

Common otolaryngology issues that do not (always) require referral

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- Family physicians have the skill set, knowledge and expertise to manage these conditions
- Facilitates earlier appropriate investigation and management



NYGH Otolaryngology group

- 5 physicians – one shared office
 - 烟Dr. M. Shah
 - 烟Dr. T. Kandasamy
 - 烟Dr. Jason Xu
 - 烟Dr. Josie Xu
 - 烟Dr. D. Lee (locum for Dr. E. Gooden)
- Constructive feedback we've received about our office
 - Long wait lists for new patient visits
 - Slow response time for consult requests
- Measures we have taken
 - Hired more admin staff
 - Email and online appointment booking
 - Hired a physician assistant



NYGH Otolaryngology Group

- Referrals / Consult requests
 - Approx 500 new referrals received per week
 - We see ~ 500-600 patients per week
 - 烟60% new patients
 - 烟40% follow-ups/repeat visits
 - Long waits times for new assessments
 - 烟Patient anxiety about their symptoms
 - 烟Delays in diagnostic testing and therapy



Outline - common problems

- Thyroid nodules
- Tinnitus
- Recurrent Pharyngitis
- BPPV



Thyroid nodules

- Palpable thyroid nodules
 - 4.2% of population
(Framingham data, Wong et al., World J Surg, 2000)
- Non-palpable nodules
 - ☹ Over 55 years
 - ☹ Female 45%
 - ☹ Male 32%
 - (Reiners et al., Thyroid 2004)
- Risk of malignancy is low
 - Overall <10%
 - ☹ Modified by numerous risk factors



Prognosis of thyroid cancer is excellent

- Vast majority of treated thyroid cancers are Stage 1 or 2
 - Prognosis
 - ☹ 5 year survival of 99-100%
 - ☹ 20 year cause specific survival 99%
- Not all cancers are clinically significant
 - Indolent nature of occult PTC
 - ☹ Autopsy studies
 - ☹ 5 – 36% prevalence of PTC



Active Surveillance

A Protocol for a Pan-Canadian Prospective Observational Study on Active Surveillance or Surgery for Very Low Risk Papillary Thyroid Cancer

OPEN ACCESS

Anna M. Sawka^{1*}, Sangeet Ghai², George Tomlinson³, Nancy A Martin Corsten⁴, Syed Ali Imran⁵, Eric Bissada⁶, Rebecca LeBo Maysa Brassard¹⁰, Han Zhang¹¹, Michael Gupta¹², Anthony C. Deric Morrison¹³, Stephanie Johnson-Obeski¹⁴, Eitan Prisman¹, Shamir P. Chandarana¹⁶, Sana Ghaznavi¹⁷, Jennifer Jones¹⁸, A John J. Matelski²⁰, Wei Xu²¹, David P. Goldstein²² and the Can. Active Surveillance Study Group

Edited by:
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CANADIAN THYROID CANCER ACTIVE SURVEILLANCE STUDY GROUP INVESTIGATORS (GREATER TORONTO AREA INVESTIGATORS): UNIVERSITY HEALTH NETWORK

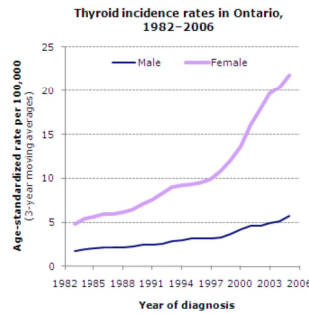
Lorne Rotstein, Dale Brown, John de Almeida, Patrick Gullane, Ralph Gilbert, Douglas Chepeha, Jonathan Irish, Jesse Pasternak, Shereen Ezzat, James P. Brierley, Richard W. Tsang; **Mount Sinai Hospital**, Eric Monteiro, Afshan Zahedi, Jacqueline James, Karen Gomez Hernandez; **Sunnybrook Health Sciences Centre**, Antoine Eskander, Danny Enepkides, Kevin Higgins, Ilana J. Halperin; **Women's College Hospital**, Afshan Zahedi, Karen Devon; **North York General Hospital**, **Everton Gooden**, **Manish Shah**; **William Osler Health System**, Mark Korman; **Trillium Health Partners**, Janet Chung, Kareem Nazarali; **Lakeridge Health**, Eric Arruda, Artur Gevorgyan; **Rouge Valley (Centenary Site)**, Michael Chang; **Scarborough Hospital (Grace Site)**, Sumeet Anand; **Scarborough Hospital (General**



