Class 19 Review – Trans Fats and Heart Disease

- **Primary prevention** – Prepathogenesis phase: Prevent disease by altering risk factors populations are exposed to
  - Example: Limit population exposure to transfats (link) **$**

- **Secondary Prevention** – Pathogenesis: Screen those who are pre-symptomatic of disease but have other markers that suggest risk (age, genetic history, biomarkers) **$$**
  - Example: High transfat exposure associated with increased LDL cholesterol. High LDL cholesterol in turn associated with heart disease. Screen for LDL cholesterol during clinic visits.

- **Tertiary Prevention** – Later stages: Treating those with active disease
  - Example: treat active heart disease – Bypass, angioplasty, medication, ER visits **$$$**

Screening for Disease Part I

HLSC 2003

Class 17

Walker
Faculty of Health Sciences
University of Lethbridge

Class 20: Learning Objectives

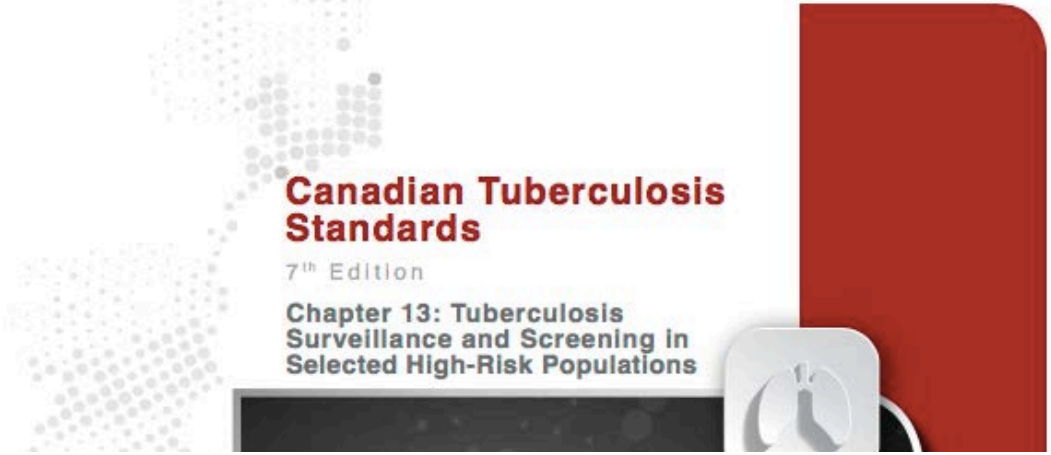
1. **Understand the role of screening** in strengthening the health of populations.

2. Understand how epidemiologists **evaluate the accuracy of screening tests**.

3. Understand the study designs epidemiologist use to **evaluate screening programs**.

4. Understand **the circumstances under which** screens should be implemented for populations.

1. The Role of Screening in Population Health



- **The highest priority in TB control programs is to detect and treat active TB cases and to investigate their contacts.**
- **Screening and treatment for LTBI should only be undertaken if the TB control program effectively manages active TB cases and their contacts.**
- **Screening for LTBI is only appropriate when available infrastructure and resources allow the monitoring and support needed to achieve safe and complete treatment.[3]**

(Strong recommendations, based on moderate to strong evidence)

Epi in the News:

LINK to article

HEALTH

TRENDING Kim Cattrall | Leafs | Bosma | Canadian dollar | Ontario budget

Task force recommends against colonoscopy for routine colorectal cancer screening

NP SHERYL UBELACKER, THE CANADIAN PRESS | February 22, 2016 | Last Updated: Feb 23 10:25 AM ET
More from The Canadian Press

New guidelines are recommending against colonoscopy for routine screening of colorectal cancer. Fotolia

Colorectal Cancer (2016)

SUMMARY OF RECOMMENDATIONS FOR CLINICIANS AND POLICY MAKERS

The CTFPHC will continue to carefully monitor the scientific developments in screening for colorectal cancer and will report back to Canadians within 5 years with an update of the 2016 guidelines.

These recommendations apply to adults aged ≥50 years who are not at high risk for colorectal cancer (CRC). They do not apply to those with previous CRC or polyps, inflammatory bowel disease, signs or symptoms of CRC, history of CRC in one or more first degree relatives, or adults with hereditary syndromes predisposing to CRC (e.g. familial adenomatous polyposis, Lynch Syndrome).

RECOMMENDATIONS

- We recommend screening adults aged 60 to 74 for CRC with FOBT (either gFOBT or FIT) every two years OR flexible sigmoidoscopy every 10 years.

  (*Strong recommendation; moderate quality evidence*)

- We recommend screening adults aged 50 to 59 for CRC with FOBT (either gFOBT or FIT) every two years OR flexible sigmoidoscopy every 10 years.

  (*Weak recommendation; moderate quality evidence*)

- We recommend not screening adults aged 75 years and over for CRC.

  (*Weak recommendation; low quality evidence*)

- We recommend not using colonoscopy as a screening test for CRC.

