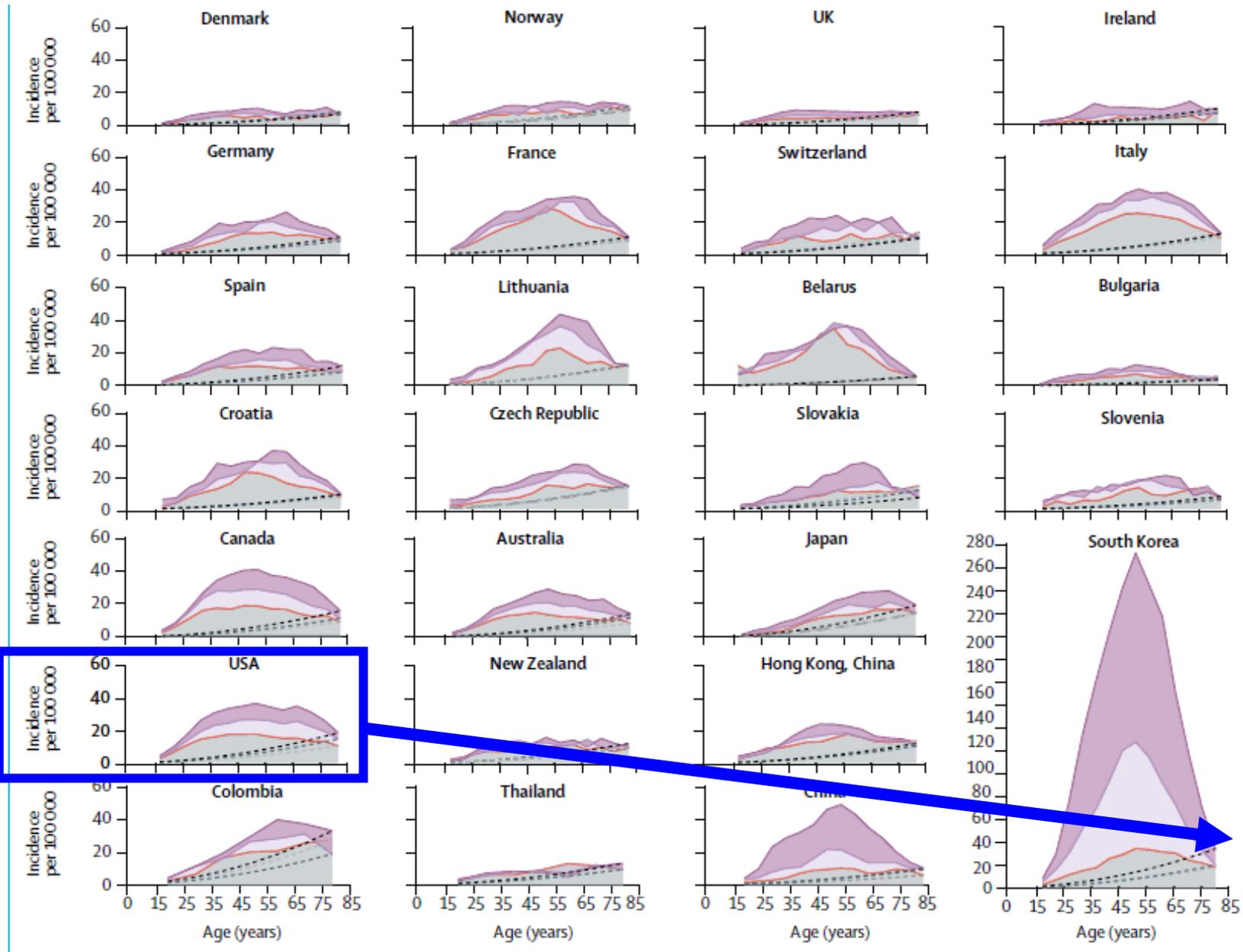
	Lung Cancer	Low-Risk Thyroid Cancer
Natural history	Rapid progression	Indolent or non-progressive
Untreated outcome	High mortality	Very low CS-Mortality
Window for cure	Narrow	Wide or unnecessary

Effect of Early Detection

What early detection finds	Lethal disease at a curable stage	Many lesions that would never cause harm
Impact on mortality	Significant reduction	No meaningful reduction
Main benefit	Lives saved	Overtreatment/Anxiety

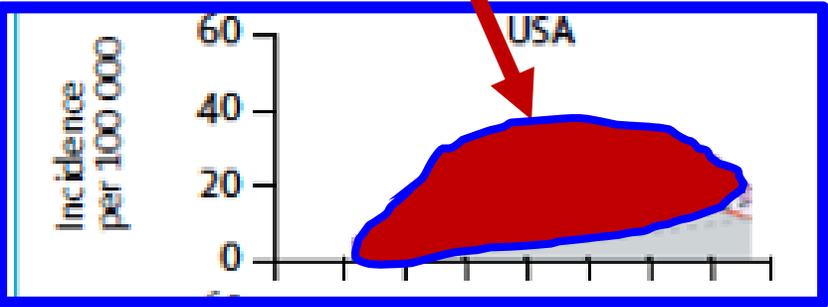
In low-risk thyroid carcinoma, **early detection has become **a principal driver of overdiagnosis and overtreatment.****

The widespread deployment of highly sensitive diagnostic technologies—including ultrasound imaging, fine-needle aspiration (FNA) cytology, molecular testing (MT), and artificial intelligence (AI)—has **markedly expanded the detection of indolent thyroid lesions that would **NOT** progress to clinically meaningful disease.**



Observed —
 Expected - - -
 2008-12
 2003-07
 1998-2002

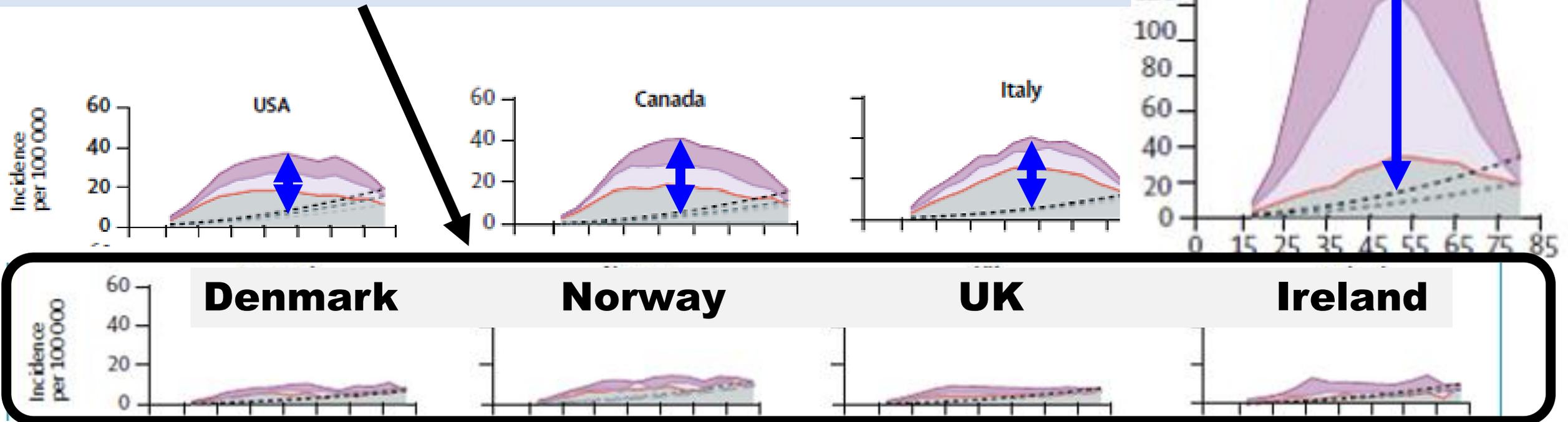
The area between observed (—) and expected (- - -) incidence curves has been interpreted as overdiagnosis.



Li M, Dal Maso L, Vaccarella S. Global trends in thyroid cancer incidence and the impact of overdiagnosis. Lancet Diabetes Endocrinol. 2020 Jun;8(6):468-470.

Overdiagnosis of thyroid carcinoma (TC) vary among countries.

Overdiagnosis (\updownarrow) of TC is high (>70%) in some developed countries (USA, Canada, Italy, and Korea), but less prominent in Nordic and some other European countries.



Li M, Dal Maso L, Vaccarella S. Global trends in thyroid cancer incidence and the impact of overdiagnosis. *Lancet Diabetes Endocrinol.* 2020 Jun;8(6):468-470.

Working Hypothesis:

- 1. First, we must recognize how widely clinical practice varies across countries.**
- 2. Understanding these differences is not about assigning blame—it is about learning.**
- 3. The key question is:
Which approaches achieve good outcomes while minimizing unnecessary intervention?**

Part 2:

Why Nordic countries diagnose less?

There are four key features for less detection of subclinical disease

- 1. No population-based thyroid screening**
- 2. Strong primary-care gatekeeping**
- 3. Restrictive use of imaging**
- 4. More conservative downstream management (No routine use of MT)**

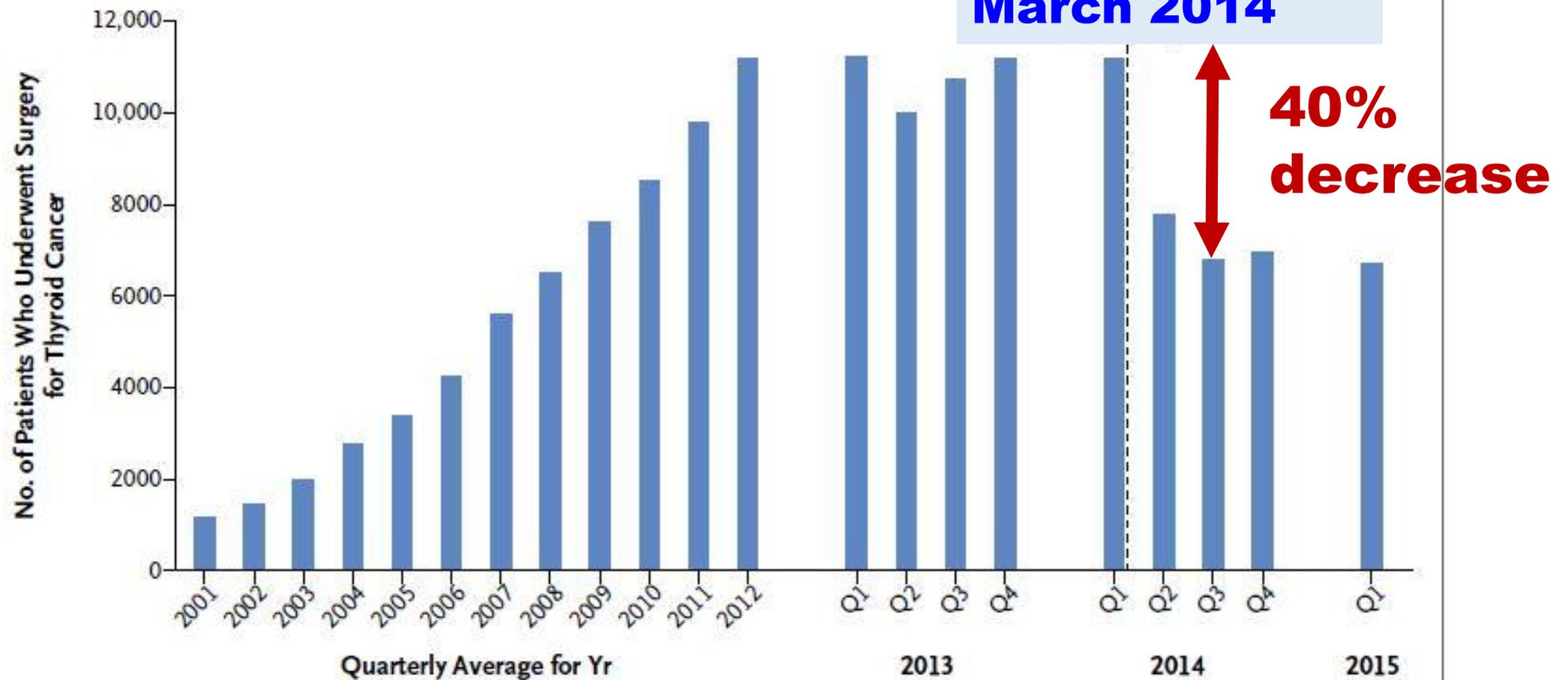


Figure 1. Trend in the Number of Operations for Thyroid Cancer in South Korea, 2001–2015.

