

# Choosing Wisley in der Endokrinologie

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## Choosing Wisely Gruppe Endokrinologie

Mitglieder des ÖGES Vorstandes (ohne Sektionsleiter) und je 2 Vorstandsmitglieder (bevorzugt President, Past-President, President elect) der ÖDG, OSDG, ÖGKM = 15 Mitglieder

### **Vorstand der ÖGES:**

Stefan Pilz, Greisa Vila, Florian Kiefer, Anton Luger, Michael Krebs, Thomas Scherer, Sabina Baumgartner-Parzer, Stefan Riedl, Vinzenz Stepan

### **Vorstand der OSDG:**

Wolfgang Buchinger, Georg Zettinig

### **Vorstand der ÖDG:**

Martin Clodi, Harald Sourij

### **Vorstand der ÖGKM:**

Christian Muschitz, Hans Peter Dimai

Top 5 Empfehlungen nach 2 Voting Runden

Empfehlung 1:  
**Keine Behandlung mit L-Thyroxin  
bei Knoten in der Schilddrüse,  
außer in ausgewählten Fällen**

**Quelle**

Italian Association of Medical Endocrinologists (AME)

<https://choosingwiselyitaly.org/en/raccomandazione-prof/thyroid-nodules-patients-should-not-be-treated-with-l-thyroxine-except-in-selected-cases/>

# 2023 European Thyroid Association Clinical Practice Guidelines for thyroid nodule management

<https://etj.bioscientifica.com>  
<https://doi.org/10.1530/ETJ-23-0067>

Cosimo Durante<sup>1,\*</sup>, Laszlo Hegedüs<sup>2,\*</sup>, Agnieszka Czarniecka<sup>3</sup>, Ralf Paschke<sup>4</sup>, Gilles Russ<sup>5</sup>,  
Fernando Schmitt<sup>6</sup>, Paula Soares<sup>7</sup>, Tamas Solymosi<sup>8</sup> and Enrico Papini<sup>9</sup>

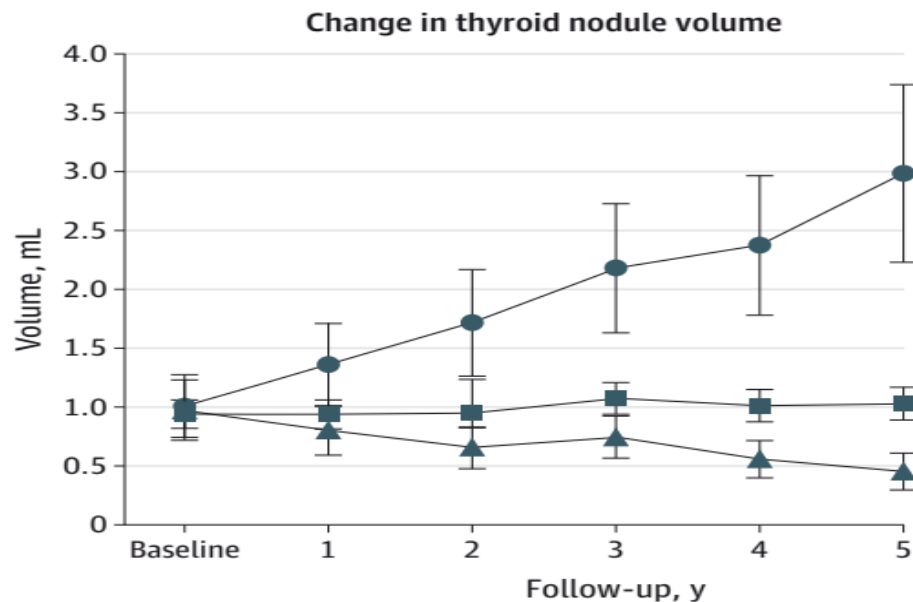
Thyroid hormone treatment is not indicated in euthyroid individuals with nodular thyroid disease (*Strength of recommendation: 1; quality of evidence: ∅∅∅∅. Agreement: 9/9 (100%); round: 1*)

Most benign thyroid nodules are incidentally diagnosed and asymptomatic (4). In the absence of elevated TSH, the use of thyroid hormone in order to decrease TSH should be discouraged in order to limit the increased morbidity and mortality seen with such therapy (101, 102), but mainly because of its lack of efficacy in adequately decreasing size in symptomatic nodules (103).

# The Natural History of Benign Thyroid Nodules

Cosimo Durante, MD, PhD; Giuseppe Costante, MD; Giuseppe Lucisano, MScStat; Rocco Bruno, MD; Domenico Meringolo, MD; Alessandra Paciaroni, MD; Efisio Puxeddu, MD, PhD; Massimo Torlontano, MD; Salvatore Tumino, MD; Marco Attard, MD; Livia Lamartina, MD; Antonio Nicolucci, MD; Sebastiano Filetti, MD

JAMA. 2015;313(9):926-935.



| No. of nodules that | Baseline | 1    | 2    | 3    | 4    | 5    |
|---------------------|----------|------|------|------|------|------|
| Grew                | 174      | 174  | 170  | 157  | 144  | 131  |
| Remained stable     | 1188     | 1188 | 1170 | 1155 | 1115 | 1096 |
| Shrank              | 205      | 205  | 197  | 188  | 173  | 161  |
| No. of patients     | 992      | 992  | 963  | 946  | 902  | 875  |

Thyroid cancer was diagnosed in 5 original nodules (0.3% [95% CI 0.0%-0.6%]). Only 2 had grown.

**CONCLUSIONS AND RELEVANCE** Among patients with asymptomatic, sonographically or cytologically benign thyroid nodules, the majority of nodules exhibited no significant size increase during 5 years of follow-up and thyroid cancer was rare. These findings support consideration of revision of current guideline recommendations for follow-up of asymptomatic thyroid nodules.

# Thyroxine Suppressive Therapy in Patients with Nodular Thyroid Disease

*Ann Intern Med.* 1998;128:386-394.

Hossein Gharib, MD, and Ernest L. Mazzaferri, MD

**Table 4.** Response Rates in Eight Randomized, Controlled Trials of Thyroid Hormone Suppressive Therapy for Nodular Thyroid Disease\*

| Study, Year, Country (Reference)        | Single or Multiple Nodules | L-Thyroxine Recipients | Controls | Patients with Suppressed Nodules |          |         | Mean Nodule Shrinkage | Duration of Therapy |
|---|----------------------------|------------------------|----------|----------------------------------|----------|---------|-----------------------|---------------------|
|   |                            |                        |          | L-Thyroxine Recipients           | Controls | P Value |                       |                     |
|   |                            | <i>n</i>               |          | %                                |          |         | %                     | <i>mo</i>           |
| Gharib et al., 1987, United States (30) | Single                     | 28                     | 25†      | 50                               | 60       | >0.2    | 50                    | 6                   |
| Cheung et al., 1989, Hong Kong (31)     | Single and multiple        | 37                     | 37       | 38                               | 35       | >0.2    | 50                    | 18                  |
| Berghout et al., 1990, Netherlands (32) | Multiple                   | 26                     | 26†      | 58                               | 5        | 0.001   | 13                    | 9                   |
| Diacinti et al., 1992, Italy (33)       | Single and multiple        | 16                     | 19       | 30.7                             | 0        | 0.01    | 25                    | 9                   |
| Reverter et al., 1992, Spain (34)       | Single                     | 20                     | 20       | 20                               | 15       | NS      | 50                    | 11                  |
| Papini et al., 1993, Italy (35)         | Single                     | 51                     | 50†      | 45                               | 26       | 0.05    | 50                    | 12                  |
| La Rosa et al., 1995, Italy (36)        | Single                     | 23                     | 22†      | 39                               | 0        | 0.004   | 40                    | 12                  |
| Mainini et al., 1995, Italy (37)        | Single                     | 45                     | 10       | 17.8                             | 0        | NS      | 50                    | 21                  |

\* NS = not significant. (Modified with permission from Gharib H. Management of thyroid nodules: another look. *Thyroid Today*. 1997;1:1-11. [Gem Communications])  
 † Controls received placebo.

**Data Synthesis:** The evidence suggests that thyroxine suppressive therapy fails to shrink most nodules: Only 10% to 20% of nodules responded to this treatment.

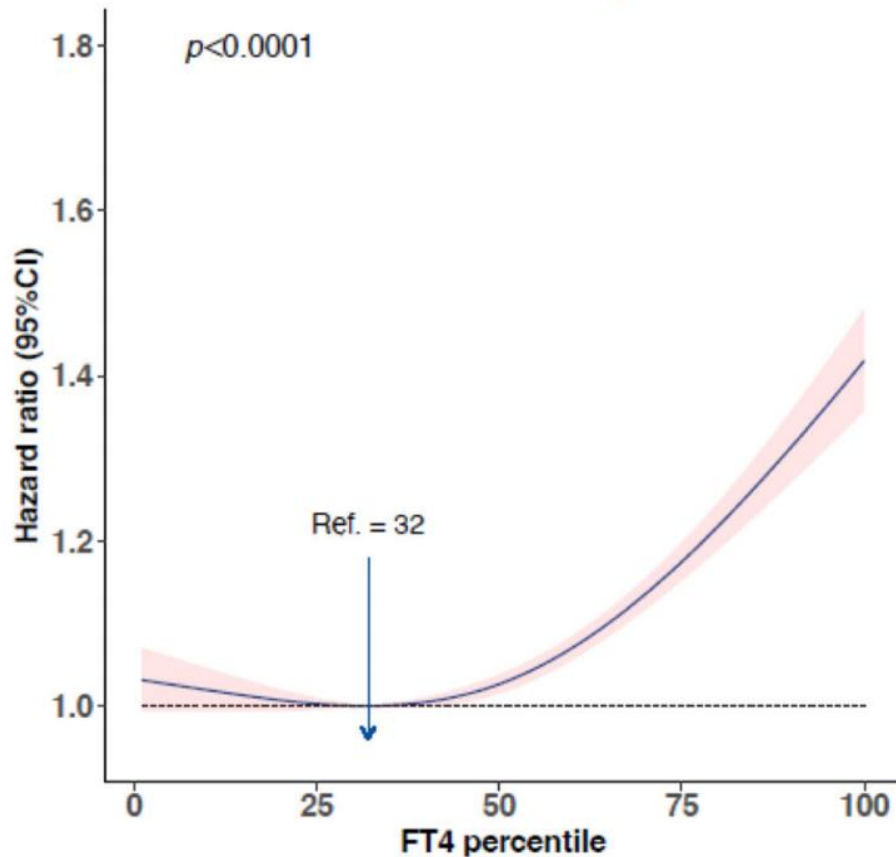
**Conclusions:** Patients with cytologically benign nodules are best followed without thyroxine treatment. Most benign nodules remain stable in size and remain benign