  (*Weak recommendation; low quality evidence*)

LINK to task Force Recommend-ations

Screening for Disease

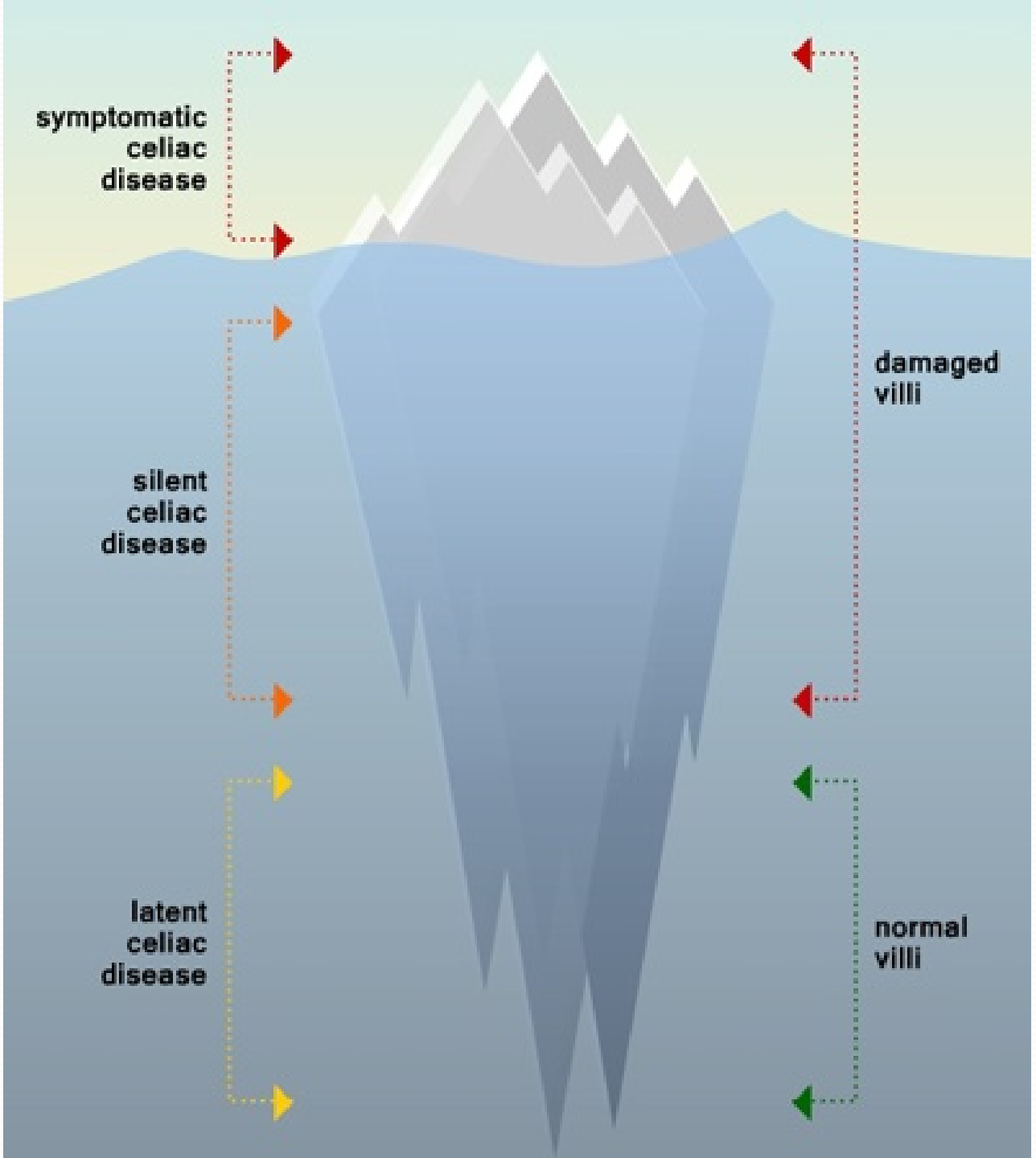
- **Screening** is defined as the identification of unrecognized disease via quick tests, examinations, or other procedures.
- Screening **DOES NOT** establish a diagnosis.
- Instead, screening **identifies those who need further diagnostic testing**, which is often more invasive, expensive, and has more potential to cause harm (e.g. CT scan)