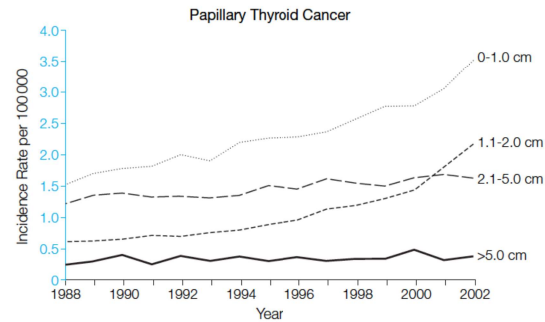
Incidence is increasing

- Canadian cancer statistics

Incidence of thyroid cancer in women increasing at 7% per year since 2002



Increasing Incidence of Thyroid Cancer in the United States, 1973-2002



Proportion of the increase:

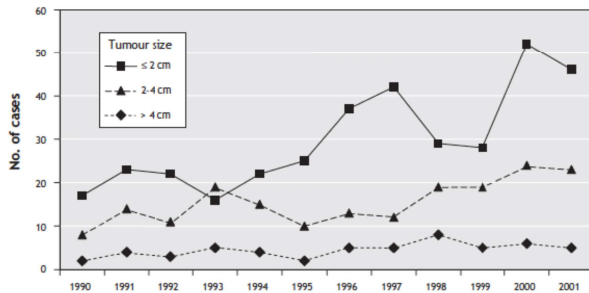
<1.0 cm: 49%

<2.0 cm: 87%

Increased incidence of differentiated thyroid carcinoma and detection of subclinical disease

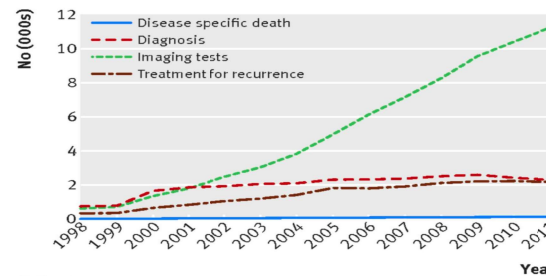
William D.T. Kent MSc MD, Stephen F. Hall MSc MD, Phillip A. Isotalo MD, Robyn L. Houlden MD, Ralph L. George MD, Patti A. Groome PhD

CMAJ 2007;177(11):1357-61



Outcomes

- We are finding more cancers at an earlier stage
- Prognosis / outcomes are not improving

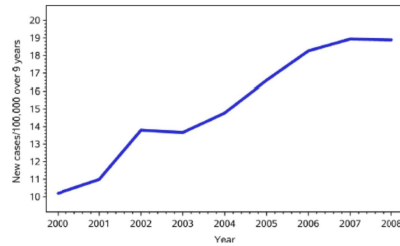


Access, excess, and overdiagnosis: the case for thyroid cancer

Stephen F. Hall¹, Jonathan Irish², Patti Groome³ & Rebecca Griffiths³

Cancer Medicine 2014; 3(1): 154-161

- Ecological study comparing use of diagnostic imaging and incidence of thyroid cancer by LHIN in Ontario



Overinvestigation/Overtreatment

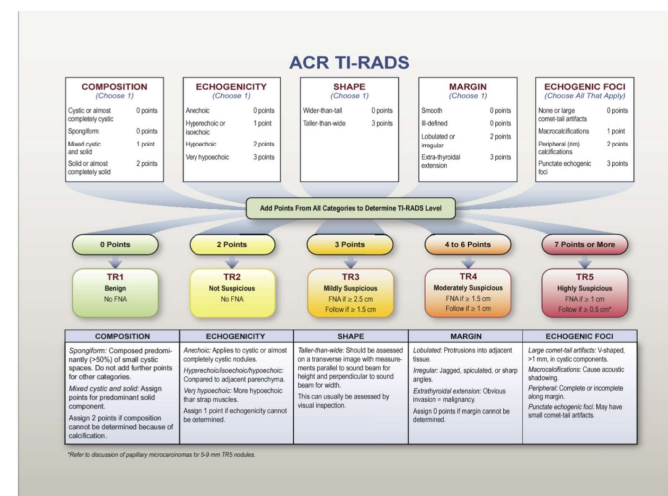
- Thyroid nodules
 - ☹️ risk of malignancy is low
- Malignancy
 - ☹️ tumours are indolent and prognosis is excellent
- Overinvestigation/overtreatment:
 - ☹️ Unnecessary patient anxiety
 - ☹️ Overuse / inappropriate use of health care resources
 - ☹️ Risks of treatment: surgical risks, I131 risks