# The optimal healthy ranges of thyroid function defined by the risk of cardiovascular disease and mortality: systematic review and individual participant data meta-analysis

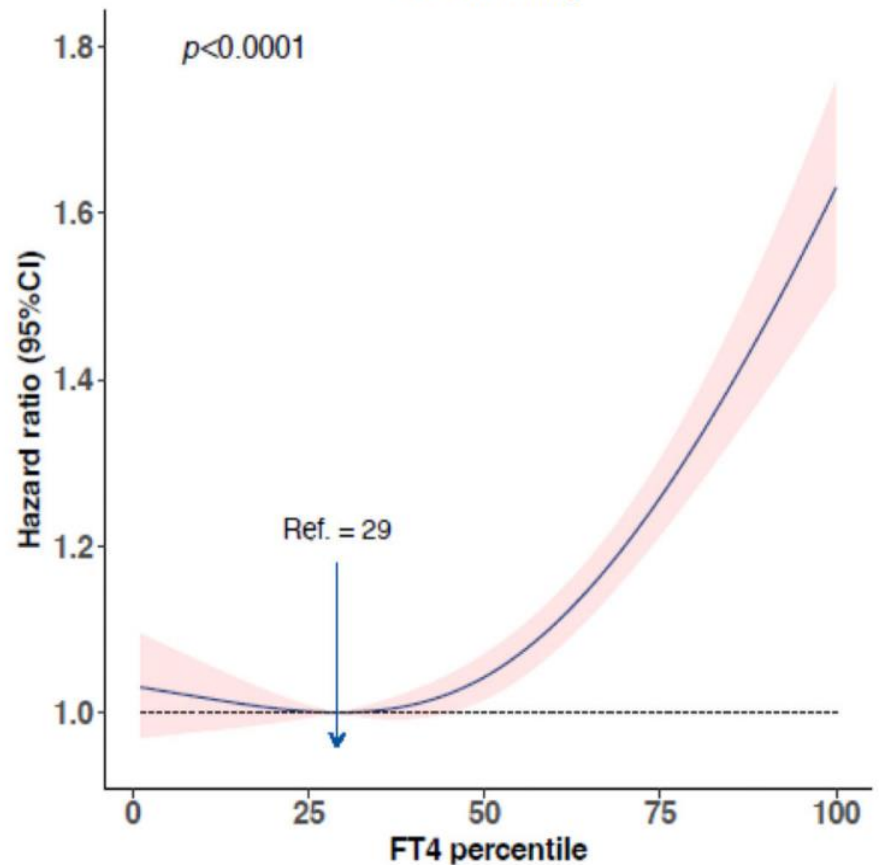
*Lancet Diabetes Endocrinol.* 2023 October ; 11(10): 743–754.

We included IPD on 134 346 participants

Overall mortality



CVD mortality



Empfehlung 2:

**Zu häufige Knochendichtemessungen vermeiden: Intervalle von weniger als zwei Jahren sind selten notwendig**

**Quelle**

Italian Association of Medical Endocrinologists (AME)



## Referenzmethode zur Osteoporose Diagnostik:

Knochendichtemessung mittels „**dual-energy X-ray absorptiometry (DXA)**“ (deutsch: Dual-Röntgen-Absorptiometrie), eine Röntgenaufnahme bei der die Knochenmineraldichte (KMD; englisch: bone mineral density [BMD]) in g/cm<sup>2</sup> in bestimmten Skelettregionen ermittelt wird.

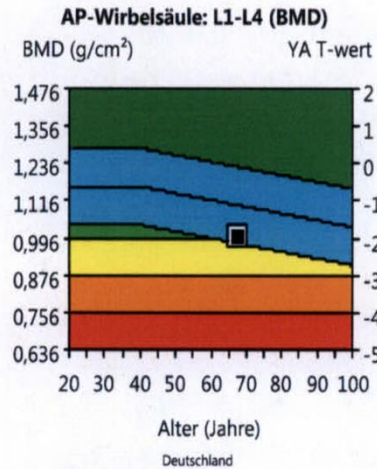
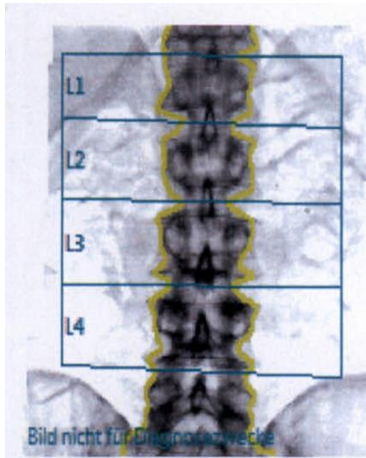


## Operationale Definition der Osteoporose gemäß WHO 1994:

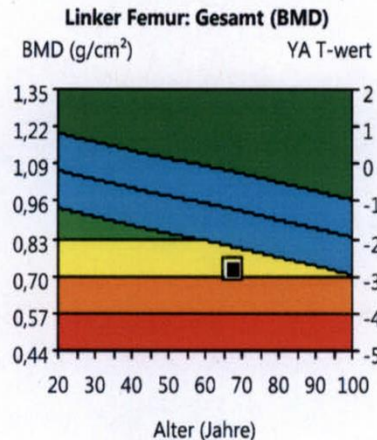
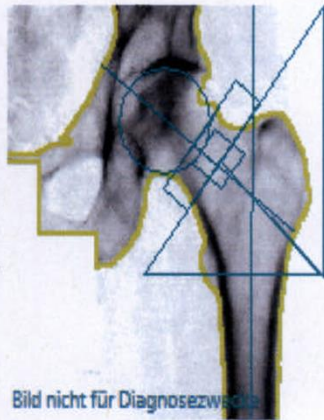
Basiert auf dem T-score, der anzeigt um wie viele Standardabweichungen (SD) die aktuell gemessene BMD von den Werten eines 20-29 jährigen weiblichen Referenzkollektivs abweicht.

**Eine Osteoporose wird diagnostiziert bei einem T-score  $\leq -2,5$**

# DXA Osteodensitometrie



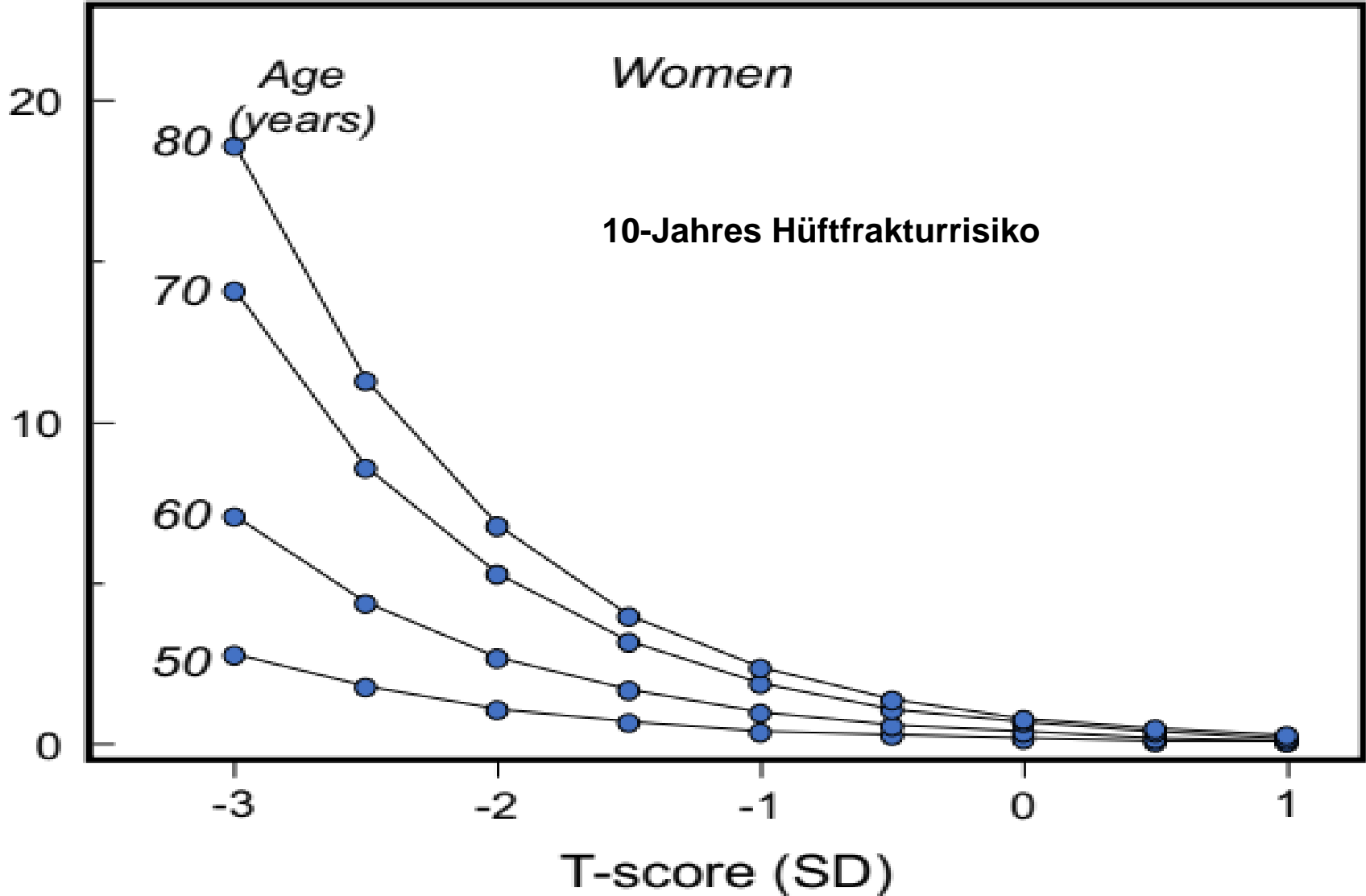
| Bereich | BMD (g/cm <sup>2</sup> ) | YA (%) | YA T-wert | AM (%) | AM Z-wert |
|---------|--------------------------|--------|-----------|--------|-----------|
| L1      | 0,901                    | 77     | -2,2      | 87     | -1,1      |
| L2      | 0,872                    | 70     | -3,1      | 78     | -2,0      |
| L3      | 1,069                    | 85     | -1,5      | 95     | -0,4      |
| L4      | 1,117                    | 89     | -1,1      | 99     | 0,0       |
| L1-L2   | 0,886                    | 73     | -2,7      | 82     | -1,6      |
| L1-L3   | 0,953                    | 78     | -2,2      | 88     | -1,1      |
| L1-L4   | 1,002                    | 81     | -1,9      | 91     | -0,8      |
| L2-L3   | 0,975                    | 78     | -2,3      | 87     | -1,2      |
| L2-L4   | 1,028                    | 82     | -1,8      | 92     | -0,8      |
| L3-L4   | 1,094                    | 87     | -1,3      | 97     | -0,2      |