Example - Celiac Disease

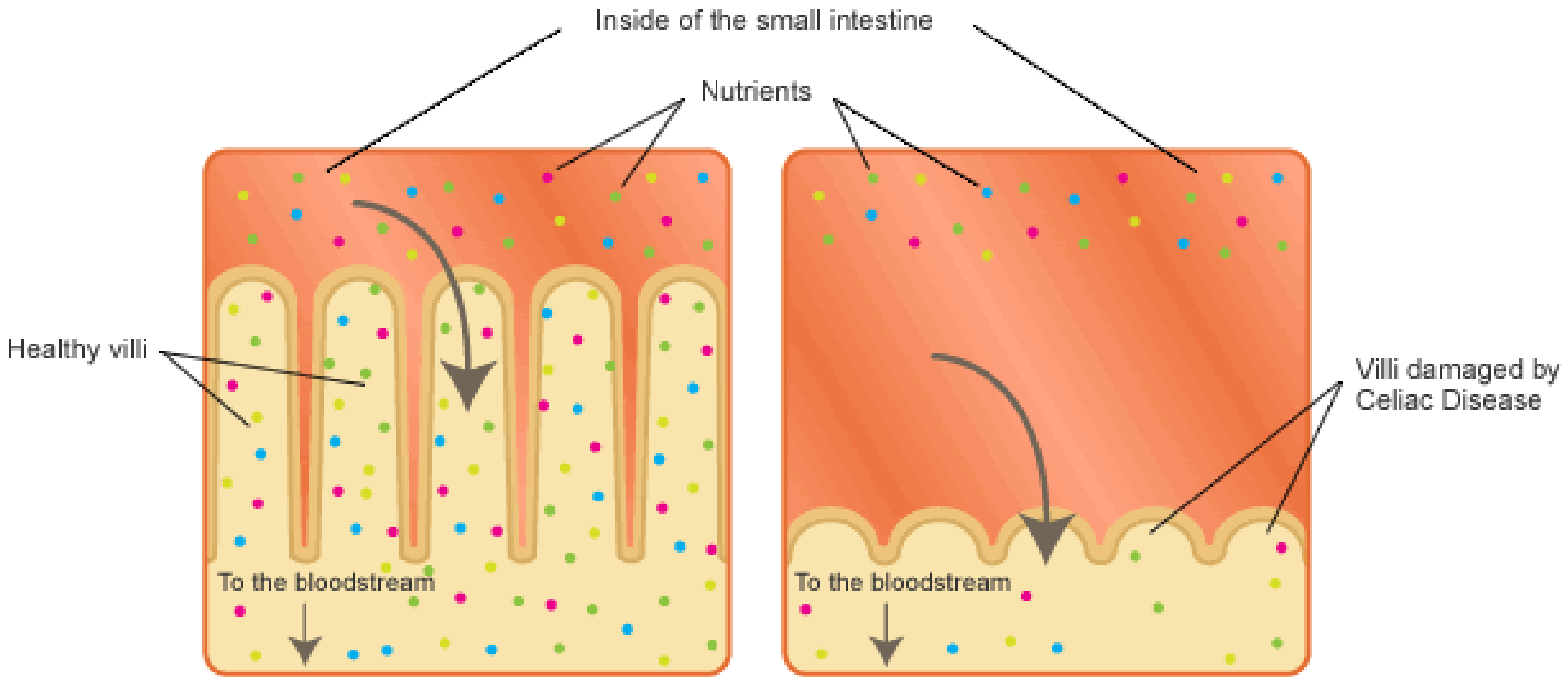
Health Canada, 2013

- One of the most common chronic diseases in the world – Epi studies indicate the prevalence of CD is 1:100 in many populations.
- As the disease progresses, many systems of the body are affected - reproductive, gastrointestinal and nervous systems. The blood, bones, teeth & skin can also be affected.
- Delays in diagnosis and not following a strict gluten-free diet = chronic poor health, anemia, a higher risk of infertility in both sexes, miscarriages, osteoporosis, & gastrointestinal cancer.
- In Canada, most cases diagnosed **12 yrs after** the disease develops.

The Celiac Iceberg



Celiac Disease Gold-Standard Test : Intestinal biopsy

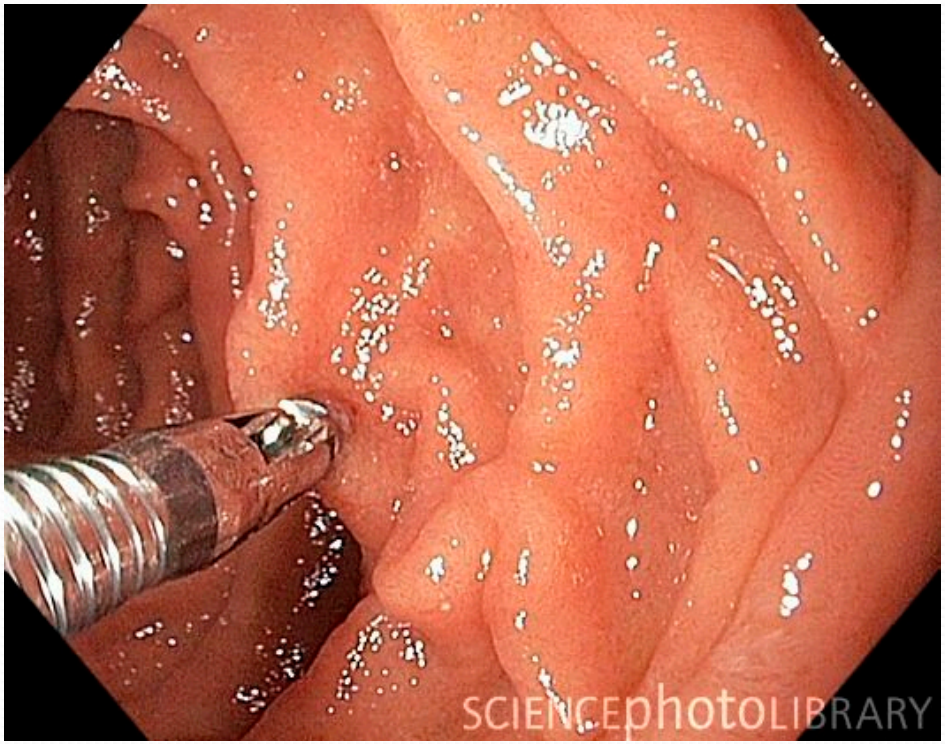


A. In a healthy person, nutrients get absorbed by villi in the small intestine and go into the bloodsteam.

B. In a person with Celiac Disease, the villi have been damaged by inflammation, so fewer nutrients pass into the bloodstream.

Screening for Celiac Disease

- Celiac disease triggers the immune system to produce specific antibodies.
- Physicians can order blood tests to screen individuals for celiac disease.
- If antibody test (the screen) is positive – the physician may order a biopsy of the small intestine to formally diagnose the condition.



Screening for Celiac

- Blood tests to detect presence of gluten antibodies:
  - IgA anti-transglutaminase antibody test (**tTG**)
  - IgA anti-endomysial antibody test (**EMA**).
  - immunoglobulin A (**IgA**)