Explanatory Notes: Thyroid Ultrasound Structured Reporting Templates

Version 1.0 (February 2020)

TI-RADS - Thyroid imaging Reporting and Data System American College of Radiology



TI-RADS Risk Categories: Guide for FNA biopsy and follow up

TR5	≥7 points	<0.5cm, no FNA or follow up 0.5cm - 0.9 cm, annual US for 5 years. Stop if stable; continue following if there is growth until no growth over 5 years. FNA if ≥ 1cm
TR4	4-6 points	<1cm, no FNA or follow up 1.0cm - 1.4cm, Follow up US at 1, 2, 3, and 5 years. Stop if stable; continue following there is growth until no growth over 5 years. FNA if ≥ 1.5cm
TR3	3 points	<1.5cm, no FNA or follow up 1.5cm - 2.4cm, Follow up US at 1, 3, 5 years. Stop if stable; continue following if there is growth until no growth over 5 years. ≥ 2.5cm, FNA
TR2	2 points	No FNA or follow-up
TR1	0 points	No FNA or follow-up

NYGH Synoptic Reporting

REFERENCE EXAM: Outside facility thyroid ultrasound report July 12, 2021

TECHNICAL QUALITY: Satisfactory

THYROID GLAND:

- Right lobe: 4.4 cm x 1.0 cm x 1.2 cm
- Left lobe: 5.4 cm x 2.0 cm x 1.7 cm
- Doppler flow whole gland: Normal
- Thyroid echotexture:

THYROID NODULES: Estimated total number of nodules 1 cm or larger: 1

Nodule: L1

- I: Location: Left mid-lower
- II: Size: 3.2 x 2.0 x 1.6 cm (SI x TV x AP). Previous size (if applicable): 3.7 x 2.1 x 1.7 cm
- III: Composition: (2 points) Solid (at least 95% solid)
- IV: Echogenicity (assess solid component of mixed nodules): (1 point) Iso/hyperechoic
- V: Shape: (0 points) Wider than tall or round
- VI: Margins: (0 points) Smooth
- VII: Echogenic foci (choose all that apply): (3 points) Punctate echogenic foci.
- VIII: ACR TI-RADS points tally: 6
- IX: ACR TIRADS risk category: TR4:

NYGH Synoptic reporting

- <1 cm, no FNA or follow up
- 1.0 - 1.4 cm, follow up US at 1, 2, 3 and 5 years. Stop if stable at 5 years. Continue following if there is growth until no growth over 5 years
- FNA if 1.5 cm or larger

LYMPH NODES: Levels evaluated; levels 2 - 4 (lateral) and 6 (central):
Suspicious lymph nodes: No

Additional Findings: None relevant

FINAL INTERPRETATION:

3.2 cm left mid-lower pole biopsy-proven nodule similar.

No adenopathy.

Inadequate Ultrasound report

THYROID/NECK ULTRASOUND

INDICATION: Follow-up.

COMPARISON: October 7, 2020.

FINDINGS:

Right lobe measures 5.0 x 2.8 x 2.27 cm and left lobe measures 3.1 x 1.3 x 0.9 cm. Echotexture is homogeneous. Vascularity is normal.

Right mid to lower pole 3.9 x 2.8 x 2.1 cm solid hypoechoic nodule with irregular margins and macrocalcifications (TI RADS 4), previously 3.8 x 2.7 x 2.3 cm.