| Bereich | BMD (g/cm <sup>2</sup> ) | YA (%) | YA T-wert | AM (%) | AM Z-wert |
|---------|--------------------------|--------|-----------|--------|-----------|
| Hals    | 0,652                    | 61     | -3,2      | 75     | -1,7      |
| Gesamt  | 0,726                    | 67     | -2,8      | 78     | -1,6      |

## Osteoporose

# Fracture probability (%)



Osteoporosis International (2019) 30:3-44

## Risikorechner

Bitte beantworten Sie die untenstehenden Fragen für die Berechnung der 10-Jahres-Wahrscheinlichkeit für eine Fraktur

Land: **Österreich**Name / ID: [Mehr zu den Risikofaktoren](#)

### Fragebogen:

1. Alter (zwischen 40 und 90 Jahren) oder Geburtsdatum

Alter:

Geburtsdatum:

J: M: T: 

2. Geschlecht



Männlich



Weiblich

3. Gewicht (kg)

4. Körpergröße (cm)

5. Vorausgehende Fraktur



Nein



Ja

6. Hüftfraktur eines Elternteils



Nein



Ja

7. Gegenwärtiges Rauchen



Nein



Ja

8. Glukokortikosteroide



Nein



Ja

9. Rheumatoide Arthritis



Nein



Ja

10. Sekundäre Osteoporose



Nein



Ja

11. Alkohol 3 und mehr Einheiten/Tag



Nein



Ja

12. Knochenmineraldichte (KMD)

T-Score



-2.7

**BMI: 22.9**Die 10-Jahres-Wahrscheinlichkeit einer Fraktur (%) **mit BMD**

Major osteoporotic

**29**

Hip fracture

**16**

Wenn Sie einen TBS Wert haben, klicken Sie bitte hier:



### Weight Conversion

Pounds  kg

### Height Conversion

Inches  cm**00144604**

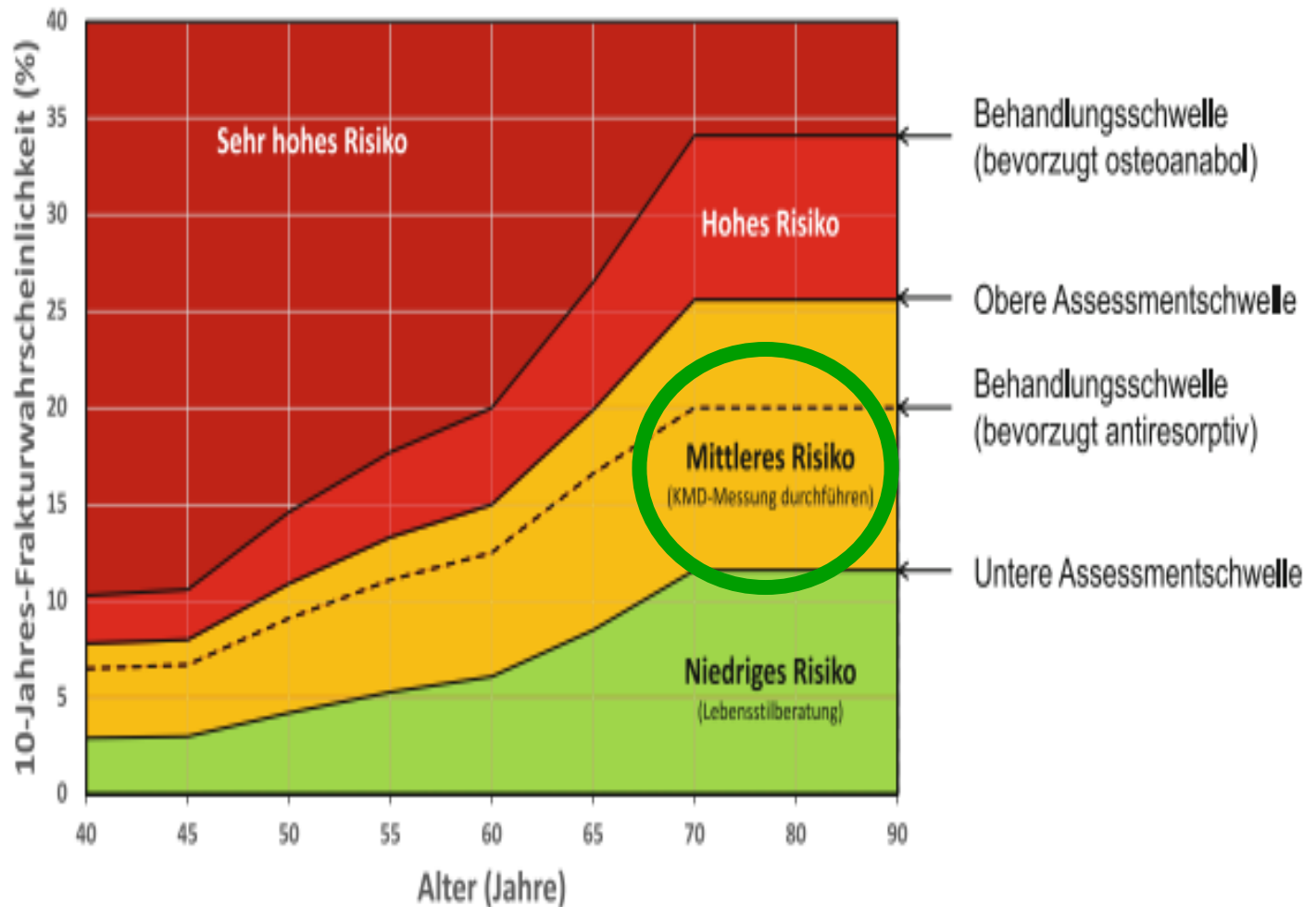
Individuals with fracture risk assessed since 1st June 2011

# Osteoporose – Definition, Risikoerfassung, Diagnose, Prävention und Therapie (Update 2024)

Leitlinie der Österreichischen Gesellschaft für Knochen- und Mineralstoffwechsel

Hans Peter Dimai · Christian Muschitz · Karin Amrein · Rosemarie Bauer · Daniel Cejka · Rudolf Wolfgang Gasser · Reinhard Gruber · Judith Haschka · Timothy Hasenöhrl · Franz Kainberger · Katharina Kersch-Schindl · Roland Kocijan · Jürgen König · Norbert Kroißbrunner · Ulrike Kuchler · Christine Oberforcher · Johannes Ott · Georg Pfeiler · Peter Pietschmann · Paul Puchwein · Alexander Schmidt-Ilsinger · Ralf Harun Zwick · Astrid Fahrleitner-Pammer

**Abb. 2** FRAX®-basierte Assessment-, Risiko- und Interventionsschwellen. FRAX Fracture Risk Assessment Tool, KMD Knochenmineraldichte. KMD ist in dieser Abbildung nicht berücksichtigt. (Mod. und übersetzt unter einer Creative-Commons-Lizenz von [195])



# Screening for Osteoporosis to Prevent Fractures

## US Preventive Services Task Force

### Recommendation Statement

*JAMA*. 2018;319(24):2521-2531. doi:10.1001/jama.2018.7498

US Preventive Services Task Force

### Screening Intervals

Some observational and modeling studies have suggested screening intervals based on age, baseline BMD, and calculated projected time to transition to osteoporosis. However, limited evidence from 2 good-quality studies found no benefit in predicting fractures from repeating bone measurement testing 4 to 8 years after initial screening.<sup>4</sup>





**2023**

### 9.3 Wiederholung von Knochendichtemessungen ohne spezifische Therapie

| <b>Therapierelevanz</b>          | <b>Empfohlener Zeitpunkt erneuter DXA Messung nach</b> |
|----------------------------------|--|
| <b>T-Score Abnahme von</b>       | <b>Erstmessung</b>                                     |
| 0,5 SD T-Score                   | 12 Monate  |
| 1,0 SD T-Score                   | 2 Jahre  |
| Bei T-Score Ergebnis $> -1,0$ SD | $>5$ Jahre   |



| Empfehlung  |  |
|---|--|
| Nach Beginn/Wechsel einer Osteoporose-Therapie sollte vor Ablauf von 5 Jahren eine Knochendichte-Verlaufskontrolle durchgeführt werden.   | <b>Empfehlungsgrad</b><br>B                    |
|   | <b>Evidenzgrad</b><br>2                        |
|   | <b>Konsensstärke</b><br>15/2/2 (19)<br>Konsens |
| <b>Sondervotum der DEGAM: kann statt sollte</b><br><br>Begründung: O. g. Studie von Leslie zeigte nur Assoziationen und die Übertragbarkeit auf andere Gesundheitssysteme ist unklar. Diese Messungen sind auch nicht Kassenleistung* und stellen eine – wenn auch geringe – zusätzliche Strahlenbelastung dar. Die vorhandenen Kapazitäten sollten vorrangig für die Erkennung von Hochrisiko-Patientinnen und -Patienten sowie geteilte Entscheidungsfindung und Unterstützung bei der Adhärenz (siehe vorausgegangene Kapitel) eingesetzt werden.<br><br>* <a href="https://www.g-ba.de/beschluesse/1655/">https://www.g-ba.de/beschluesse/1655/</a> |  |