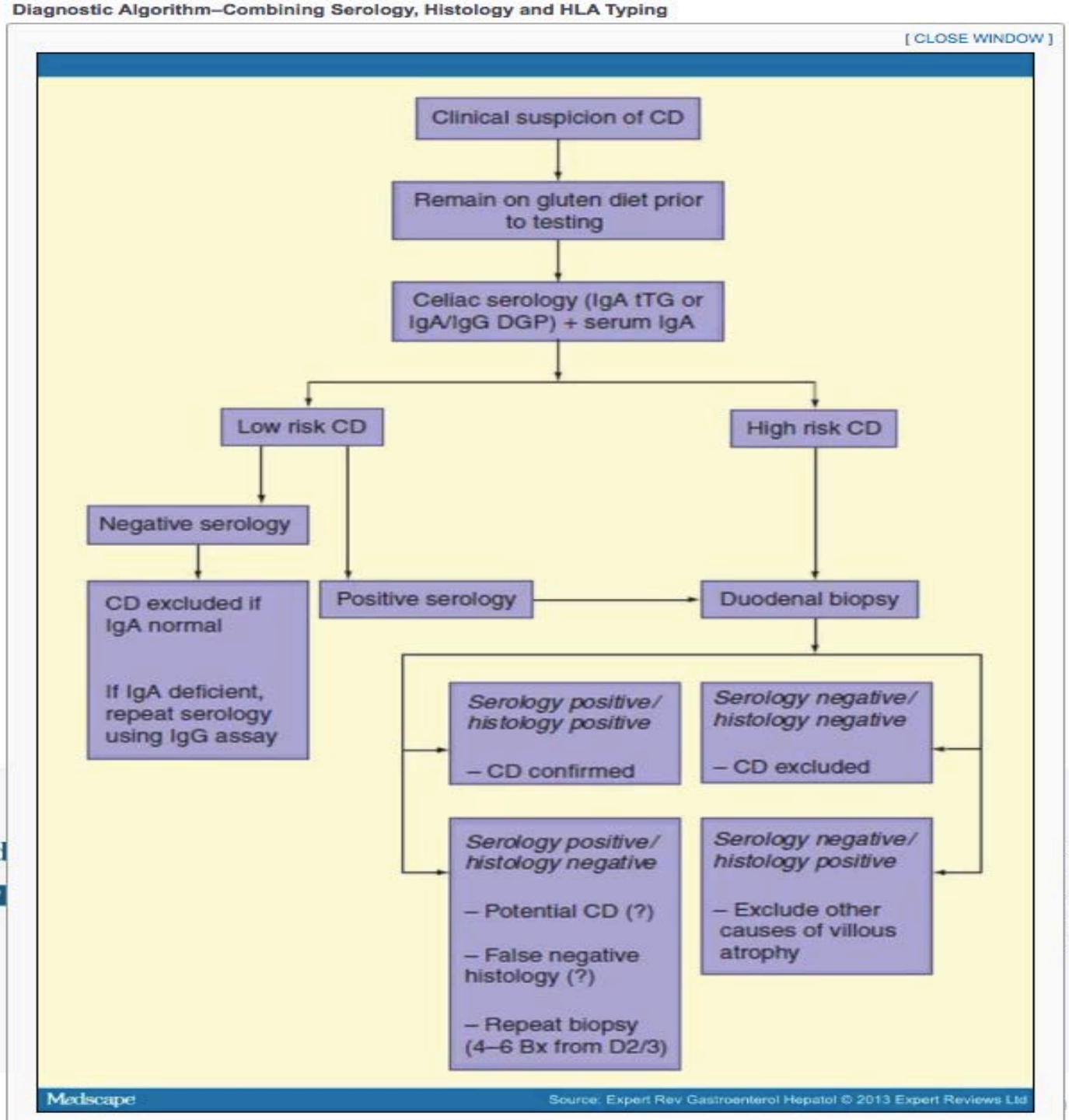
Health Canada, 2013

Diagnosis of Celiac Disease

Celiac disease is diagnosed through a combination of:

- Blood tests for antibodies (**screen**)
- Small-bowel biopsy (**gold-standard test**)
- Recovery from the symptoms while following a gluten-free diet

Testing for the disease should take place before an individual starts a gluten-free diet.