Data are from the Health Insurance Review and Assessment Service, South Korea.

Ahn HS, Welch HG: South Korea's Thyroid-Cancer "Epidemic"--Turning the Tide. N Engl J Med 373:2389-2390, 2015.

Screening for Thyroid Cancer

US Preventive Services Task Force Recommendation Statement

US Preventive Services Task Force

IMPORTANCE The incidence of thyroid cancer detection has increased by 4.5% per year over the last 10 years, faster than for any other cancer, but without a corresponding change in the mortality rate. In 2013, the incidence rate of thyroid cancer in the United States was 15.3 cases per 100 000 persons. Most cases of thyroid cancer have a good prognosis; the 5-year survival rate for thyroid cancer overall is 98.1%.

OBJECTIVE To update the US Preventive Services Task Force (USPSTF) recommendation on screening for thyroid cancer.

EVIDENCE REVIEW The USPSTF reviewed the evidence on the benefits and harms of screening for thyroid cancer in asymptomatic adults, the diagnostic accuracy of screening (including neck palpation and ultrasound), and the benefits and harms of treatment of screen-detected thyroid cancer.

FINDINGS The USPSTF found inadequate direct evidence on the benefits of screening but determined that the magnitude of the overall benefits of screening and treatment can be bounded as no greater than small, given the relative rarity of thyroid cancer, the apparent lack of difference in outcomes between patients who are treated vs monitored (for the most common tumor types), and observational evidence showing no change in mortality over time after introduction of a mass screening program. The USPSTF found inadequate direct evidence on the harms of screening but determined that the overall magnitude of the harms of screening and treatment can be bounded as at least moderate, given adequate evidence of harms of treatment and indirect evidence that overdiagnosis and overtreatment are likely to be substantial with population-based screening. The USPSTF therefore determined that the net benefit of screening for thyroid cancer is negative.

CONCLUSIONS AND RECOMMENDATION The USPSTF recommends against screening for thyroid cancer in asymptomatic adults. (D recommendation)

JAMA. 2017;317(18):1882-1887. doi:10.1001/jama.2017.4011

- ← Editorial page 1840
- + Author Audio Interview
- ← Related article page 1888
- + CME Quiz at jamanetwork.com/learning and CME Questions page 1906
- + Related articles at jamainternalmedicine.com, jamaotolaryngology.com, and jamasurgery.com

The US Preventive Services Task Force recommends **against** screening for thyroid cancer in asymptomatic adults.

(D recommendation)

US Preventive Services Task Force; Bibbins-Domingo K, et al. Screening for Thyroid Cancer: US Preventive Services Task Force Recommendation Statement. JAMA. 317:1882-1887, 2017.

Ultrasound, FNA, Molecular Testing

Restricted Access

More Liberal Access

Over diagnosis
of thyroid cancer

Risk-Stratification
for Surgery

Overtreatment
of thyroid cancer

Less
Prominent

Yes / No

Less
Prominent

Prominent

Yes

Less
Prominent

No

Prominent

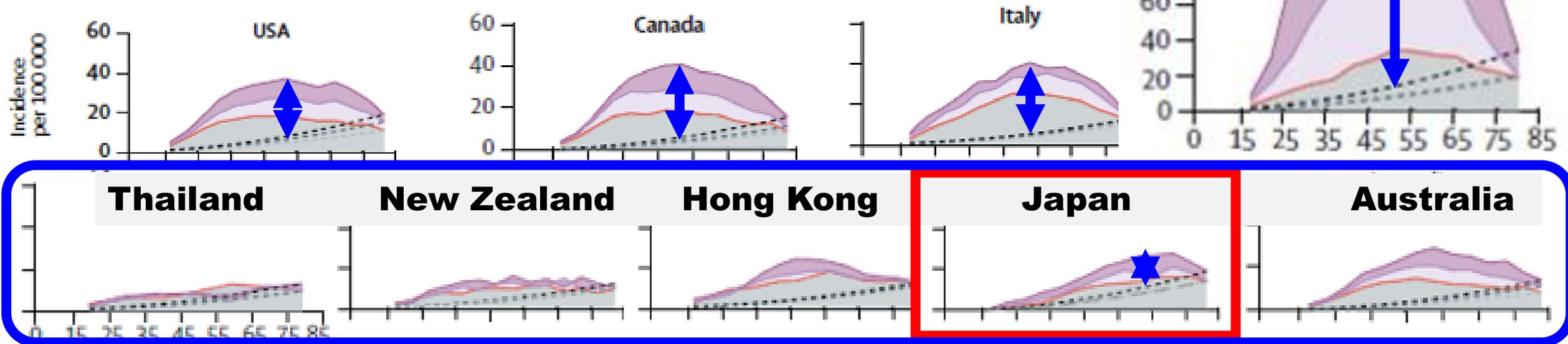
**Nordic countries diagnose less thyroid cancer.
As a consequence, overtreatment rarely occurs.**

Part 3:
**Japanese clinical guidelines and
Asian practice**

**Conservative Approaches Recommended
by the Japan Thyroid Association (JTA)
and the Japan Association of Endocrine
Surgery (JAES).**

Overdiagnosis of thyroid carcinoma varies widely among countries.

Overdiagnosis of thyroid cancer is less prominent in some Asia/Oceania countries (Thailand, New Zealand, Hong Kong China, Japan and Australia).



Li M, Dal Maso L, Vaccarella S. Global trends in thyroid cancer incidence and the impact of overdiagnosis. Lancet Diabetes Endocrinol. 2020 Jun;8(6):468-470.

Management of FN nodules varies widely.

It is because FNA cannot distinguish follicular adenoma from carcinoma reliably.

- 1. In many Western systems, the strategy is early definitive intervention to avoid missing cancer.**
- 2. In Japan, the strategy is staged decision-making—observe first, treat only if progression occurs.**

Indication of surgical intervention for FN thyroid nodules in Japan:

- 1. High-grade cytological malignancy;**
- 2. Suspected malignancy on ultrasound;**
- 3. Large tumor diameter (>3-4 cm); or**
- 4. Rapid tumor growth.**

Note: Surgery is recommended for FN nodules, if any of the above 4 conditions are present.

Japanese approach can successfully exclude these non-growing FN nodules from unnecessary surgery.

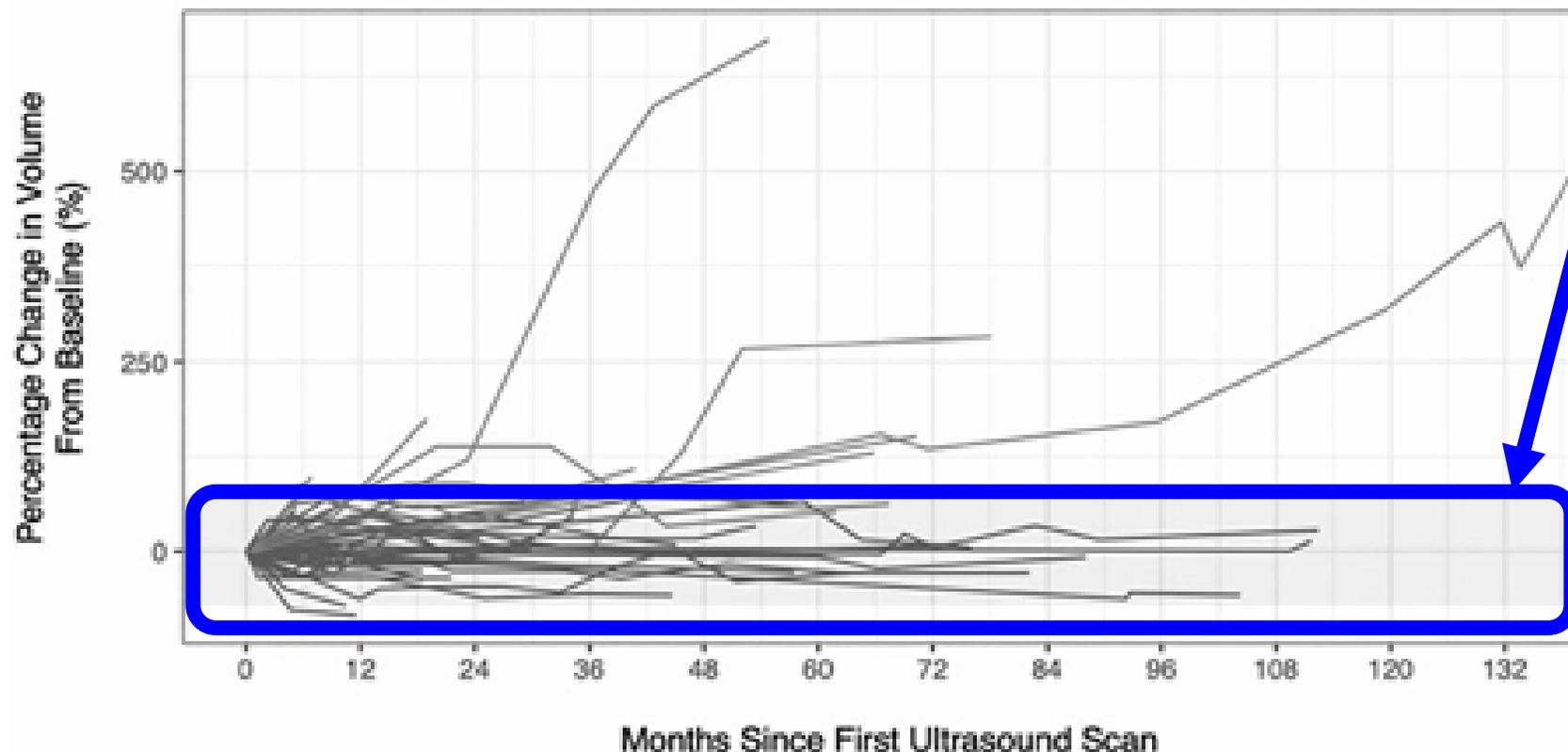


FIG. 4. Percent change in volume of individual *RAS*-mutated nodules from baseline as determined by thyroid ultrasound scans ($n=63$). Tumor growth was defined as $>72\%$ change in volume at any point during active surveillance (orange lines: $n=12$) and included nodules that subsequently regressed ($n=2$).