## Intravenöse Bisphosphonatherapie:

- Nach 3 Jahren (Entscheidung ob 3 oder 6 Jahre Therapiedauer)

## Orale Bisphosphonatherapie:

- Nach 5 Jahren (Entscheidung ob 5 oder 10 Jahre Therapiedauer)

## Therapiepause von Bisphosphonathen:

- Nach 2 bis 3 Jahren Kontrolle



**Empfehlung 3:**  
**Keine Testosterontherapie bei  
älteren Männern außer in Fällen mit  
nachgewiesenem Hypogonadismus**

**Quelle**

Australasian Chapter of Sexual Health Medicine

<https://www.choosingwisely.org.au/recommendations/achshm5>

# Male hypogonadism: pathogenesis, diagnosis, and management

*Lancet Diabetes Endocrinol*  
2024; 12: 761–74

*Nipun Lakshitha De Silva\**, *Nikoleta Papanikolaou\**, *Mathis Grossmann*, *Leen Antonio*, *Richard Quinton*, *Bradley David Anawalt*, *Channa N Jayasena*

## Clinical features

|  |   |
|--|---|
| Foetal life                            |   |
| Early                                  | Disorders or differences of sexual differentiation (eg, female external genitalia, atypical genitalia, bifid scrotum, and hypospadias)  |
| Late                                   | Micropenis; cryptorchidism; and features mentioned under pre-pubertal and post-pubertal   |
| Pre-pubertal                           | Delayed puberty (no secondary sexual characteristics or virilisation); high-pitched voice; small testicular volume; eunuchoid body habitus (longer limbs, upper body or lower body ratio of less than 1, and arm span exceeding height by 6 cm or more); and features mentioned under post-pubertal |
| Post-pubertal                          |   |
| Specific or suggestive of hypogonadism | Deficient male-type body hair (in severe hypogonadism); low libido and loss of morning erections; hot flushes; gynaecomastia; infertility due to azoospermia, oligospermia or poor semen quality; height loss of more than 6 cm or minimal trauma fractures; and unexplained anaemia                |
| Non-specific                           | Erectile dysfunction; lower muscle mass; gynaecoid fat distribution; fatigue, reduced energy; and depressive mood   |

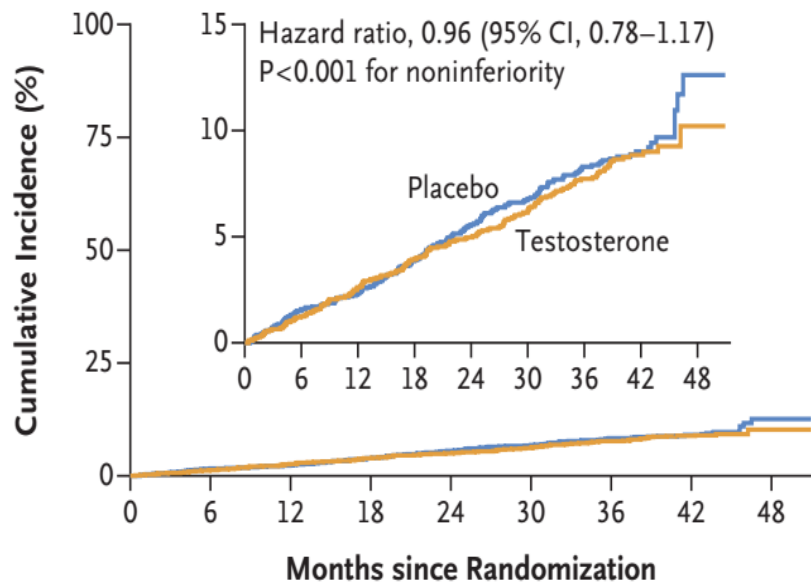
**Table 2:** Clinical features depending on the onset of male hypogonadism

# Cardiovascular Safety of Testosterone-Replacement Therapy

A.M. Lincoff, S. Bhasin, P. Flevaris, L.M. Mitchell, S. Basaria, W.E. Boden, G.R. Cunningham, C.B. Granger, M. Khera, I.M. Thompson, Jr., Q. Wang, K. Wolski, D. Davey, V. Kalahasti, N. Khan, M.G. Miller, M.C. Snabes, A. Chan, E. Dubcenco, X. Li, T. Yi, B. Huang, K.M. Pencina, T.G. Travison, and S.E. Nissen, for the TRAVERSE Study Investigators\*

N Engl J Med 2023;389:107-17.  
DOI: 10.1056/NEJMoa2215025

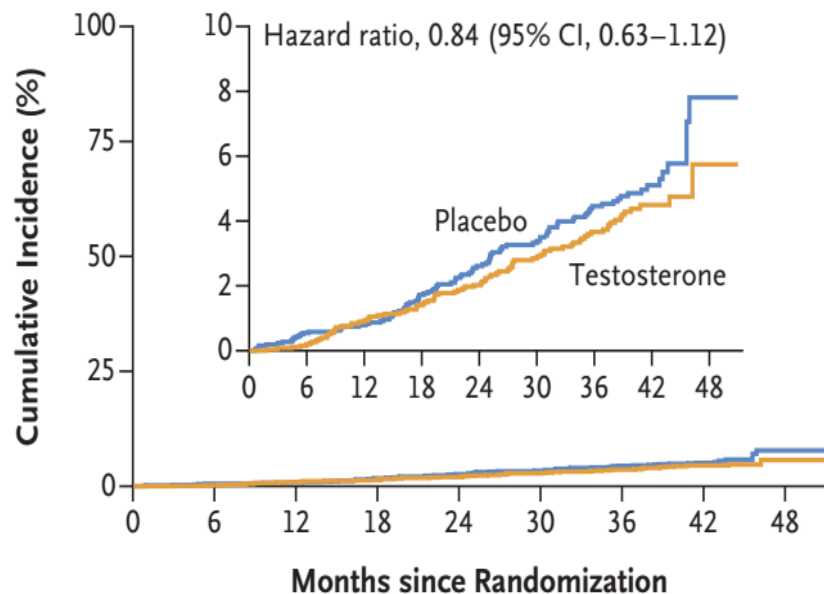
**A Primary Cardiovascular Composite Safety End Point: Safety Population**



**No. at Risk**

|              |      |      |      |      |      |      |      |     |    |
|--------------|------|------|------|------|------|------|------|-----|----|
| Placebo      | 2602 | 2507 | 2323 | 2088 | 1792 | 1568 | 1337 | 598 | 33 |
| Testosterone | 2596 | 2504 | 2339 | 2120 | 1829 | 1605 | 1380 | 653 | 39 |

**D Death from Cardiovascular Causes: Safety Population**



**No. at Risk**

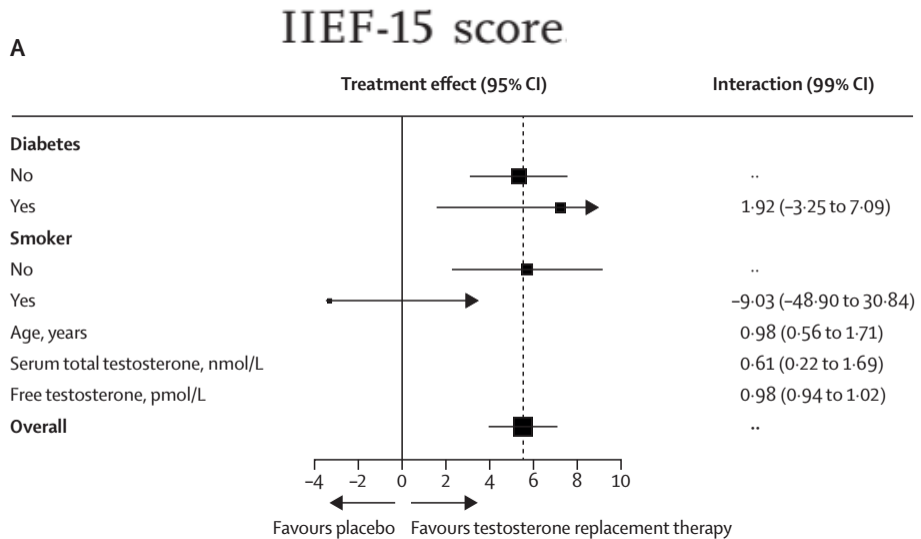
|              |      |      |      |      |      |      |      |     |    |
|--------------|------|------|------|------|------|------|------|-----|----|
| Placebo      | 2602 | 2533 | 2360 | 2130 | 1845 | 1624 | 1390 | 619 | 34 |
| Testosterone | 2596 | 2529 | 2375 | 2167 | 1875 | 1647 | 1423 | 672 | 40 |

**CONCLUSIONS**

In men with hypogonadism and preexisting or a high risk of cardiovascular disease, testosterone-replacement therapy was noninferior to placebo with respect to the incidence of major adverse cardiac events. (Funded by AbbVie and others; TRAVERSE ClinicalTrials.gov number, NCT03518034.)