Few minimally prominent submandibular region lymph nodes, likely reactive

IMPRESSION:

Stable large right-sided thyroid nodule

Family physician role in investigation & management

- Good quality thyroid US with synoptic reporting facilitates appropriate further investigation
 - ☺ Thyroid FNA biopsy
 - ☺ Surveillance US (frequency and duration)
 - ☺ No further testing required
- If biopsy indicated, order biopsy and send referral
 - ☺ Reduces wait time for biopsy
 - ☺ We are happy to discuss results with patients and form management plan
- If unsure at any time, please refer and we are happy to see in consultation



Tinnitus

- Prevalence of 15-30%
- Classic primary tinnitus
 - ringing / buzzing / high pitched sound
 - Bilateral (can be worse in one ear)
 - Non-pulsatile
 - No other associated symptoms
 - ☺ Hearing loss, vertigo, aural fullness, headaches
 - Normal otologic examination



Otolaryngology–Head and Neck Surgery

Guideline | Free Access

Clinical Practice Guideline: Tinnitus

David E. Tunkel MD , Carol A. Bauer MD, Gordon H. Sun MD, MS, Richard M. Rosenfeld MD, MPH, Sujana S. Chandrasekhar MD, Eugene R. Cunningham Jr MS, Sanford M. Archer MD ... [See all authors](#)

First published: 01 October 2014 | <https://doi.org/10.1177/0194599814545325> | Citations: 11



Recommendations

- History & physical exam for patients with tinnitus
- Audiologic evaluation is indicated only if
 - ☺ Unilateral
 - ☺ Pulsatile
 - ☺ > 6 months
 - ☺ Subjective hearing loss
- In other cases, audiologic evaluation is optional



Recommendations

- Imaging
 - Strong recommendation: Do **NOT** order routine imaging in patient with tinnitus
 - Only indicated if one of:
 - ☹ Unilateral
 - ☹ Pulsatile
 - ☹ Asymmetric hearing loss
 - ☹ Focal neurologic abnormalities



Recommendations

- Educate patients
 - Etiology unknown but classic primary tinnitus is NOT a symptom of worrisome pathology
 - ☹ Reassurance is crucial
 - Common in general population
 - ☹ Reassurance
 - Natural history – reassurance
 - ☹ >40% report complete resolution
 - ☹ Most (>80%) report improvement over time
 - Mild / less intrusive symptoms



Recommendation

- Educate patient regarding management options
 - No effective pharmacologic / dietary interventions
 - No cure for primary tinnitus BUT we have therapies that can relieve the effects of tinnitus on QOL
 - Be careful of Dr. Google
 - ☹ Lots of misleading information



Management options

- Distraction
 - Music
 - Background noise (eg fan)
 - Sound machines – white noise, environmental sounds (rain, waves, etc)
 - smartphone apps



Management options

- No evidence for efficacy of pharmacologic interventions
 - No evidence for antidepressants, anxiolytics or intratympanic medications
- No evidence for dietary supplements
 - Ginkgo biloba
 - Lipoflavanoids
 - Zinc
 - Melatonin

When to refer

- Unilateral
- Pulsatile
- Other symptoms
 - Hearing loss, dysequilibrium/vertigo, neurological symptoms
- “Bothersome tinnitus”

Bothersome tinnitus

- For some patients, tinnitus can severely impact QOL
 - Sleep disturbance/insomnia, difficult concentrating/working, emotional distress, anxiety, depression, anger
- What can we do for these patients
 - Further reassurance
 - Hearing aids
 - Sound generators
 - Support groups
 - Tinnitus workshop
 - CBT / “tinnitus retraining” therapy

“Tonsil problems”

- Recurrent pharyngitis
- Tonsil stones

Recurrent pharyngitis

- Recurrent sore throat with or without other URI symptoms
- Often referred for consideration of tonsillectomy
- Indications for adult tonsillectomy
 - ☹️ Confirmed or suspicion of malignancy
 - ☹️ Hypertrophy causing airway obstruction
 - acute or chronic – eg severe OSA with tonsillar hypertrophy
 - ☹️ Recurrent bacterial pharyngitis (Streptococcal pharyngitis)



Recurrent Streptococcal pharyngitis

- Most episodes of pharyngitis, even if severe/prolonged and tonsillar exudate present, are viral in etiology
 - Tonsillectomy does not reduce frequency or severity of viral pharyngitis
- Tonsillectomy is “curative” for recurrent bacterial infections
 - ☹️ Need proof of bacterial infection
 - ☹️ Culture positive swabs
 - High incidence of false positives with Rapid Strep tests
- Typical indications
 - ☹️ > 5 infections in 1 year
 - ☹️ > 2-3 infections per year for 2 or more consecutive years
 - ☹️ Episodes with severe symptoms
 - airway obstruction, hospital admission for IV fluids
 - peritonsillar abscess (>1 episode)