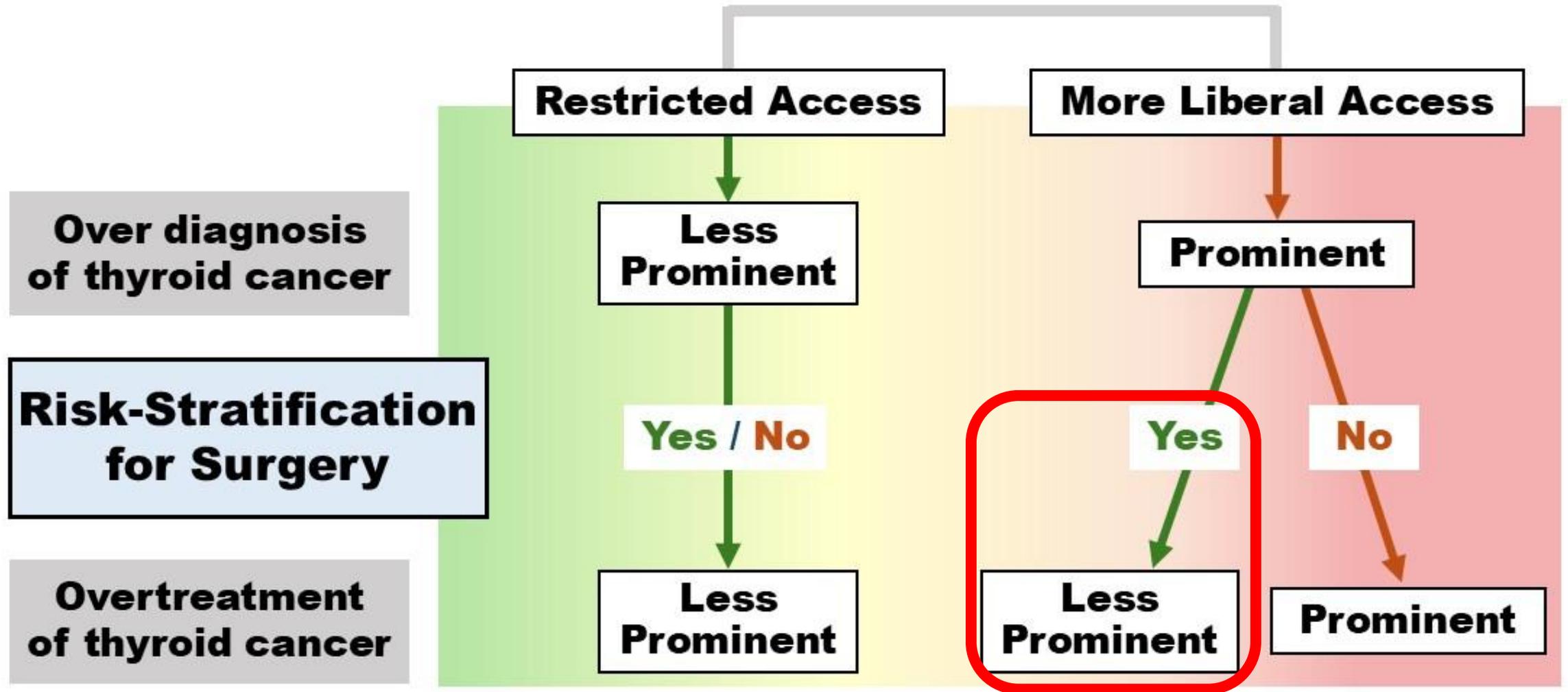
Sfreddo et al reported that most *RAS*-mutated indeterminate nodules remain stable. The author concluded that immediate surgery for all of them is a limited clinical value.

The British Thyroid Association clinical guidelines recommend **multidisciplinary team-based decision-making, rather than reliance on any single diagnostic modality.**

This philosophy is concordant with that of the Japan Association of Endocrine Surgeons clinical guidelines, which emphasize clinically integrated, risk-adapted strategies. Such approaches can substantially reduce unnecessary surgery while preserving oncologic safety.



Ultrasound, FNA, Molecular Testing



Both British and Japanese guidelines emphasize multidisciplinary, risk-adapted management, which reduces overtreatment significantly.

Different Clinical Logic

1. In some healthcare systems, **diagnostic surgery to indeterminate thyroid nodules (ITNs)** has been traditionally favored to avoid missing malignancy; patients usually accept its surgical removal.
2. Clinicians in Japan consider **ultrasound appearance, nodule size**, patient age, **and tumor kinetics** to decide whether to follow clinically or proceed with surgery.
3. This **“wait and see”** approach safely excludes non-progressive tumors from immediate surgery.
4. Importantly, this is not limited to **low-resource settings**. It also reduces unnecessary intervention in **high-income countries**.

Part 4:

Active surveillance and cytopathology

**Even for patients with FNA-confirmed PTC,
non-surgical follow-up (active surveillance)
is one option in Japan in addition to immediate
surgery.**

Active Surveillance Versus Immediate Surgery:
Questionnaire Survey on the Current Treatment Strategy
for Adult Patients with Low-Risk Papillary Thyroid
Microcarcinoma in Japan

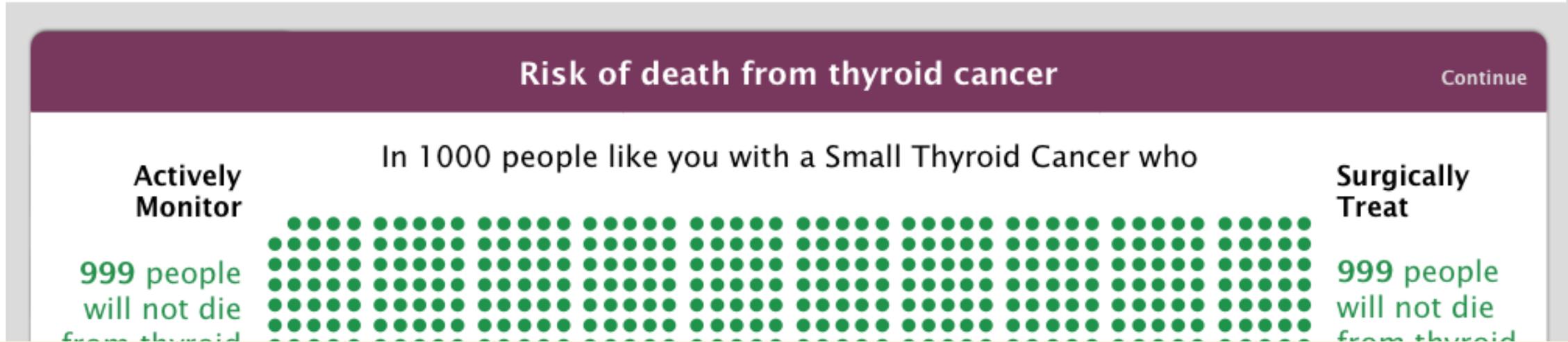
- 1. Responses were obtained from 134 institutes, where 72.4% of Japanese thyroid cancer cases were treated.**
- 2. After the diagnosis, 42 responders (31.3%) recommend active surveillance (AS), 35 (26.1%) recommend immediate surgery as the management, and 52 (38.8%) allowed patients to decide the treatment course.**
- 3. At these institutions, 1176 patients with PMC underwent surgery in 2017, accounting for 18.1% of surgeries for PTC.**
- 4. During the following three months, 310 of 576 (53.8%) PMC patients underwent AS.**

Are there patients in whom active surveillance and percutaneous ablation are appropriate management options?

■ **RECOMMENDATION 11**

- A. Active surveillance may be offered as an appropriate management option for some patients with cT1aN0M0 PTCs. Shared clinical decision-making between the patient and clinical team regarding risks and benefits of this approach is essential. (*Conditional recommendation, Low certainty evidence*)

This reframes the conversation from **‘saving lives’** to **‘avoiding harm.’**

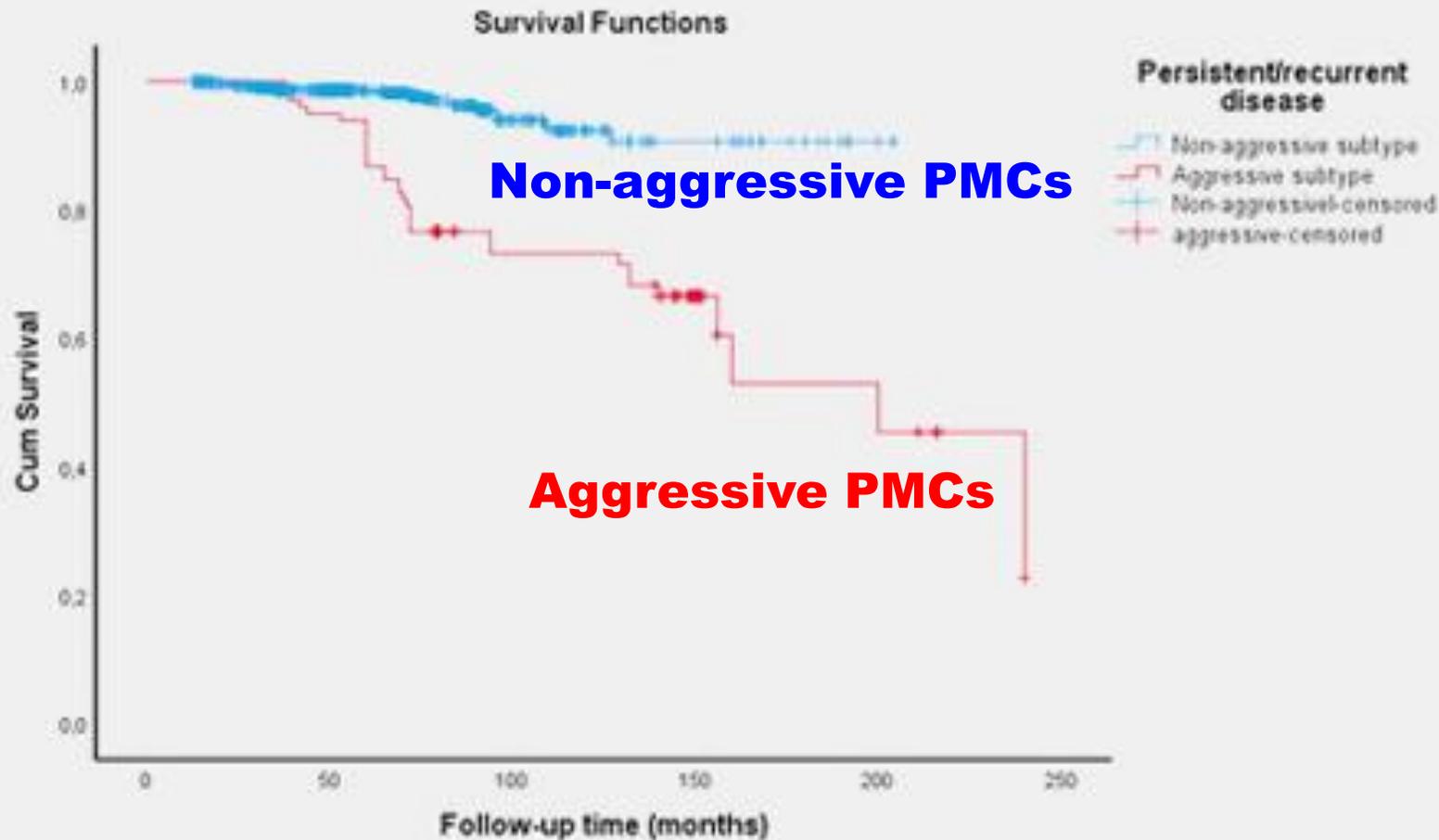


A systematic review and meta-analysis by van Dijk et al. found that patients whose PMC was managed with active surveillance reported equal or better health-related quality of life than those undergoing surgery.

van Dijk SPJ, et al. Patient-Reported Outcomes Across Treatment Strategies in Papillary Thyroid Microcarcinoma: A Meta-Analysis. JAMA Otolaryngol Head Neck Surg. 2025 Dec 26:e254670.