# Symptomatic benefits of testosterone treatment in patient subgroups: a systematic review, individual participant data meta-analysis, and aggregate data meta-analysis

Jemma Hudson, Moira Cruickshank, Richard Quinton, Lorna Aucott, Frederick Wu, Mathis Grossmann, Shalender Bhasin, Peter J Snyder, Susan S Ellenberg, Thomas G Travison, Gerald B Brock, Emily J Gianatti, Yvonne T van der Schouw, Marielle H Emmelot-Vonk, Erik J Giltay, Geoff Hackett, Sudarshan Ramachandran, Johan Svartberg, Kerry L Hildreth, Kristina Groti Antonic, Joyce Lisa Tenover, Hui Meng Tan, Christopher Ho Chee Kong, Wei Shen Tan, Leonard S Marks, Richard J Ross, Robert S Schwartz, Paul Manson, Stephen A Roberts, Marianne Skovsager Andersen, Line Velling Magnussen, Magaly Aceves-Martins, Katie Gillies, Rodolfo Hernández, Nick Oliver, Waljit S Dhillon, Siladitya Bhattacharya, Miriam Brazzelli\*, Channa N Jayasena\*

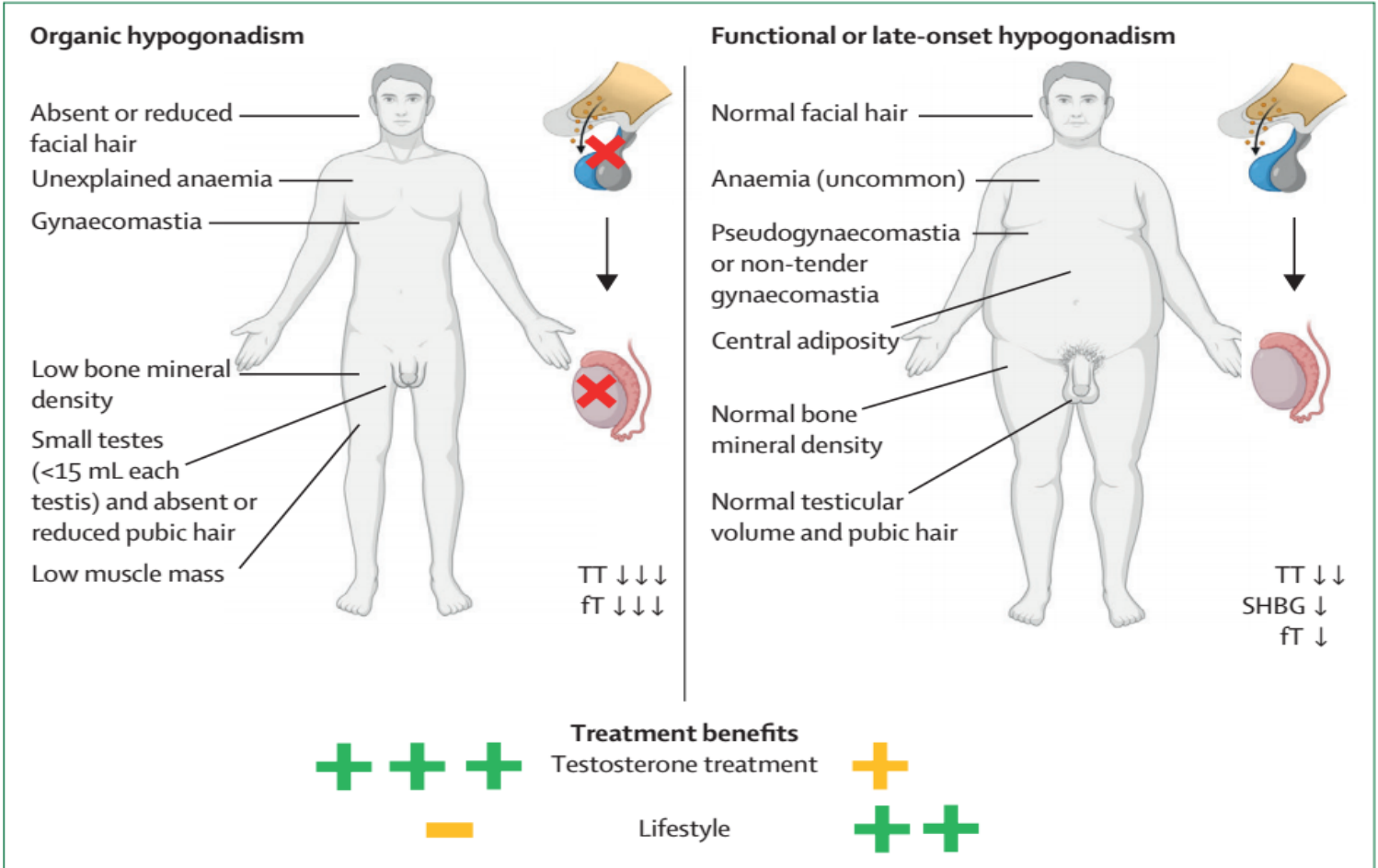


**Interpretation** In men aged 40 years or older with baseline serum testosterone of less than 12 nmol/L, short-to-medium-term testosterone treatment could provide clinically meaningful treatment for mild erectile dysfunction, irrespective of patient age, obesity, or degree of low testosterone. However, due to more severe baseline symptoms, the absolute level of sexual function reached during testosterone treatment might be lower in older men and men with obesity.

# Male hypogonadism: pathogenesis, diagnosis, and management

Lancet Diabetes Endocrinol  
2024; 12: 761-74

Nipun Lakshitha De Silva\*, Nikoleta Papanikolaou\*, Mathis Grossmann, Leen Antonio, Richard Quinton, Bradley David Anawalt, Channa N Jayasena



**Figure 2: Comparison between organic and functional hypogonadism**  
 Clinical presentation, pathophysiology, biochemistry and treatment approach in men with organic and functional hypogonadism are summarised. fT=free testosterone. SHBG=sex hormone-binding globulin. TT=total testosterone. -=no effect. Figure created with Biorender.com.

# Testosterone Therapy in Men With Hypogonadism: An Endocrine Society\* Clinical Practice Guideline

J Clin Endocrinol Metab, May 2018, 103(5):1715–1744

Shalender Bhasin,<sup>1</sup> Juan P. Brito,<sup>2</sup> Glenn R. Cunningham,<sup>3</sup> Frances J. Hayes,<sup>4</sup> Howard N. Hodis,<sup>5</sup> Alvin M. Matsumoto,<sup>6</sup> Peter J. Snyder,<sup>7</sup> Ronald S. Swerdloff,<sup>8</sup> Frederick C. Wu,<sup>9</sup> and Maria A. Yialamas<sup>10</sup>

## ***Diagnosis of men with suspected hypogonadism***

1.1 We recommend diagnosing hypogonadism in men with symptoms and signs of testosterone deficiency and unequivocally and consistently low serum total testosterone and/or free testosterone concentrations (when indicated). (1|⊕⊕⊕O)

## ***Screening and case detection for hypogonadism***

1.2 We recommend against routine screening of men in the general population for hypogonadism. (1|⊕⊕OO)

## **Older men with age-related decline in testosterone concentration**

2.4 We suggest against routinely prescribing testosterone therapy to all men 65 years of age or older with low testosterone concentrations (1|⊕⊕OO). In men > 65 years who have symptoms or conditions suggestive of testosterone deficiency (such as low libido or unexplained anemia) and consistently and unequivocally low morning testosterone concentrations, we suggest that clinicians offer testosterone therapy on an individualized basis after explicit discussion of the potential risks and benefits. (2|⊕⊕OO)

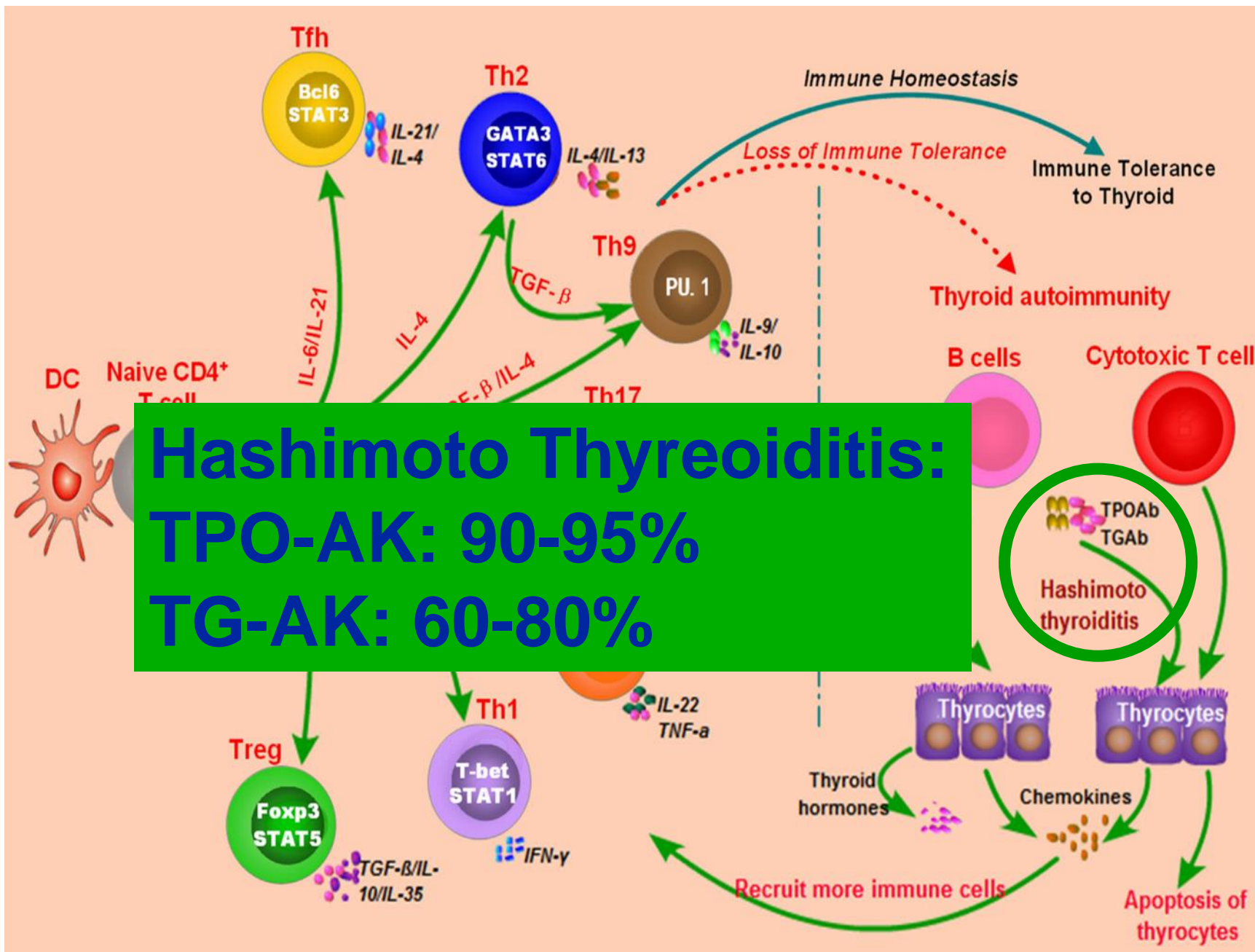
Empfehlung 4:  
**Kein routinemäßiges Testen  
auf Anti-TPO-Antikörper**