Recurrent pharyngitis

- Adult tonsillectomy does have downsides
 - 3% risk of post op bleeding
 - ++ pain
 - ☹️ 2 weeks recovery time off work / school
 - ☹️ Most patients require opioid analgesia for 10+ days
- Indications for adult tonsillectomy
 - Confirmed or suspicion of malignancy
 - Hypertrophy causing airway obstruction
 - Recurrent bacterial pharyngitis (Streptococcal pharyngitis)
- In the absence of these indications
 - ☹️ Supportive care
 - ☹️ Recurrence



Tonsil stones

- Debris that builds up in crypts on the surface of the tonsil
 - ☹️ Food, shed mucosal epithelium, oral flora
- Symptoms
 - ☹️ Globus sensation
 - ☹️ Foul taste and smell
 - ☹️ Can cause halitosis
- Management
 - ☹️ Oral hygiene
 - ☹️ Use of Water pik
 - ☹️ Manual expression of stones (toothbrush, Qtip)



Tonsil stones - Role for Surgery

- Standard tonsillectomy
 - Curative -- 100% success
 - Disadvantages:
 - ☹️ post-op pain/recovery (2 weeks); operative risks
 - ☹️ Not covered by OHIP
- Coblation “tonsillectomy”
 - Tonsil not removed but “resurfaced” so crypts are not deep and won’t trap debris
 - ☹️ Can be done under local anaesthesia (office / minor procedure clinic)
 - ☹️ Faster post op recovery
 - Not 100% effective
 - Not covered by OHIP

Benign Paroxysmal Positional Vertigo (BPPV)

- The most common cause of peripheral vertigo
 - ☹️ Accounts for >40% of cases
- Definitions
 - ☹️ *Vertigo* - an illusory sensation of motion of either the self or the surroundings in the absence of true motion
 - ☹️ *BPPV* is defined as a disorder of the inner ear characterized by repeated episodes of positional vertigo

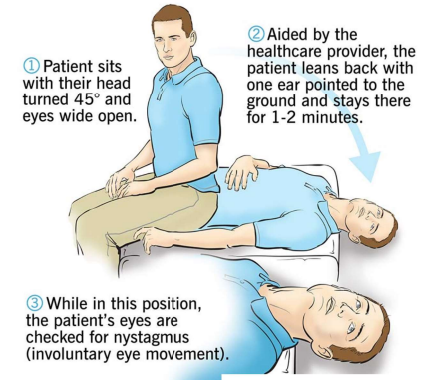
BPPV - History

- Classic presentation
 - Diagnosis can often be made from history alone
 - Sudden onset rotational spinning sensation
 - +/- nausea and vomiting
 - Episodic
 - Episodes last seconds to minutes
 - Triggered by sudden head movements
 - Stops if they stay still
 - No other auditory symptoms (sudden change in hearing or sudden onset of tinnitus)
 - No neurologic symptoms

BPPV Physical exam

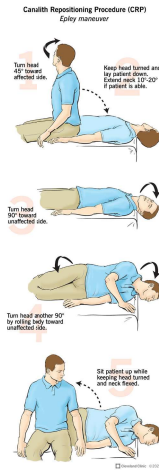
- Normal neurological exam
 - Cranial nerve exam, cerebellar testing
- Positive Dix-Hallpike maneuver

Dix-Hallpike Maneuver



BPPV - Management

- Epley repositioning maneuver
 - ☹ Very efficacious
- Post Epley instructions
 - ☹ Avoid rapid head movements for 2 days
 - ☹ Avoid sleeping on affected side for 1 week



BPPV - Natural history

- Majority of patients experience self-resolving symptoms
 - ☹ Symptoms resolve within a few days to weeks
 - ☹ >50% of patients asymptomatic by 1 month
- No need for immediate referral for all patients
 - ☹ Epley maneuver can be done by family physician, ER physician, physiotherapist




BPPV - Natural history

- It is normal for patients to have mild imbalance that can persist for several weeks (months) following an acute episode
 - ☹ Rapid (head) movements
 - ☹ Fatigue / stress
- No need to refer for these convalescence symptoms
 - ☹ Reassurance
 - ☹ Encourage activity
 - ☹ Refer for vestibular physiotherapy

BPPV - when to refer

- Severe symptoms
- Non-resolving symptoms
- Atypical presentation / diagnosis unclear
- Patient high risk for falls
 - Elderly, mobility issues, etc





- Thank you!

- Questions?

- Manish.shah@nygh.on.ca