Role of Cytopathologists in AS Safety

- 1. Active surveillance is safe only if aggressive thyroid cancers (aggressive subtypes PTC, MTC, PDTC etc.) are excluded.**
- 2. This makes cytopathologists central to patient safety.**



► **Fig. 1** Kaplan–Meier curves displaying the estimated persistent/recurrent disease-free survival probability in patients with histologically aggressive and non-aggressive PTMC subtypes.

Zuhur SS, et al. Do Histologically Aggressive Subtypes of Papillary Thyroid Microcarcinoma have Worse Clinical Outcome than Non-Aggressive Papillary Thyroid Microcarcinoma Subtypes? A Multicenter Cohort Study. Horm Metab Res. 2023 May;55(5):323-332.

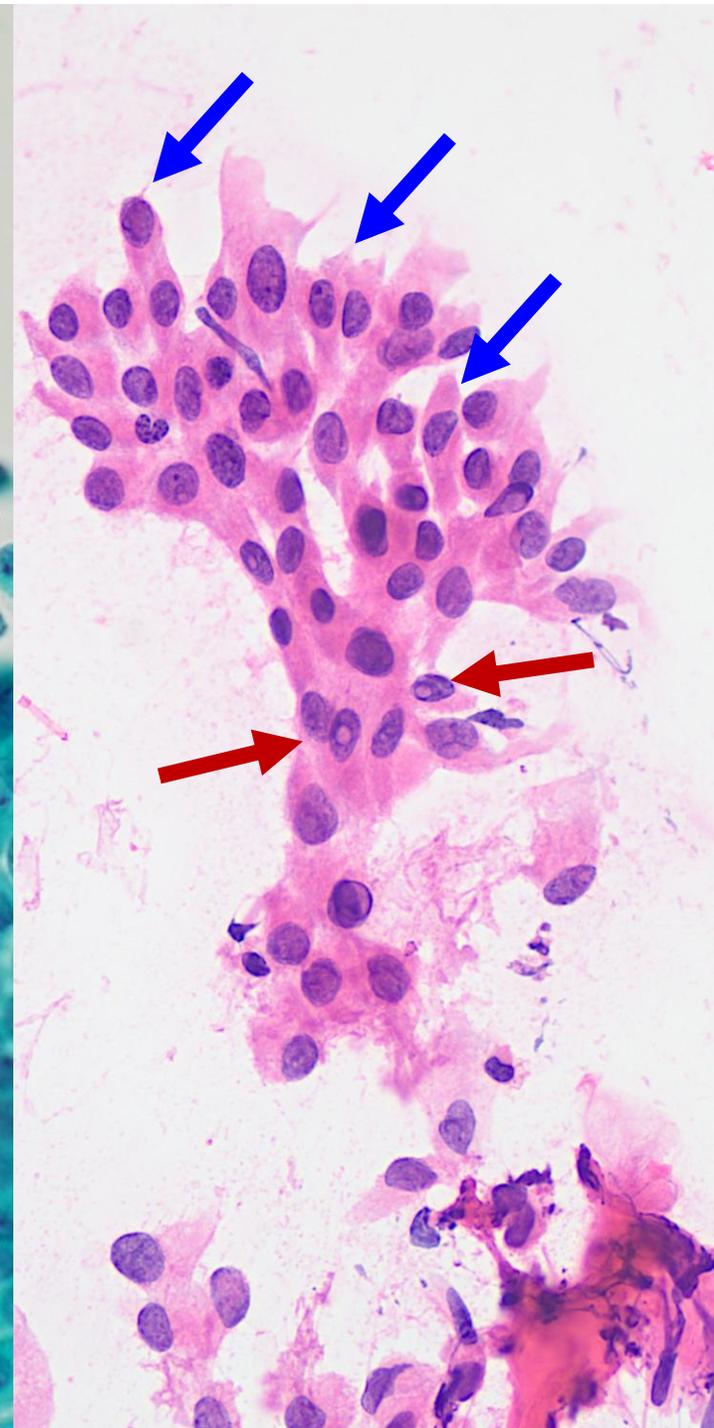
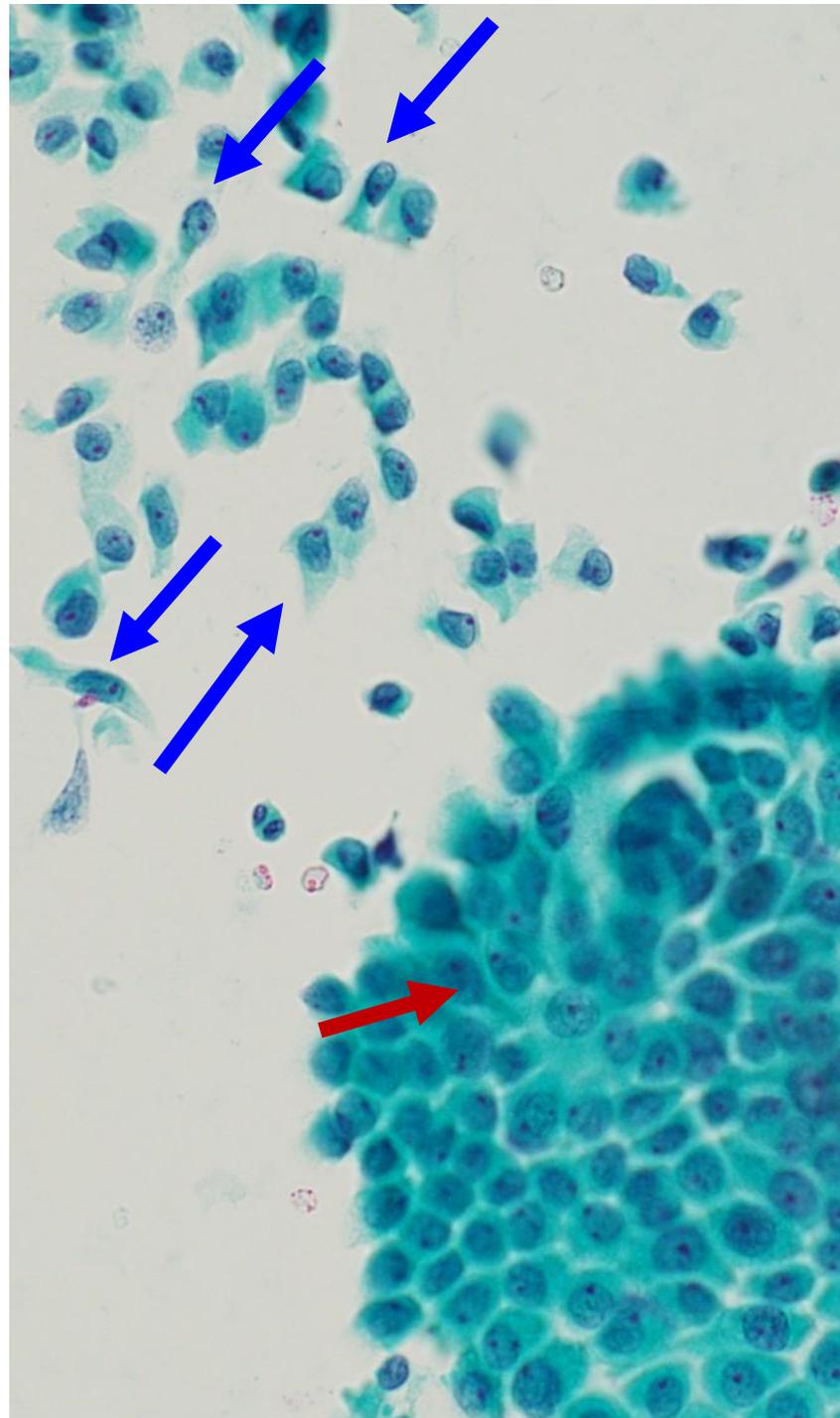
Indications for immediate surgery and contraindications for active surveillance in papillary thyroid microcarcinoma by the JAES guidelines.

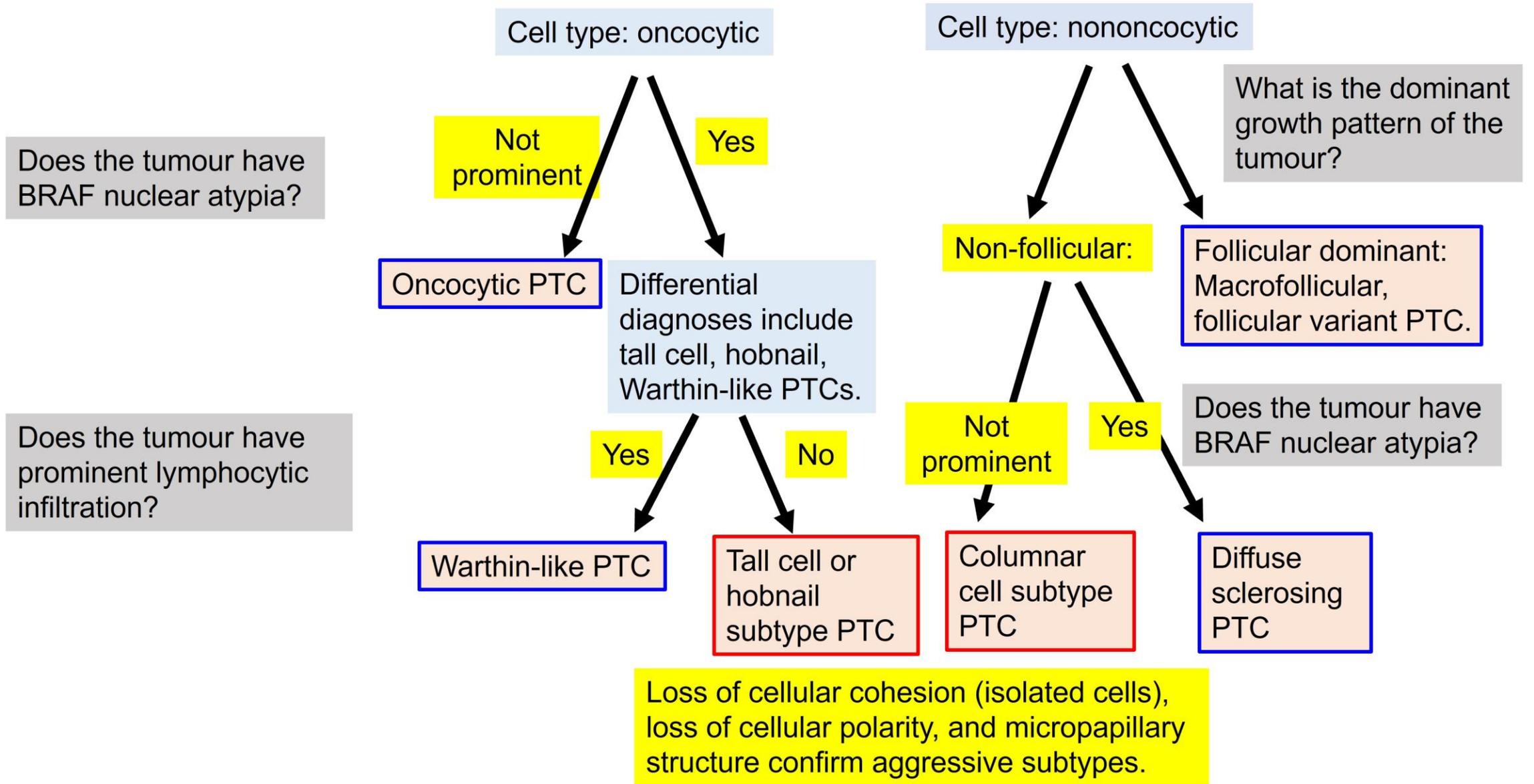
- 1. Presence of clinical lymph node metastasis or distant metastasis.**
- 2. Clinically apparent invasion into recurrent laryngeal nerve.**
- 3. Diagnosis of aggressive subtype of papillary thyroid carcinoma on cytology.**
- 4. Tumors adherent to the trachea, possibly invading.**
- 5. Tumors located along the course of the recurrent laryngeal nerve.**
- 6. Associated with other thyroid or parathyroidal disease requiring surgery.**
- 7. Age <20 years (no current evidence)**

Sugitani I, et al. Indications and Strategy for Active Surveillance of Adult Low-Risk Papillary Thyroid Microcarcinoma: Consensus Statements from the Japan Association of Endocrine Surgery Task Force on Management for Papillary Thyroid Microcarcinoma. Thyroid. 31:183-192, 2021.