**Quelle**

Canadian Society of Endocrinology and Metabolism

<https://choosingwiselycanada.org/recommendation/endocrinology-and-metabolism/>





**Hashimoto Thyreoiditis:**  
**TPO-AK: 90-95%**  
**TG-AK: 60-80%**



# Age-Specific Distribution of Serum Thyrotropin and Antithyroid Antibodies in the U.S. Population: Implications for the Prevalence of Subclinical Hypothyroidism

Martin I. Surks and Joseph G. Hollowell

The Journal of Clinical Endocrinology & Metabolism 92(12):4575–4582  
Copyright © 2007 by The Endocrine Society

**TABLE 2.** Disease-free population: distribution of antibodies within specific age groups by TSH concentration, NHANES III (1988–1994)<sup>a</sup>

| Age (yr)                   | Sample             | Total | Percent in category with positive antibodies |          |         |      |
|----------------------------|--------------------|-------|--|----------|---------|------|
|                            |                    |       | <0.4 <sup>b</sup>                            | 0.4–2.49 | 2.5–4.5 | >4.5 |
| B. Antibodies not excluded |                    |       |  |          |         |      |
| Total                      | 16533 <sup>d</sup> | 14.7  | 12.7 <sup>e</sup>                            | 10.3     | 26.6    | 52.6 |
| 12–19                      | 2,431              | 8.0   | 11.5   | 6.3      | 17.0    | 19.1 |
| 20–29                      | 3,186              | 9.7   | 7.3  | 7.5      | 27.4    | 30.8 |
| 30–39                      | 2,981              | 13.8  | 6.9  | 11.3     | 21.7    | 56.3 |
| 40–49                      | 2,290              | 16.5  | 29.5   | 9.9      | 30.9    | 67.4 |
| 50–59                      | 1,554              | 18.3  | 24.0   | 12.4     | 27.4    | 61.9 |
| 60–69                      | 1,834              | 20.9  | 2.6  | 14.4     | 29.1    | 63.8 |
| 70–79                      | 1,333              | 24.6  | 31.4   | 15.9     | 31.4    | 50.4 |
| 80+                        | 924                | 27.8  | 30.6   | 22.5     | 32.2    | 40.5 |

<sup>a</sup> Disease-free population are people who did not report having thyroid disease or taking thyroid medications.

<sup>b</sup> TSH concentration group (milliinternational units per liter).

<sup>c</sup> Number in population with antibodies. Percentages cited are the relative frequencies in the population represented by the sample.

<sup>d</sup> Number in total disease-free population. Percentages cited are the relative frequencies in the population represented by the sample.

# The Prevalence of Undiagnosed Thyroid Disorders in a Previously Iodine-Deficient Area

THYROID  
Volume 13, Number 8, 2003

Henry Völzke,<sup>1</sup> Jan Lüdemann,<sup>2</sup> Daniel M. Robinson,<sup>3</sup> Knut W. Spieker,<sup>3</sup> Christian Schwahn,<sup>4</sup>  
Axel Kramer,<sup>5</sup> Ulrich John,<sup>1</sup> and Wieland Meng<sup>3</sup>

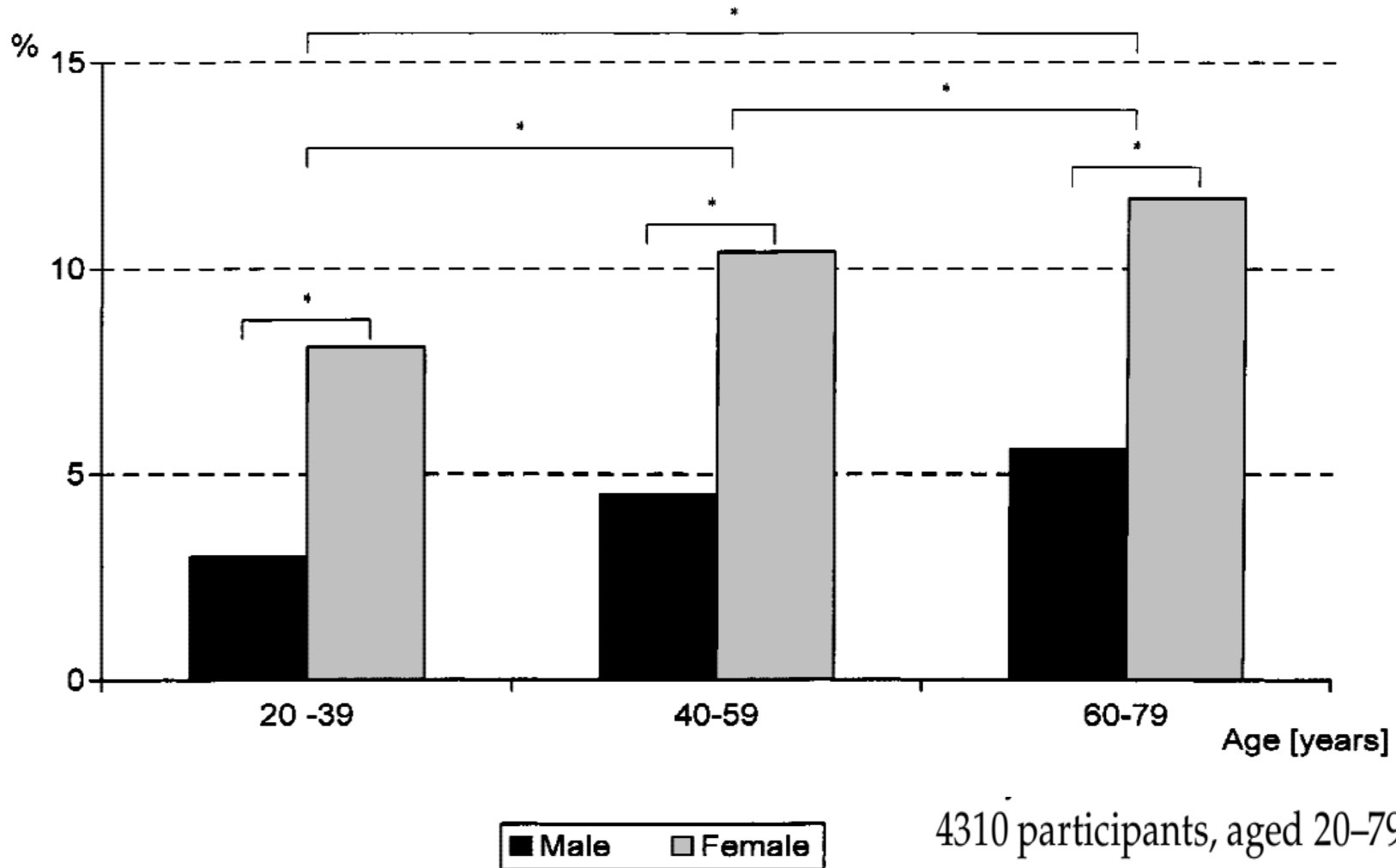
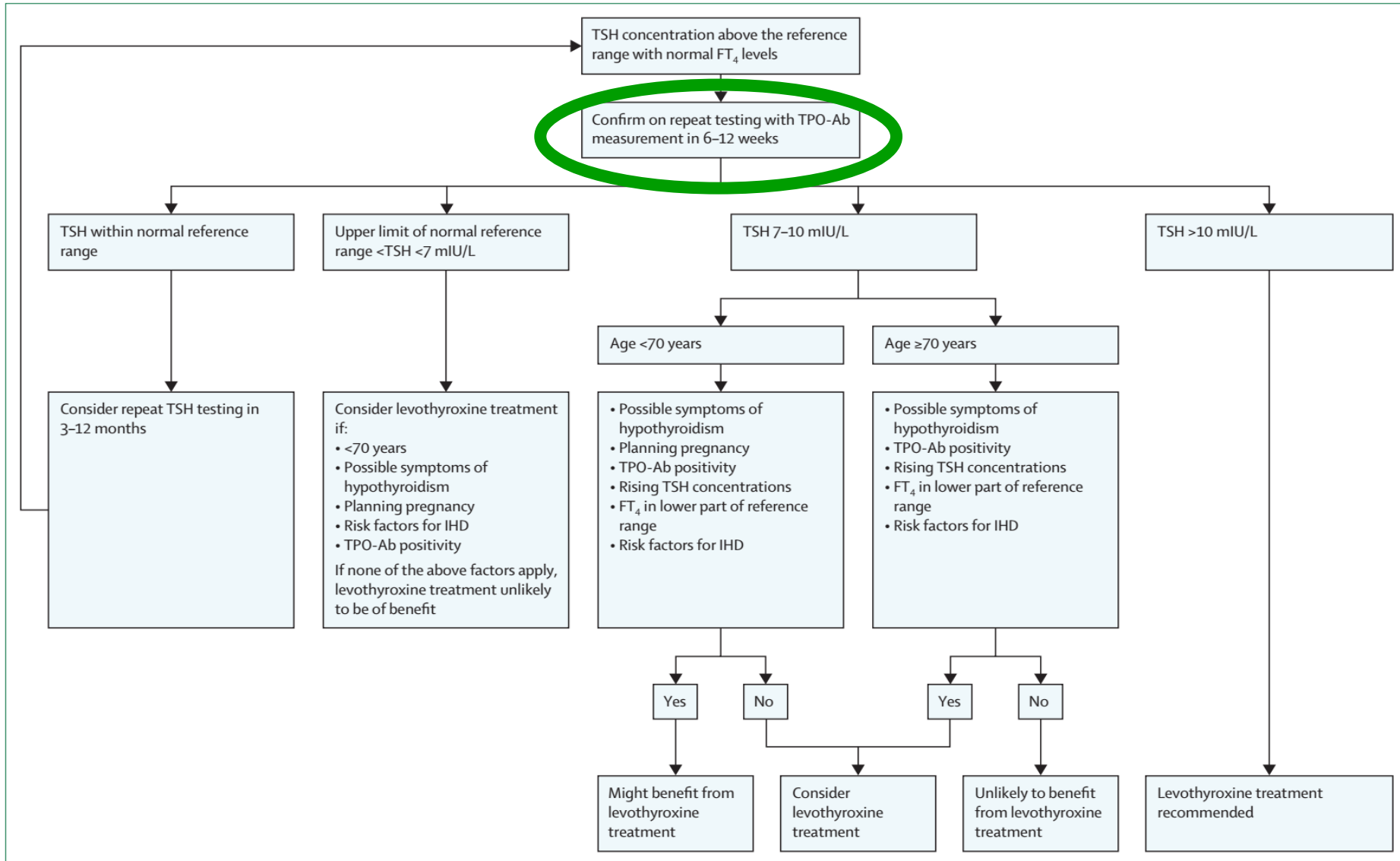


FIG. 4. Elevated serum autoantibodies to thyroperoxidase (TPOAb) levels with respect to age and gender. \* $p < 0.05$ .