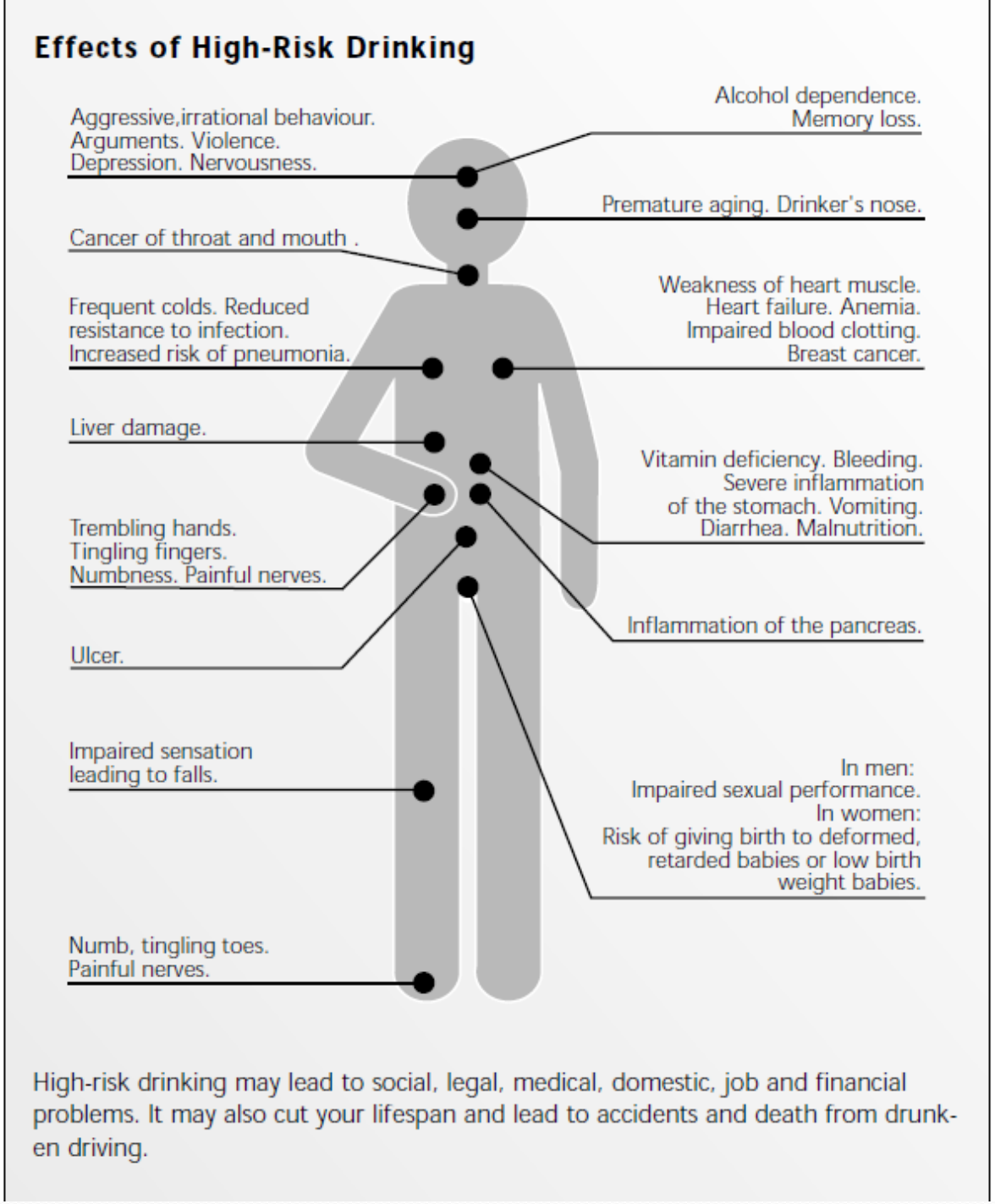


Diagnostic Algorithm for suspected celiac disease
(Expert Review of Gastroenterology and Hepatology, 2013)

Standard Treatment

After 6 -12 months of maintaining a strict gluten-free diet, symptoms should disappear, blood tests become negative, and small bowel injury should heal.

What are some of the (negative) effects of High-Risk Drinking?



Alcohol screen and scoring instructions

Box 10

The Alcohol Use Disorders Identification Test: Self-Report Version

PATIENT: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest.
Place an X in one box that best describes your answer to each question.

Questions	0	1	2	3	4	
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week	
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
9. Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year	
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year	
					Total	

AUDIT Total score	*Dependence score*	*Risk level*	*Possible Interventions*
0 - 7	below 4	**Low-risk**	• Use 'Right Mix' materials to reinforce low-risk drinking, particularly for those who previously had alcohol problems or whose circumstances may change. • Harm reduction advice may be appropriate for those in susceptible groups (see 'Consumption Score' above).
8 - 15	below 4	**Risky** or **hazardous level.** Moderate risk of harm. May include some clients currently experiencing harm (especially those who have minimised their reported intake and problems).	• Brief Intervention - feedback of AUDIT and harm reduction advice may be sufficient Ideally also: - setting goals and limits - a motivational interview - self-monitoring of drinking - use of "The Right Mix" self-help guide
	4 or more	Assess for dependency	• Counselling may be required.
16 - 19	below 4	**High-risk** or **harmful level.** Drinking that will eventually result in harm, if not already doing so. May be dependent.	• Brief Intervention (all components) is a minimum requirement. • Assessment for more intensive intervention. • Counselling using CBT principles and motivational interviewing in individual sessions and/or in groups. • Follow-up and referral where necessary.
	4 or more	Assess for dependence	
20 or more	below 4	**High-risk** Definite harm, also likely to be alcohol dependent. Assess for dependence.	• Further assessement preferably including family and significant others. • More intensive counselling and/or group program. • Consider referral to medical or specialist services for withdrawal management.
	4 or more	**Almost certainly dependent.** Assess for dependency.	• Pharmacotherapy to manage cravings. • Relapse prevention, longer-term follow-up and support.

This all sounds rather clinical.

How are epidemiologists involved in disease screening?

There are 2 ways:

1. Evaluation of screening tests
2. Evaluation of screening programs

2. Evaluation of Screening Tests

Screening with Dichotomous & Continuous Variables

Dichotomous

- e.g. infections disease with known agent, presence of antibodies, presence of malignancy, mortality

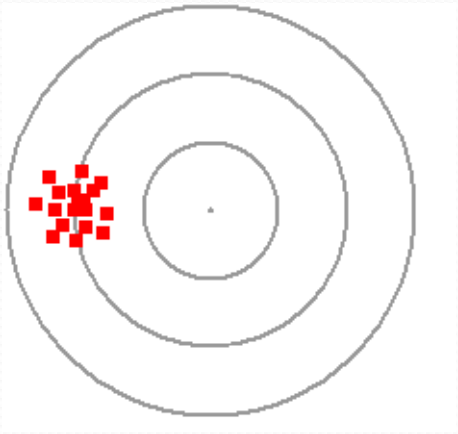
Continuous

- e.g. weight, alcoholism, blood pressure, blood glucose, anemia, disability, etc.

Evaluation of Screening Tests

- **Validity (accuracy)**
  - How well the screen measures what it was designed to measure (i.e. its ability to distinguish between those who have the disease and those who do not).
  - Degree of closeness to the true value (the bullseye)

- **Reliability (precision)**
  - Screen produces same results on repeated occasions.
  - Result is reproducible