Tall cell PTC

1. Frequent presence of tumor cells with a height at least three times their width (←), showing abundant eosinophilic cytoplasm.
2. Intranuclear pseudoinclusions (←), occasionally observed.
3. Differential diagnoses for tall cell PTC include non-aggressive PTCs with oncocytic features, such as Warthin-like and oncocytic PTCs.





Modified from Canberk S, et al. Variants of Papillary Thyroid Carcinoma: An Algorithmic Cytomorphology-Based Approach to Cytology Specimens. Acta Cytol. 64:288-298, 2020.

PTC subtyping is not recommended in many Western reporting systems including the Bethesda reporting system. A table from Rossi et al. (2025) states that **subtyping PTC on cytology is not necessary.**

Why Western Systems Hesitate?

If a cytopathologist definitely labels a subtype (e.g., tall cell) and histology later disagrees, this could be considered an error affecting surgical planning, and may trigger malpractice claims.

PTC

Nuclear pseudoinclusions can be seen in several different entities
Not only peculiar of PTC

PTC subtypes

It is not necessary to diagnose them on cytology

Warthin-like PTC subtype may mimic HT

Tall-cell PTC subtype show spindle cells seen in other entities too

ND non-diagnostic, *HT* hashimoto thyroiditis, *PTC* papillary thyroid carcinoma

Some studies found that surgery was associated with improved all cause or thyroid cancer mortality, particularly in studies from the USA.

- 1. Lin JK, et al. Risk of Mortality between Untreated and Treated Papillary Thyroid Cancer: A Matched Cohort Analysis. Ann Otol Rhinol Laryngol. 129:265-272, 2020.**
- 2. Ho AS, et al. Mortality Risk of Nonoperative Papillary Thyroid Carcinoma: A Corollary for Active Surveillance. Thyroid. 29:1409-1417, 2019.**
- 3. Megwalu UC. Observation versus thyroidectomy for papillary thyroid microcarcinoma in the elderly. J Laryngol Otol. 131:173-176, 2017.**

“When aggressive cancers are not reliably excluded,” surgery may appear beneficial in population studies.

This is a failure of selection **NOT proof that surgery is superior.**

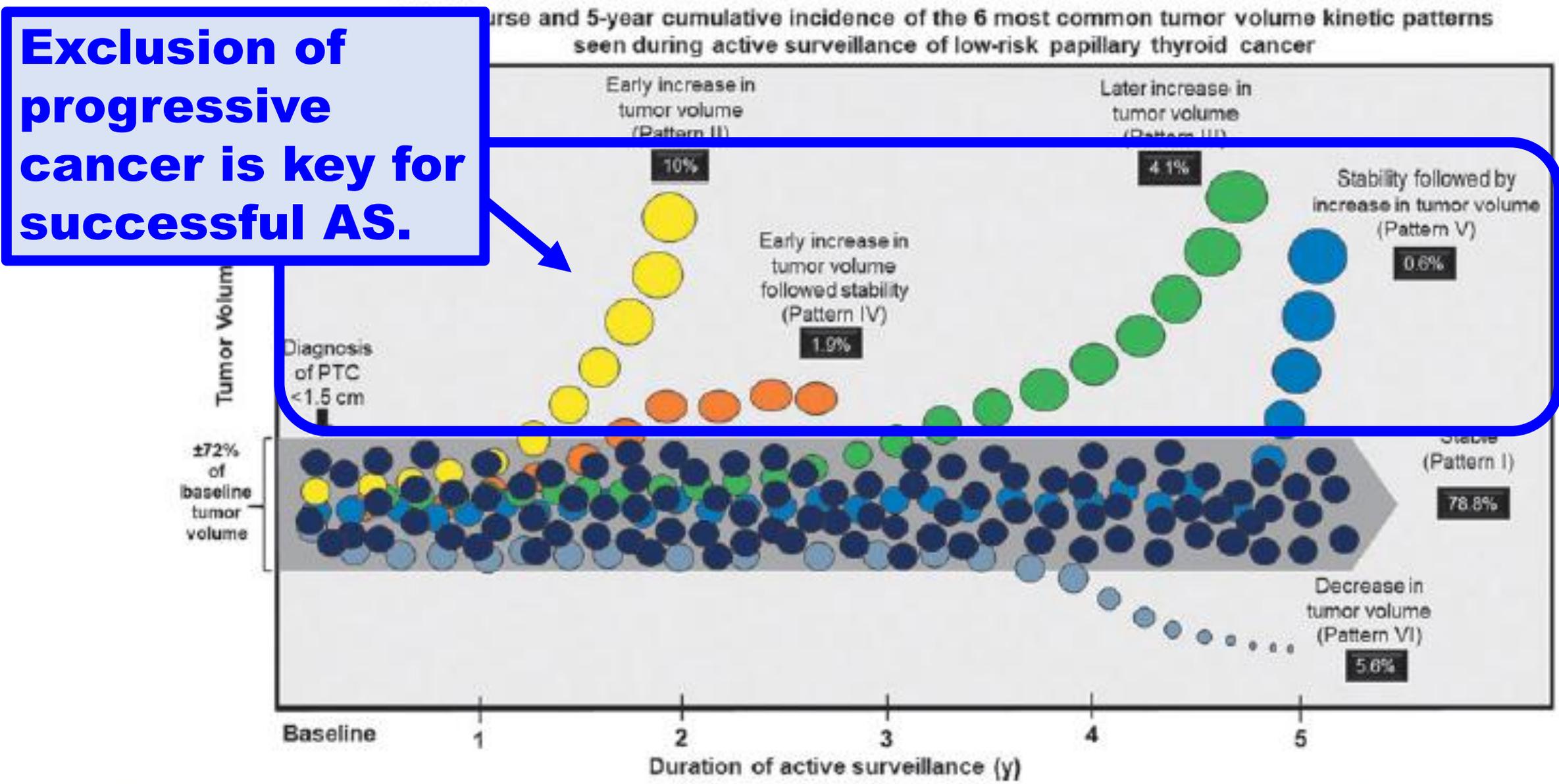


FIG. 4. Graphic representation of the time course and cumulative incidence of the six tumor volume kinetic patterns.

Tuttle RM, et al. Active Surveillance of Papillary Thyroid Cancer: Frequency and Time Course of the Six Most Common Tumor Volume Kinetic Patterns. Thyroid. 2022 Nov;32(11):1337-1345.

Of 1252 cases in the Japanese patient cohort under active surveillance, 188 patients underwent delayed surgery for various reasons. Although these cases were confirmed non-aggressive PTCs with FNA before entry, there was **one tall cell subtype on histology. Thus, the **miss-classification of tall cell subtype PTC** in the active surveillance group occurred in **0.08%(1/1252).****

Successful exclusion of clinically significant carcinoma is key to good performance of AS.



Exclusion of progressive thyroid carcinomas from AS is essential for ensuring that clinically significant cancers are not missed.

- **A patient in AS asked for a **second opinion**.**
- **Prof. Liu reviewed the smears and diagnosed tall cell subtype PTC.**
- **Surgery confirmed **tall cell PTC with lymph node metastasis**.**
- **The patient was grateful and expressed his appreciation.**

Key Message on AS:

- 1. Active surveillance is safe for low-risk small PTCs if aggressive cancers are successfully excluded.**
- 2. East–West practice differences exist, but patient safety is universal priority.**
- 3. On the other hand, some Western pathologists worry that Asian conservative approaches might increase diagnostic error or medicolegal risk if applied in their own legal environment.**

What happens if we reserve **immediate surgery only for **clinically high-risk nodules**? And we apply this not only to **indeterminate nodules**, but also to nodules classified as **benign or malignant** by FNA.**

High-Risk Nodules Go First

When surgery is reserved for clinically high-risk nodules, **nearly all aggressive cancers are captured early.**

The proportion of surgically resected nodules that proved **benign** was reduced to less than **31%**.

This finding provides further evidence that **risk-adapted diagnostic and management strategies** can meaningfully reduce unnecessary benign surgery and **mitigate overtreatment of thyroid carcinoma**.

FN/SFN	PTC (6), FTC (24), PDTC (4)	FTC (6)
SM	PTC (70), FTC (1), Lymphoma(8), ATC (1)	PTC (2)
Malignant	PTC (843), FTC (2), Lymphoma (5), MTC (4), PDTC (3), ATC (8)	PTC (22)
Total	1118 (ROM in resected: 73.9%)	62

Histological types of malignant tumors at 1 year and at 5 years after FNAs in 1713 resected nodules in Kuma Hospital, Japan. (study from total 7775 FNAs, actual ROM of all resected nodules was 68.9%)

Table 81.4 ThyroSeq mutation profile with associated probability of malignancy and molecular risk groups

Mutation categories	Probability of malignancy or NIFTP	Molecular risk groups (risk of disease recurrence/metastasis)
No mutation	Very low (3–4%)	Very low
Clonal marker that is usually not sufficient by itself for cancer development (e.g., <i>TSHR</i> , <i>PTEN</i> , <i>EIF1AX</i>)	Low (~5–10%)	Very low
<i>RAS</i> -like (e.g., <i>RAS</i> , <i>PAX8/PPARγ</i> , <i>BRAF K601E</i> , copy number alteration)	Intermediate to high (40–80%)	Low
<i>BRAF</i> ^{V600E} -like (e.g., <i>BRAF V600E</i> , <i>RET/PTC</i> , <i>NTRK 1,3</i> , <i>RET</i> point mutation, <i>ALK</i>)	High (99–100%)	Intermediate
Multiple mutations with co-existing unfavorable mutation(s) (e.g., <i>TERT</i> , <i>p53</i> , <i>PIK3CA</i> , <i>AKT1</i>)	High (99–100%)	High

NIFTP non-invasive follicular thyroid neoplasm with papillary-like nuclear features

This table from Ohori et al. shows that many mutation-positive nodules have low- or intermediate- probability of malignancy or NIFTP.

If molecular testing is used without clinical integration, it may actually increase overtreatment.