Peter N Taylor, Marco M Medici, Alicja Hubalewska-Dydejczyk, Kristien Boelaert



**Figure 2: Considerations and treatment thresholds for starting thyroid hormone replacement in patients with subclinical hypothyroidism**

Recommendations are based on guidelines from the American Thyroid Association,<sup>109</sup> European Thyroid Association,<sup>142</sup> and the UK National Institute of Health and Care Excellence.<sup>107</sup> FT<sub>4</sub>=free thyroxine. IHD=ischaemic heart disease. TPO-Ab=thyroid peroxidase antibodies. TSH=thyroid-stimulating hormone.

**TPO-Antikörper nur bei Hypothyreose bestimmen**

**TPO-Antikörper Positivität ist ein Hinweis aber kein Beweis für eine Hashimoto Thyreoiditis**

**TPO-Antikörper positive Personen mit latenter Hypothyreose haben ein etwa doppelt so hohes Risiko von einer latenten in eine manifeste Hypothyreose überzugehen**

**Wiederholte Bestimmungen der TPO-Antikörper bei Hashimoto Thyreoiditis sind nicht empfohlen da sie keinen diagnostischen Wert im Rahmen einer chronischen Schilddrüsenerkrankung haben**

Empfehlung 5:  
**Keine routinemäßige Schilddrüsenultraschalluntersuchung ohne Anzeichen/Symptome einer Schilddrüsenerkrankung, außer bei Risikopersonen für Schilddrüsenkrebs. Bei Knoten mit geringem Risiko die Indikation/Durchführung von Feinnadelaspirationen einschränken**

**Quelle**

Italian Association of Medical Endocrinologists (AME)

JAMA | US Preventive Services Task Force | **EVIDENCE REPORT**

## Screening for Thyroid Cancer

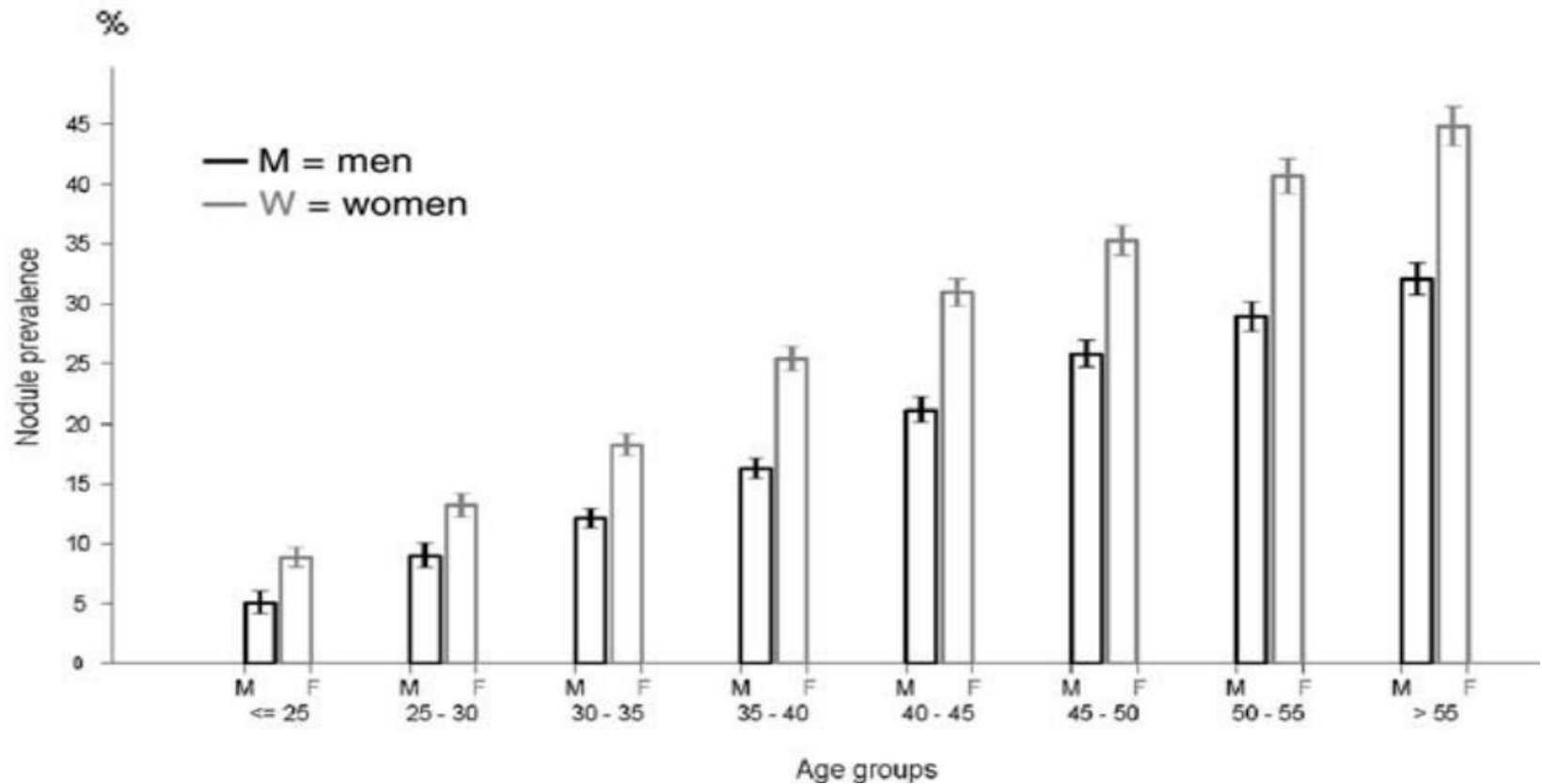
Updated Evidence Report and Systematic Review  
for the US Preventive Services Task Force

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

# Prevalence of Thyroid Disorders in the Working Population of Germany: Ultrasonography Screening in 96,278 Unselected Employees

THYROID  
Volume 14, Number 11, 2004

Christoph Reiners,<sup>1</sup> Karl Wegscheider,<sup>2</sup> Harald Schicha,<sup>3</sup> Peter Theissen,<sup>3</sup> Renate Vaupel,<sup>4</sup>  
Renate Wrbitzky,<sup>5</sup> and Petra-Maria Schumm-Draeger<sup>6</sup>



**FIG. 2.** Nodule prevalences by gender and age group. The column heights represent observed prevalences. The column tops are surrounded by 95% confidence limits for true prevalences.

# Geographic variations in the frequency of thyroid disorders and thyroid peroxidase antibodies in persons without former thyroid disease within Germany

C Meisinger<sup>1,2</sup>, T Ittermann<sup>3</sup>, H Wallaschofski<sup>4</sup>, M Heier<sup>1,2</sup>, H Below<sup>5</sup>, A Kramer<sup>5</sup>, A Döring<sup>6</sup>, M Nauck<sup>4</sup> and H Völzke<sup>3</sup>

European Journal of Endocrinology (2012) **167** 363–371

**Table 2** Ultrasonographic findings in men stratified by study. Data are expressed as median and inter-quartile range (continuous variables) and as frequency in percentage (dichotomous variables).