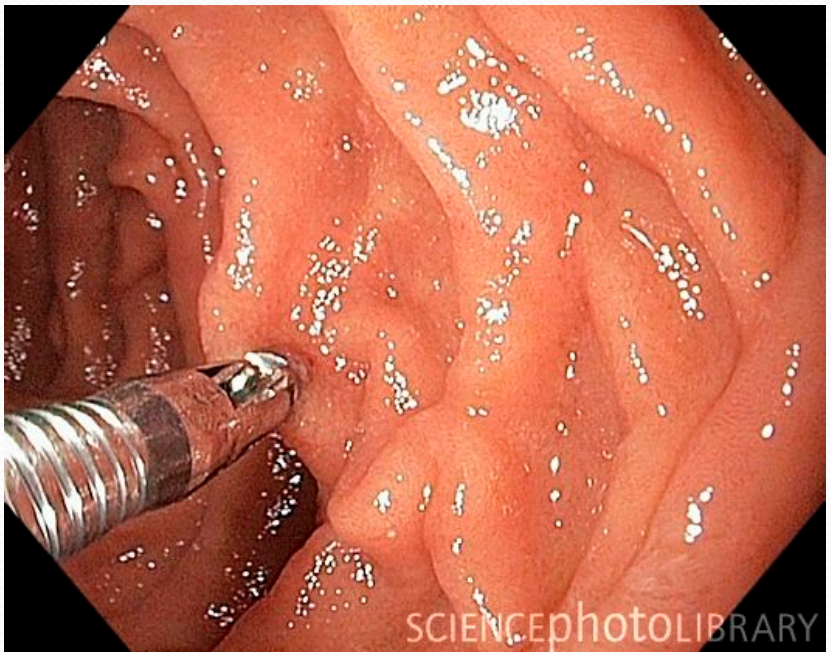
Validity (accuracy)

- We will focus on determining the **accuracy of screens**.
- To determine the accuracy of a screen, epidemiologists must have **a gold-standard (a "truth")** to compare it to – a diagnostic test that would confirm someone has the disease.
- Example: Celiac Disease
  - Celiac – blood test screen for antibodies
  - Gold standard diagnostic test - biopsy of the small intestine to determine if there is damage to villi

Celiac Disease: Gold Standard Test

Biopsy of small intestine

Tells us definitively if someone has or does not gave celiac.



Determining the Validity of a Screen

1. Sensitivity - the ability of the test to **identify correctly** all screened individuals **who actually have the disease**.

$$\frac{\text{All correctly identified positive by screen}}{\text{All who actually have disease}} \times 100$$

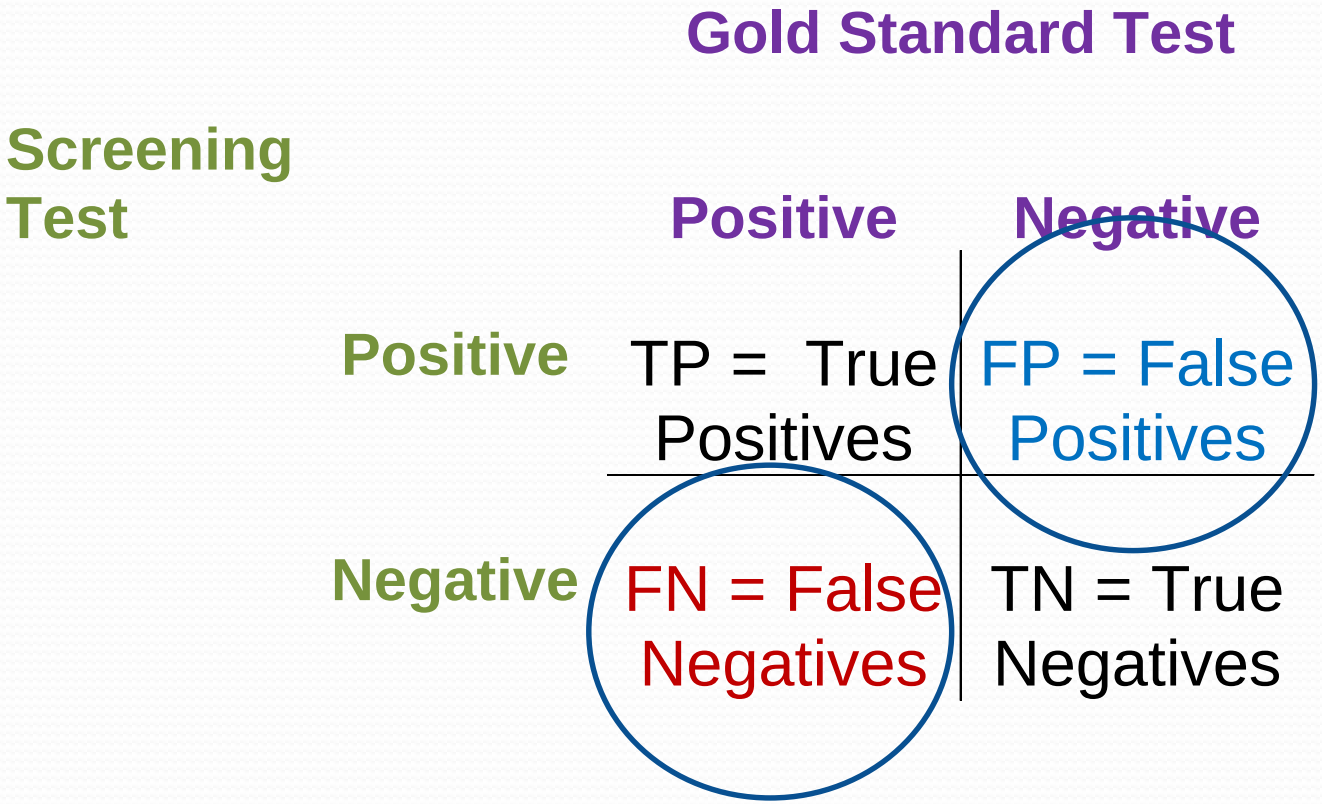
2. Specificity - the ability of the test to **correctly identify** all screened individuals **who are truly non-diseased**.

$$\frac{\text{All correctly identified as disease-free by screen}}{\text{All who actually are disease-free}} \times 100$$