Carty and colleagues, using ThyroSeq® version 2 or 3, reported a malignancy rate of approximately 70% in MT-positive FN nodules, compared with 16% in test-negative cases. However, the performance characteristics also deserve careful attention.

Among resected FN nodules, the false-negative rate was 16%, and the false-positive rate was 30%.

These rates are not negligible and, in fact, are higher than many clinicians might expect.

Carty SE, et al. The Clinical Utility of Molecular Testing in the Management of Thyroid Follicular Neoplasms (Bethesda IV Nodules). Ann Surg. 272:621-627, 2020.

The surgical resection rates and ROMs in indeterminate (Bethesda III & IV) nodules between **old** and **new** generation molecular testing methods.

Nguyen T et al. Under preparation.

FNA categories	Variable	Pooled proportion (95% CI) in old molecular testing methods	Pooled proportion (95% CI) in new molecular testing methods
Indeterminate nodule	Resection rate	59.3 (54.2-64.1)	41.2 (36.9-45.7)
	Risk of malignancy	40.1 (35.6-44.5)	43.7 (38.2-49.3)
	Rate of performed molecular test	98.5 (97.7-99)	99.1 (98.3 – 99.5)
	Rate of positive test	39.5 (34.9-44.2)	37.1 (33.9-40.3)

From our meta-analysis by Vuong et al, Western series had a significantly lower ROM in most of Bethesda categories.

Focusing on Indeterminate (AUS + FN) nodules, RR in Asian series was significantly lower (37.6% vs. 51.3%, $p = 0.048$) and ROM was significantly higher (41.9% vs. 25.4%, $p = 0.002$) in comparison to those in Western series.

Vuong HG, et al. Differences in surgical resection rate and risk of malignancy in thyroid cytopathology practice between Western and Asian countries: A systematic review and meta-analysis. Cancer Cytopathol. 128:238-249, 2020.

The surgical resection rates and ROMs in indeterminate (Bethesda III & IV) nodules between **old** and **new** generation molecular testing methods.

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	Risk of malignancy	40.1 (35.6-44.5)	43.7 (38.2-49.3)

The average resection rate of **37.6% in Asia achieved with conventional clinical tests **was better than** the rate, with **new generation molecular tests, average 41.2%.****

Old generation: Afirma GEC, ThyroSeq v1/v2, and early gene panels.

New generation: Afirma GSC, ThyroSeq v3, RNA sequencing-based tests, and NGS.

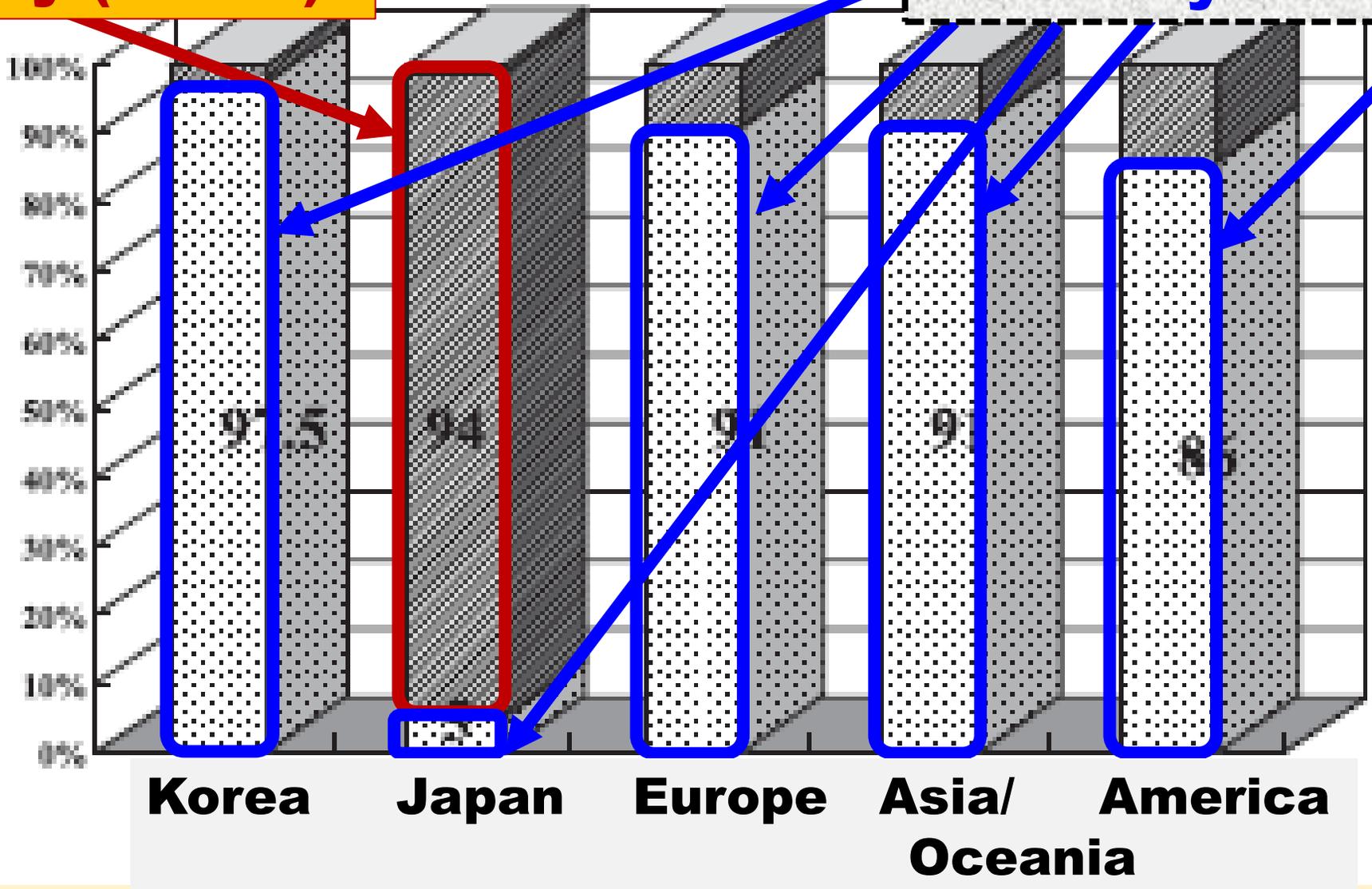
Part 5:

Lobectomy as default surgery

Lobectomy (< TTX)

Total Thyroidectomy

**1-2 cm
DTCs**



Japanese surgeons have traditionally chosen more conservative management than other countries.

The 2009 ATA Clinical Guidelines

Cooper DS, Doherty GM, Haugen BR et al.: Revised American Thyroid Association management guidelines for patients with thyroid nodules and differentiated thyroid cancer. *Thyroid*. 2009; 19:1167-1214.

A Total Thyroidectomy and Adjuvant Radio-Active Iodine treatment were recommended to all thyroid cancers larger than 1 cm.