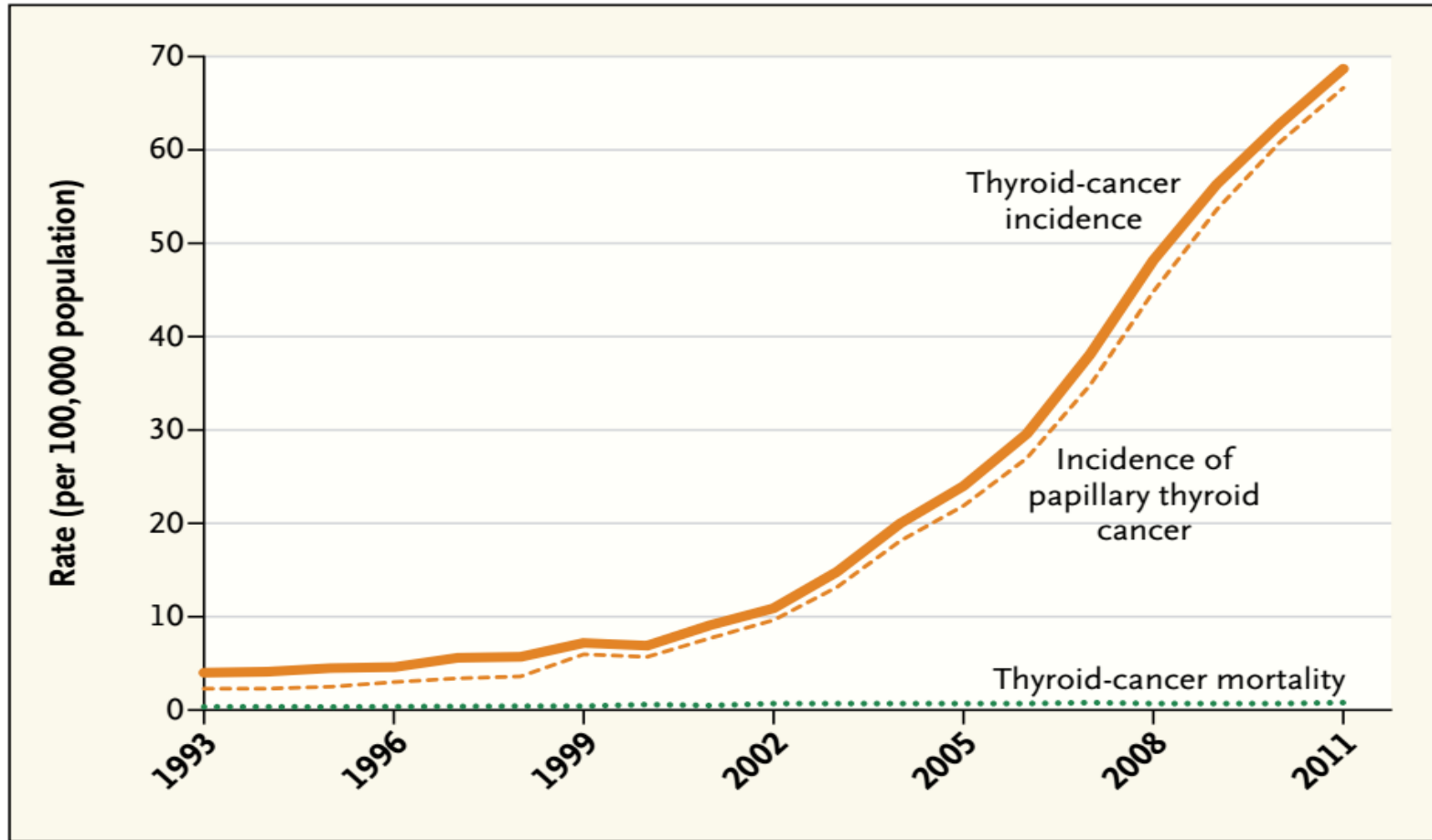
|                     | 25–34 years      | 35–44 years      | 45–54 years      | 55–64 years      | 65–74 years      | 75–88 years      |
|---------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Thyroid volume (ml) |                  |                  |                  |                  |                  |                  |
| SHIP                | 18.9 (15.7–22.4) | 20.6 (17.4–26.0) | 23.2 (18.5–28.5) | 22.4 (18.1–28.2) | 26.0 (19.8–33.2) | 24.9 (19.3–35.1) |
| KORA                | 17.5 (15.2–22.1) | 18.2 (14.7–23.9) | 20.7 (16.5–28.0) | 22.6 (17.7–29.0) | 22.8 (18.1–30.5) | 20.6 (17.4–29.3) |
| Goiter              |                  |                  |                  |                  |                  |                  |
| SHIP                | 15.0             | 31.4             | 40.8             | 37.4             | 53.7             | 49.7             |
| KORA                | 19.5             | 21.6             | 34.2             | 37.2             | 45.1             | 36.9             |
| Thyroid nodules     |                  |                  |                  |                  |                  |                  |
| SHIP                | 12.5             | 21.4             | 29.5             | 37.3             | 53.3             | 51.7             |
| KORA                | 30.4             | 40.7             | 52.0             | 65.0             | 70.4             | 68.9             |



# Korea's Thyroid-Cancer "Epidemic" — Screening and Overdiagnosis

N ENGL J MED 371;19 NEJM.ORG NOVEMBER 6, 2014

Hyeong Sik Ahn, M.D., Ph.D., Hyun Jung Kim, M.P.H., Ph.D., and H. Gilbert Welch, M.D., M.P.H.



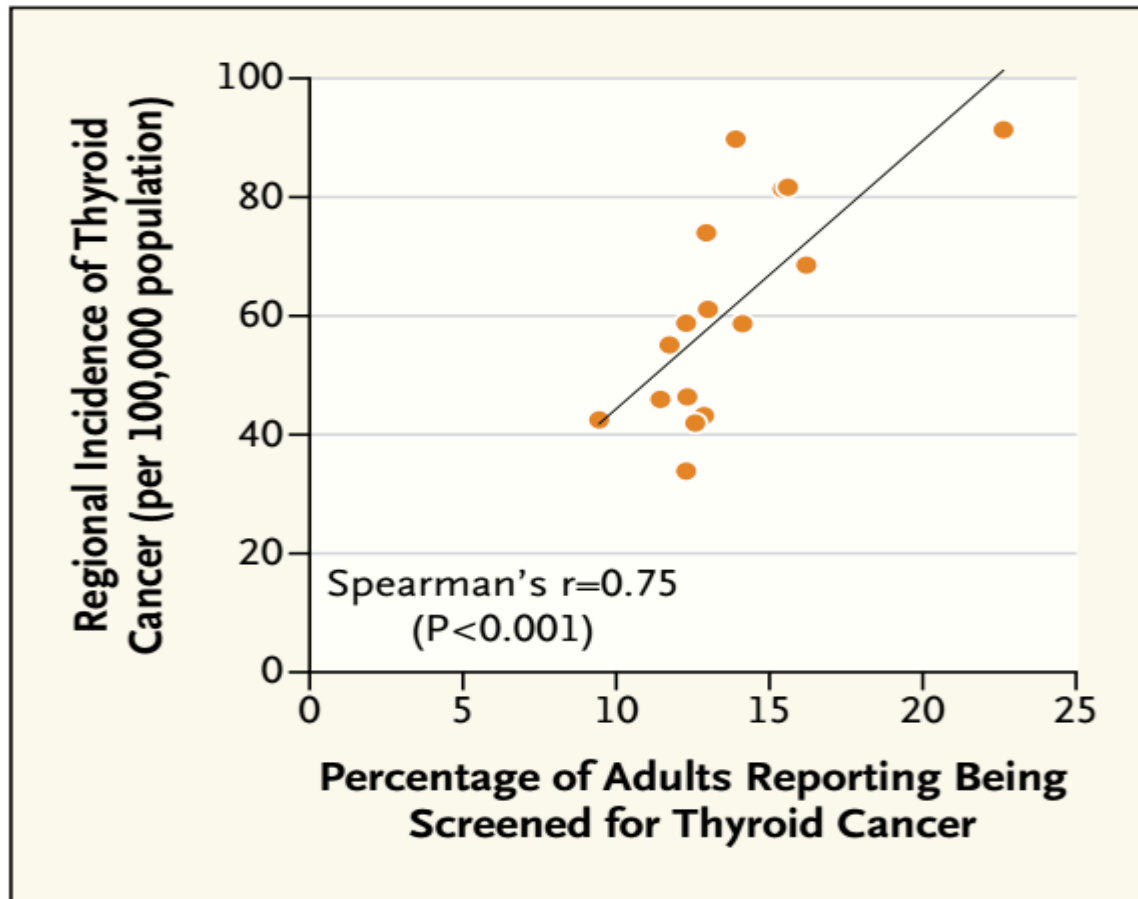
## Thyroid-Cancer Incidence and Related Mortality in South Korea, 1993–2011.

Data on incidence are from the Cancer Incidence Database, Korean Central Cancer Registry; data on mortality are from the Cause of Death Database, Statistics Korea. All data are age-adjusted to the South Korean standard population.

# Korea's Thyroid-Cancer "Epidemic" — Screening and Overdiagnosis

N ENGL J MED 371;19 NEJM.ORG NOVEMBER 6, 2014

Hyeong Sik Ahn, M.D., Ph.D., Hyun Jung Kim, M.P.H., Ph.D., and H. Gilbert Welch, M.D., M.P.H.



**Penetration of Thyroid-Cancer Screening (2008–2009) and Incidence of Thyroid Cancer (2009) in the 16 Administrative Regions of South Korea.**

# The epidemiological landscape of thyroid cancer worldwide: GLOBOCAN estimates for incidence and mortality rates in 2020

*Lancet Diabetes Endocrinol*  
2022; 10: 264-72

Margherita Pizzato, Mengmeng Li, Jerome Vignat, Mathieu Laversanne, Deependra Singh, Carlo La Vecchia, Salvatore Vaccarella

|               | Incidence |      |          |     | Mortality |     |         |     |
|---------------|-----------|------|----------|-----|-----------|-----|---------|-----|
|               | Women     |      | Men      |     | Women     |     | Men     |     |
|               | Cases     | ASR  | Cases    | ASR | Death     | ASR | Death   | ASR |
| World         | 448 915*  | 10.1 | 137 287* | 3.1 | 27 740*   | 0.5 | 15 906* | 0.3 |
| Very high HDI | 162 780   | 15.5 | 49 863   | 4.5 | 8 166     | 0.4 | 4 951   | 0.3 |
| High HDI      | 247 066   | 13.6 | 74 559   | 4.1 | 12 465    | 0.6 | 6 469   | 0.3 |
| Medium HDI    | 30 832    | 2.7  | 10 393   | 0.9 | 4 728     | 0.4 | 3 640   | 0.4 |
| Low HDI       | 8 068     | 2.5  | 2 440    | 0.9 | 2 375     | 0.9 | 845     | 0.4 |

ASR=age-standardised rate. HDI=Human Development Index. \*The estimated numbers of cancer cases and cancer deaths in a given region might not correspond to the sum of the estimated numbers of cancer cases and deaths in the individual countries of that region; the population of a region might include some small country populations for which it was not possible to provide estimates.

**Table: Numbers and rates per 100 000 of incidence and mortality for thyroid cancer by sex, according to the HDI 2020**

## Implications of all the available evidence

The evidence from this study highlights that overdiagnosis of thyroid cancer has become a major public health issue in many settings worldwide. Monitoring epidemiological patterns is crucial to develop tailored prevention strategies to limit overdiagnosis, with its clinical and financial implications.

Caren G. Solomon, M.D., M.P.H., *Editor*

N Engl J Med 2017;376:2556-65.

DOI: 10.1056/NEJMcp1611144

# Subclinical Hypothyroidism

Robin P. Peeters, M.D., Ph.D.

ultrasonography is not recommended routinely for the evaluation of subclinical hypothyroidism.

# DANKE

**...allen Kolleg\*innen der  
Choosing Wisely Gruppe**

**...allen Kolleg\*innen des Institut für  
Allgemeinmedizin und evidenzbasierte  
Versorgungsforschung (Carolin Zipp,  
Andrea Siebenhofer-Kroitzsch, Karl  
Horvath, Klaus Jeitler, etc.)**



## 27. JAHRESTAGUNG DER ÖGES

gemeinsam mit der OSDG und ANETS

19. - 21. MAI 2025, KONGRESS-UND  
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