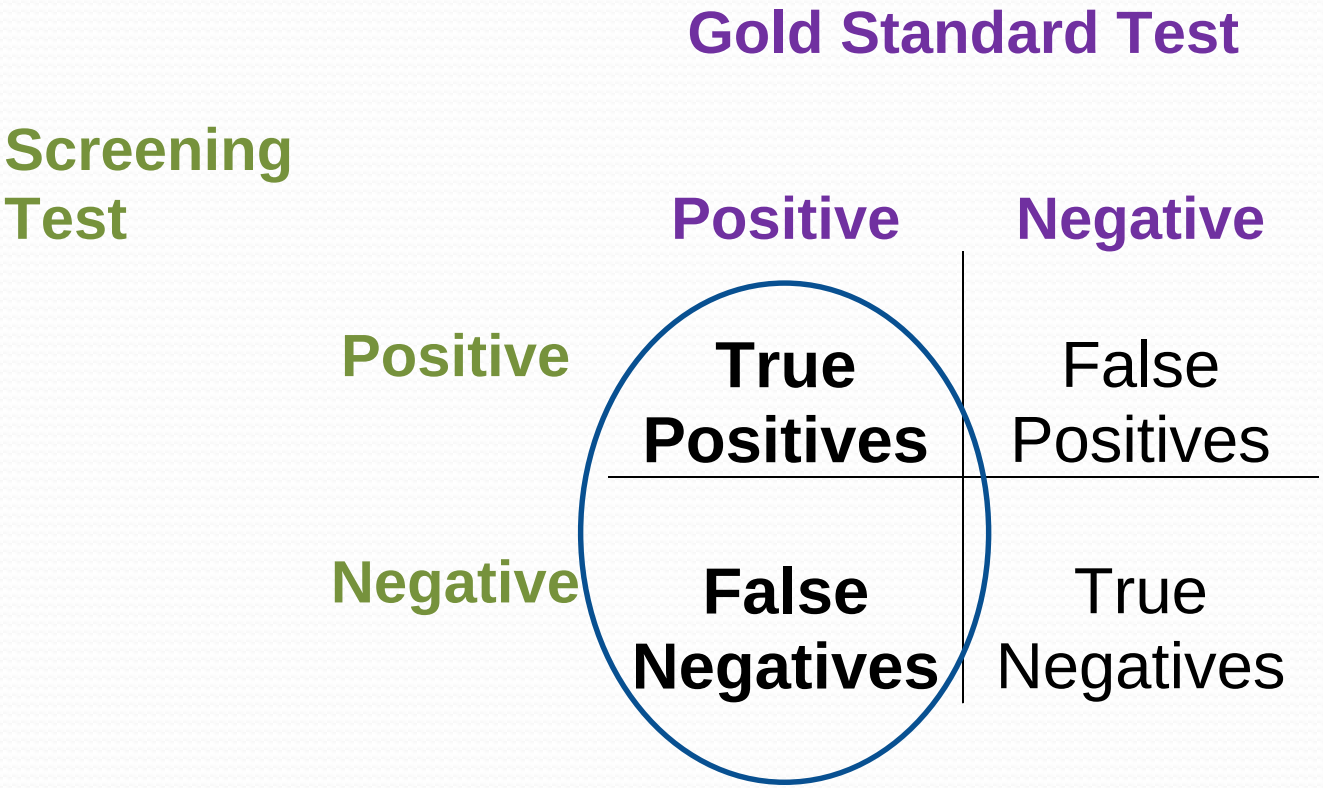
2 x 2 Table

Screening Test	Gold Standard Test: Positive	Gold Standard Test: Negative
Positive	TP = **True Positives**	
Negative		TN = **True Negatives**

2 x 2 Table


Gold Standard Test
Screening Test
Positive
Negative
Positive
Negative
TP = True Positives
FP = False Positives
FN = False Negatives
TN = True Negatives

Sensitivity



Sensitivity of Screen = **TP / TP + FN**

Specificity

Screening Test	Gold Standard Test: Positive	Gold Standard Test: Negative
Positive	True Positives	**False Positives**
Negative	False Negatives	**True Negatives**

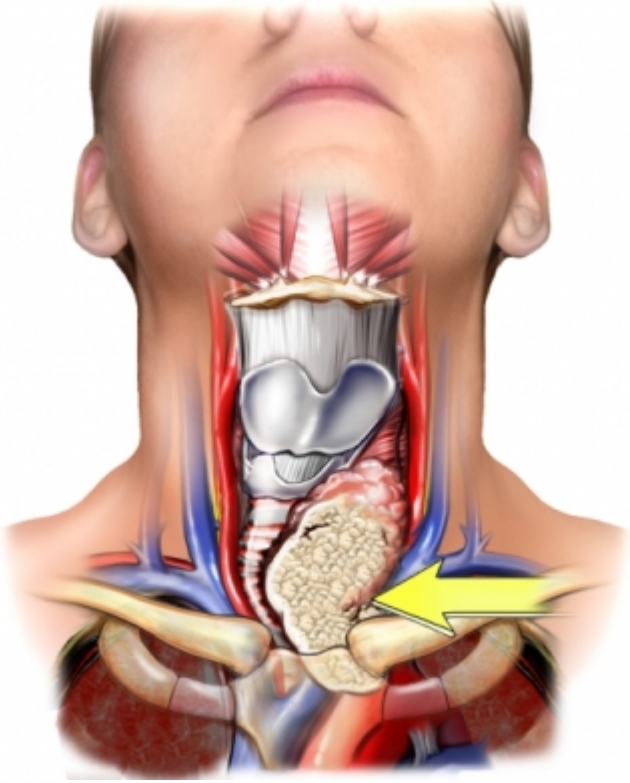
Specificity of Screen = **TN / FP + TN**

Example – Thyroid Cancer

- The **gold-standard (biopsy)**, and a **screen for thyroid cancer (ultrasound)** were both given to 1000 adults.