TTX: Total Thyroidectomy

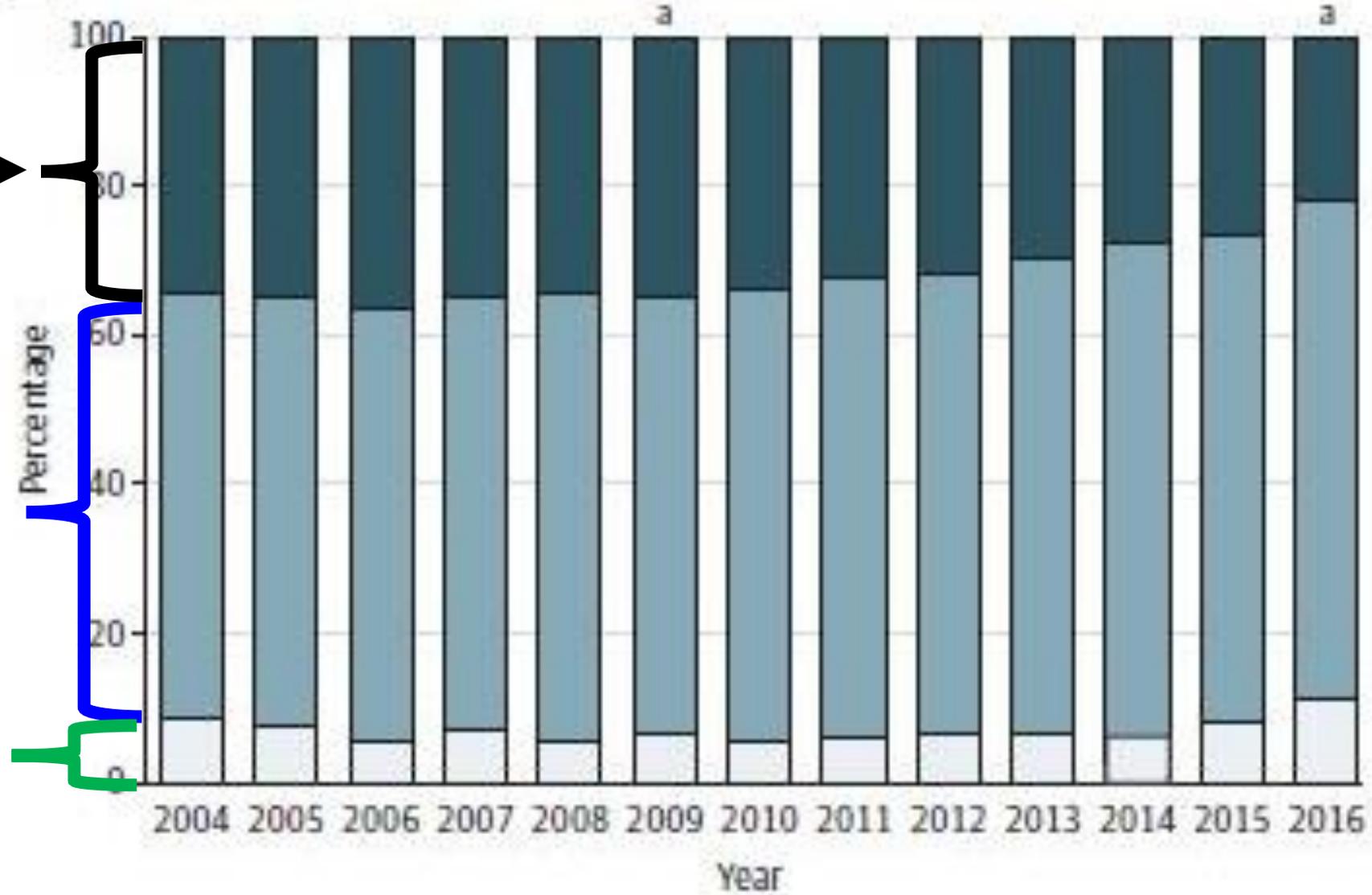
TTX + RAI

TTX alone

Lobectomy

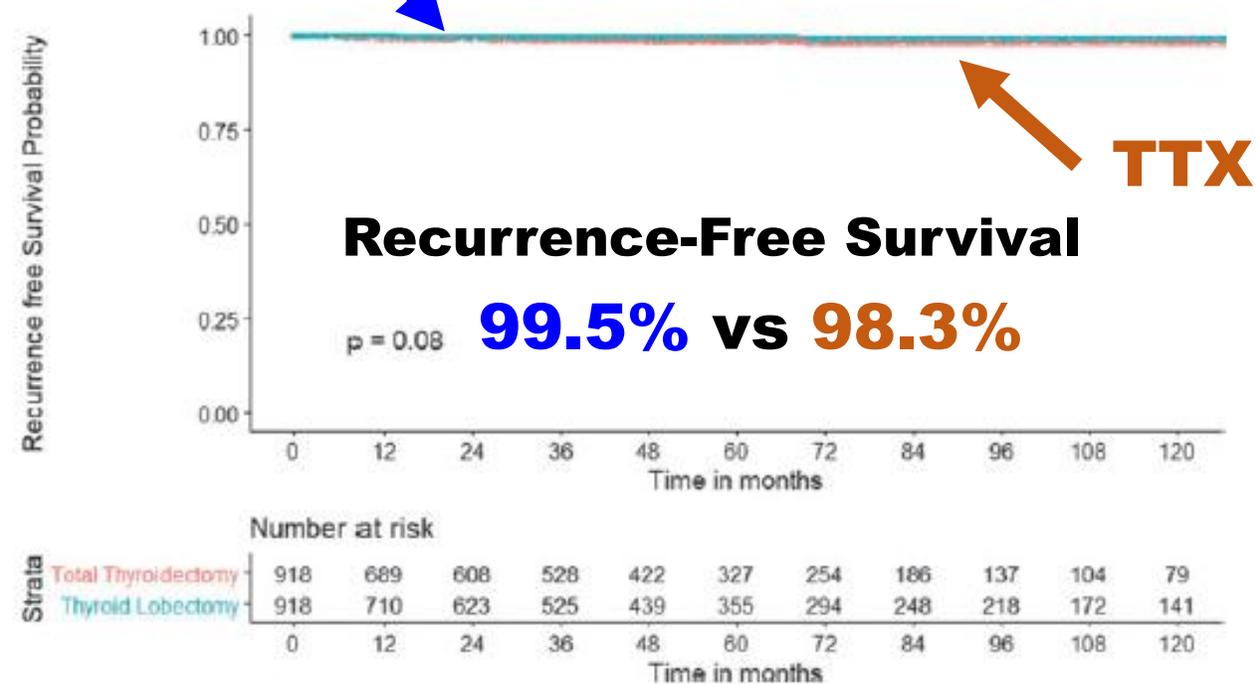
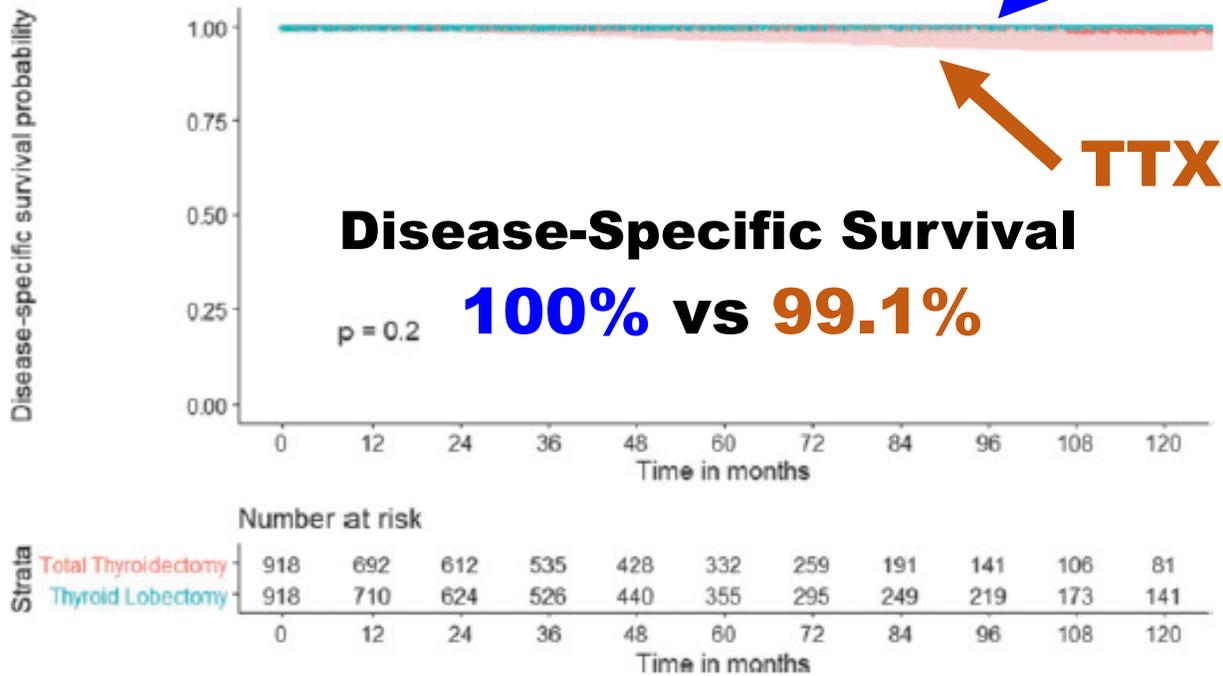
B Surgical trends for tumors 1-2 cm

1-2 cm PTC



Lohia S et al. Association Between Implementation of the 2009 American Thyroid Association Guidelines and De-escalation of Treatment for Low-risk Papillary Thyroid Carcinoma. JAMA Otolaryngology Head & Neck Surgery, 2020.

Lobectomy

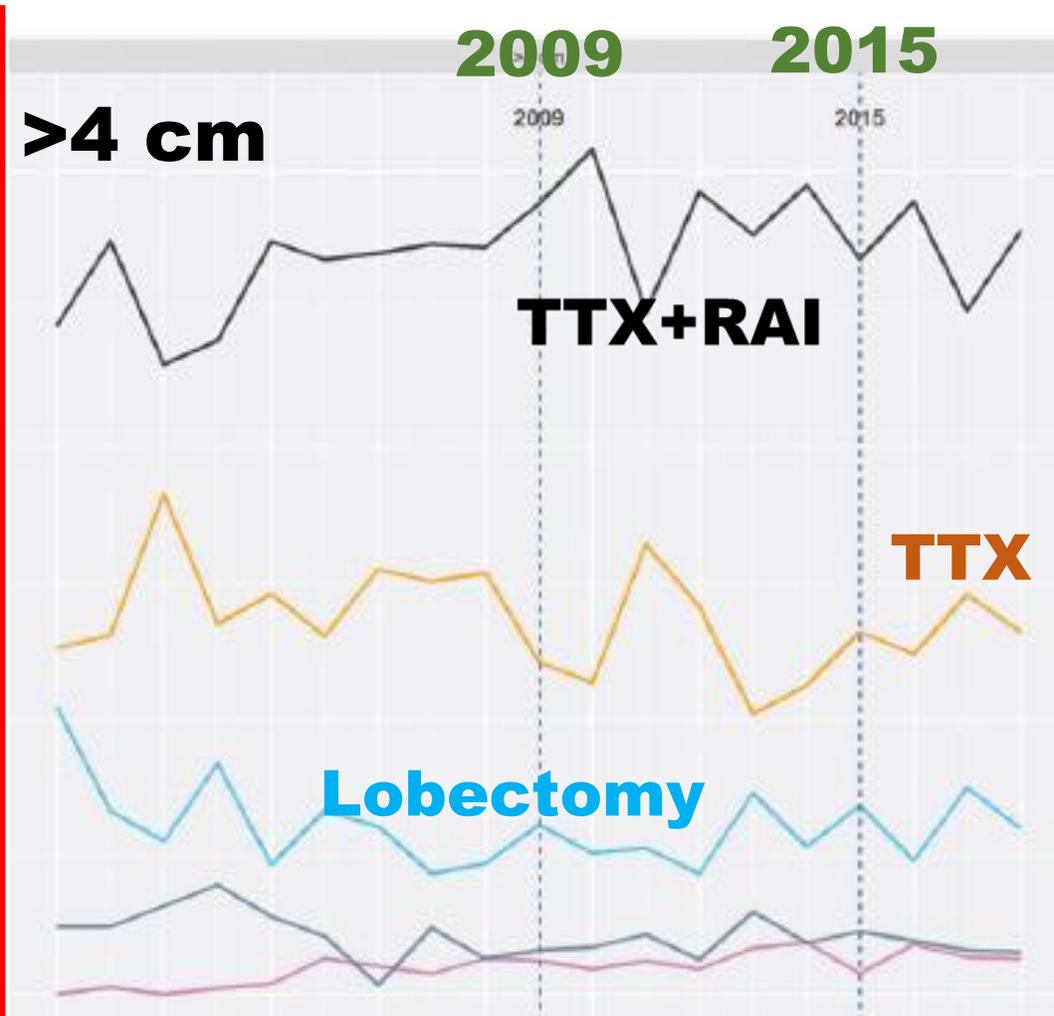
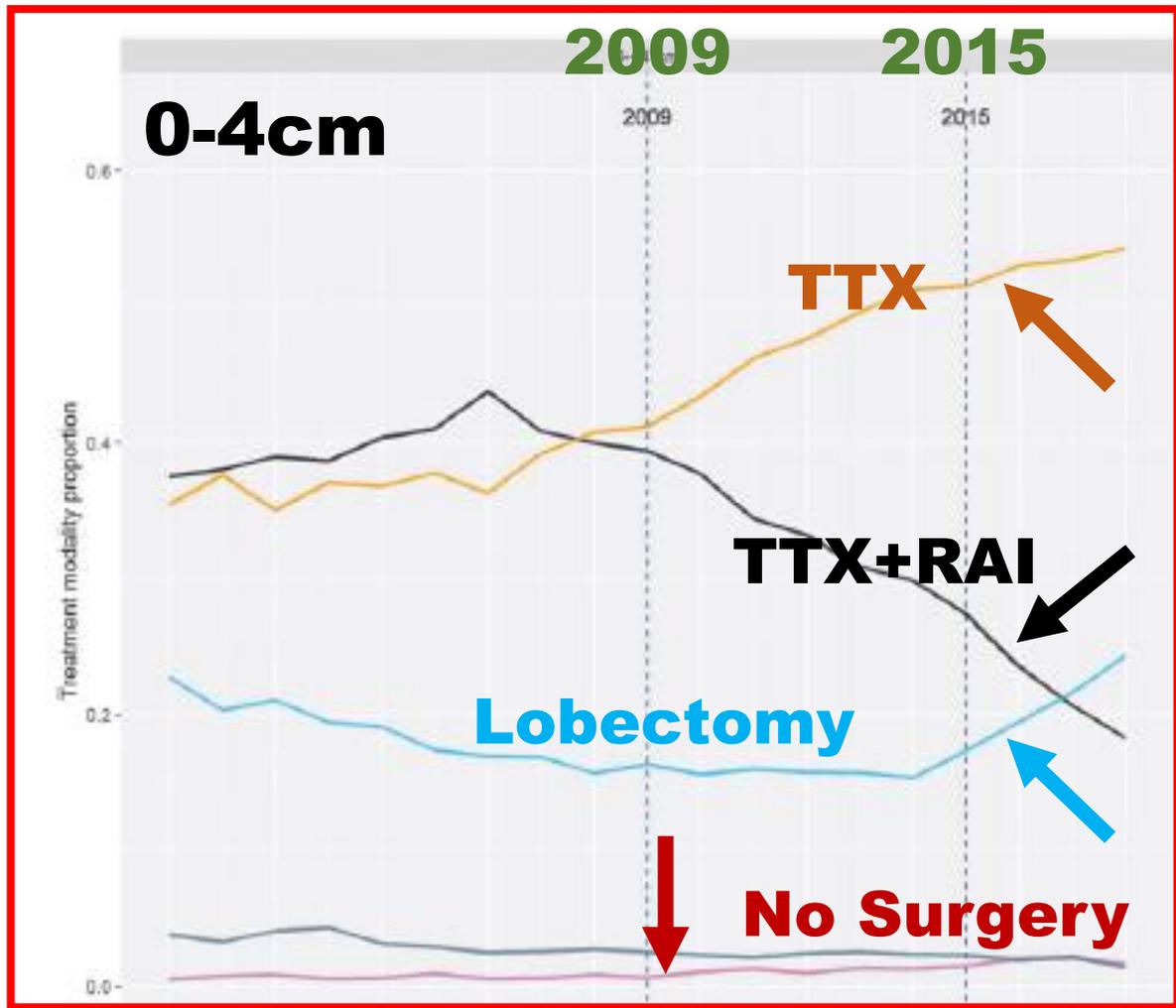


For low-/intermediate-risk patients with intrathyroidal differentiated thyroid cancer <4 cm, patients selected for lobectomy have similar survival outcomes to a comparable group treated by TTX.

Matsuura D, et al. Surgical Management of Low-/Intermediate-Risk Node Negative Thyroid Cancer: A Single-Institution Study Using Propensity Matching Analysis to Compare Thyroid Lobectomy and Total Thyroidectomy. Thyroid. 32:28-36, 2022.

The 2015 ATA clinical guidelines recommended lobectomy is sufficient for low-risk PTCs up to 4 cm.

This formal revision helps clinicians avoid unnecessary total thyroidectomy and radioactive iodine (RAI) therapy to low-risk small (<4 cm) PTCs.



Pasqual et al. (2022) analyzed the SEER database and demonstrated that TTX+RAI for PTC ≤ 4 cm significantly declined after 2015, although the change was smaller than expected for lobectomy and non-surgical follow-up.

Lobectomy on the management of low-risk PTC stratified by nodule size

In patients treated at **University of Pisa, Italy**

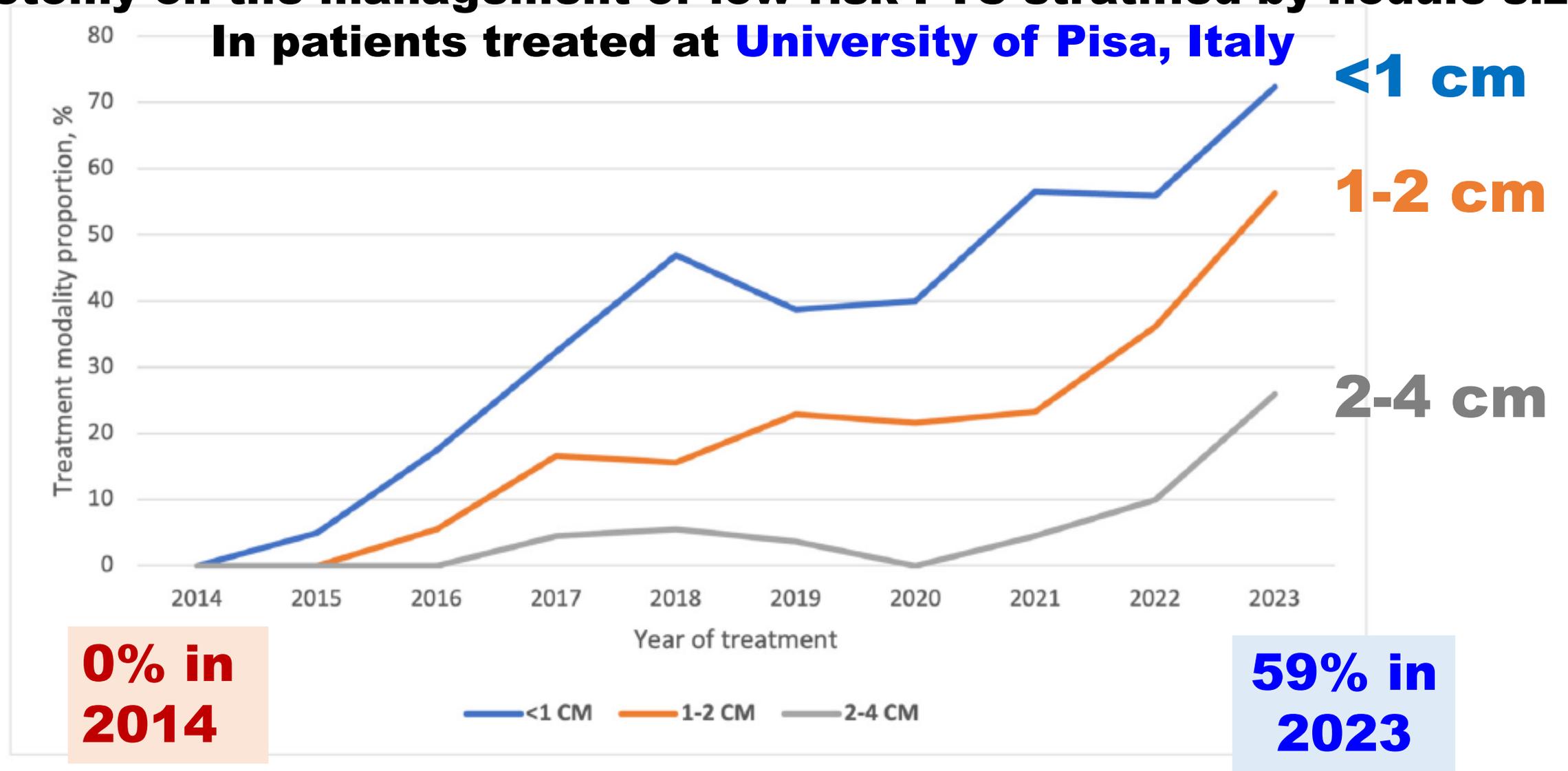


Figure 6. Temporal trends of lobectomy on the management of low-risk PTC stratified by nodule size.

Gjeloshi, B. et al. Evolving Practices in Low-Risk Papillary Thyroid Cancer: Impact of the 2015 ATA Guidelines. Curr. Oncol. 2026, 33, 26.

Lessons from Developed Nations

Q: Do standardized guidelines achieve optimal outcomes in every health-care context?

In many countries, U.S. guidelines are often treated as the “gold standard.”

Their implementation, however, may require contextual adaptation to local health-care systems, resources, and patient populations.

Global Health Security (GHS), Maternal Mortality (MM) Rate (/100000) and Corvid 19 Mortality Rate (%)

Country (Region)	GHS Index	MM rate	COVID 19
USA (America)	75.9	46.0	1.23
Australia (Oceania)	71.1	2.0	0.12
Finland (Europe)	70.9	4.0	0.36
Canada (America)	69.8	8.5	1.05
Thailand (Asia)	68.2	34.5	0.67
UK (Europe)	67.2	6.2	0.79
Germany (Europe)	65.5	4.1	0.55
South Korea (Asia)	65.4	9.2	0.13

High-income countries with high health security index do NOT always guarantee optimal outcomes.



In the same way, we should **respect Western guidelines, but stop **blindly admiring** them.**

We should aim to build our own best practice, **based on our own data and our patients.**

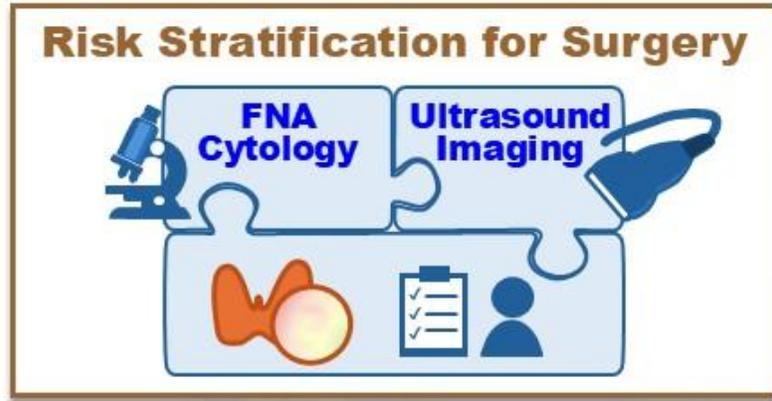
As long as we idolize them, **we can never surpass them.**

We are here today to surpass them — to become the best.

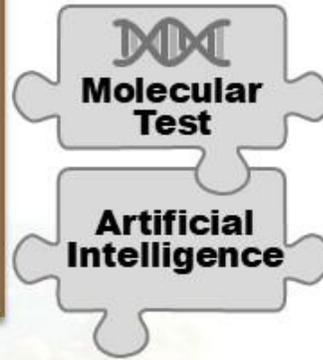
Just for today, set aside your admiration for them and **focus only on winning.”**

— Shohei Ohtani

Our task is to combine:



without



- 1. Scientific evidence**
- 2. Local outcome data**
- 3. Health-system design**
- 4. Cultural and socioeconomic context**

to design the best possible care for our own patients.

Japanese conservative strategies include:

- 1. Risk stratification of thyroid nodules for surgery**
- 2. AS of low-risk PMC**
- 3. Lobectomy as default for PTC**



Active Surveillance of low-risk PMC

Lobectomy as default for PTC

Conclusions:

- 1. Not every cancer we detect is a cancer that needs to be treated.**
- 2. The goal is not to find more disease, but to prevent more harm.**
- 3. Better diagnosis is not about detecting more—it is about knowing when not to act.**
- 4. True progress in thyroid cancer care lies not in expanding intervention, but in aligning treatment with real biological risk.**



Busan, Korea, 2017



Chiang Mai, Thai, 2018



Sydney, ICC, 2019



Okayama, JSCC, 2019

The Asian Thyroid Working Group, from 2017 to 2023

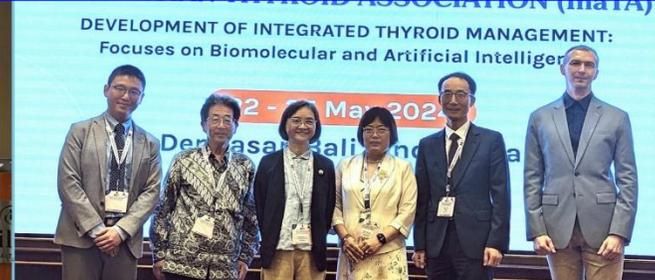
Kennichi Kakudo¹, Chan Kwon Jung², Zhiyan Liu³, Mitsuyoshi Hirokawa⁴, Andrey Bychkov⁵, Huy Gia Vuong⁶, Somboon Keelawat⁷, Radhika Srinivasan⁸, Jen-Fan Hang⁹, Chiung-Ru Lai⁹

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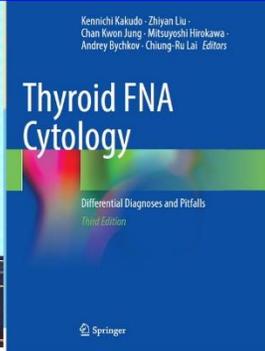
Acknowledgments:
Support from our colleagues at the Asian Thyroid Working Group is gratefully acknowledged.



Baltimore, ICC, 2022



Bali, Indonesia, 2024



A close-up photograph of a large, dark red peony flower with a yellow center, surrounded by green leaves and other flowers. The text "Thank you for joining my Webinar." is overlaid in yellow at the top.

Thank you for joining my Webinar.

Many challenges remain, but we now have the evidence to move forward.