- Results show 152 out of **160** cases of thyroid cancer were correctly identified by the screen.

- Of the **840** adults without thyroid cancer 714 were correctly identified by the screen.



Thyroid Cancer

Screening Test	Gold Standard Test: Positive	Gold Standard Test: Negative
Positive	TP = ___	FP = ___
Negative	FN = ___	TN = ___
	160 have disease	**840** are disease free

Example

Screening Test	Gold Standard Test: Positive	Gold Standard Test: Negative
Positive	TP = **152**	FP = **126**
Negative	FN = **8**	TN = **714**
	160 have disease	**840** are disease free

Sensitivity = **TP / TP + FN**

= 152 / 160

Specificity = **TN / FP + TN**

= 714 / 840

Interpretation: Example 1

Sensitivity

- 152 / 160 = 0.95 x 100 = 95%
- Ultrasound screening correctly identifies 95% of adults who have thyroid cancer.
- *Or you can state*: Ultrasound screening misses 5% of adults who have thyroid cancer.

Specificity

- 714/840 = 0.85 x 100 = 85%
- Ultrasound screening incorrectly indentifies 15% of healthy adults as having thyroid cancer.

Example 2

- A screen for ADHD (in-school questionnaire) and the gold-standard (psychiatric interview) were given to 500 children.
- Results show 45 out of **50** cases of ADHD were correctly identified by the screen.
- Of the **450** children without ADHD 420 were correctly identified by the screen.
- Calculate and interpret the sensitivity and specificity of the in-school questionnaire as a screen for ADHD.

Example 2

Screening Test	Gold Standard Test: Positive	Gold Standard Test: Negative
Positive	TP = ___	FP = ___
Negative	FN = ___	TN = ___
	_____	_____
	# have disease	# disease free

Interpretation

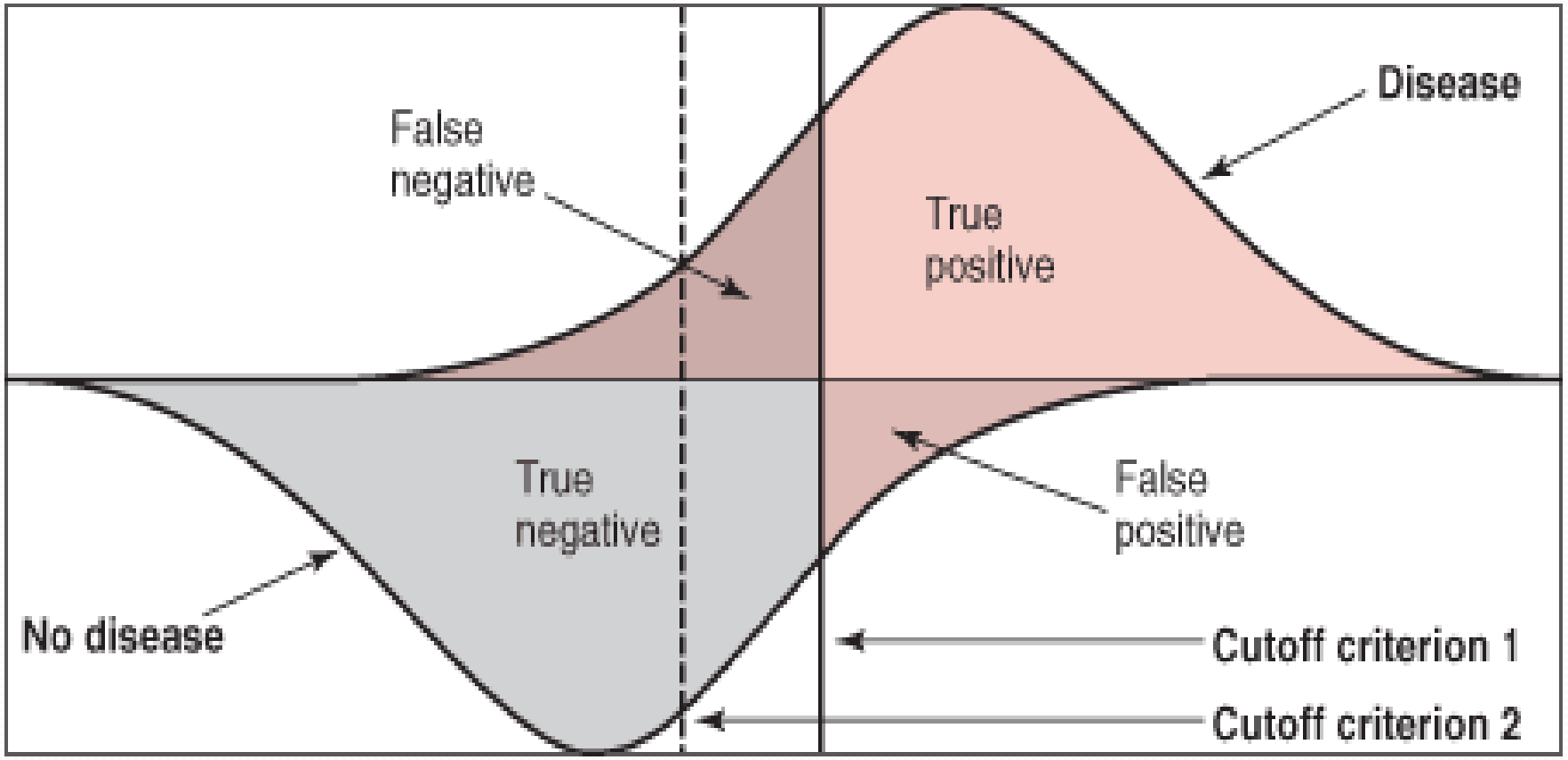
Sensitivity

Specificity

The effect of Cut-Points on Sensitivity and Specificity:

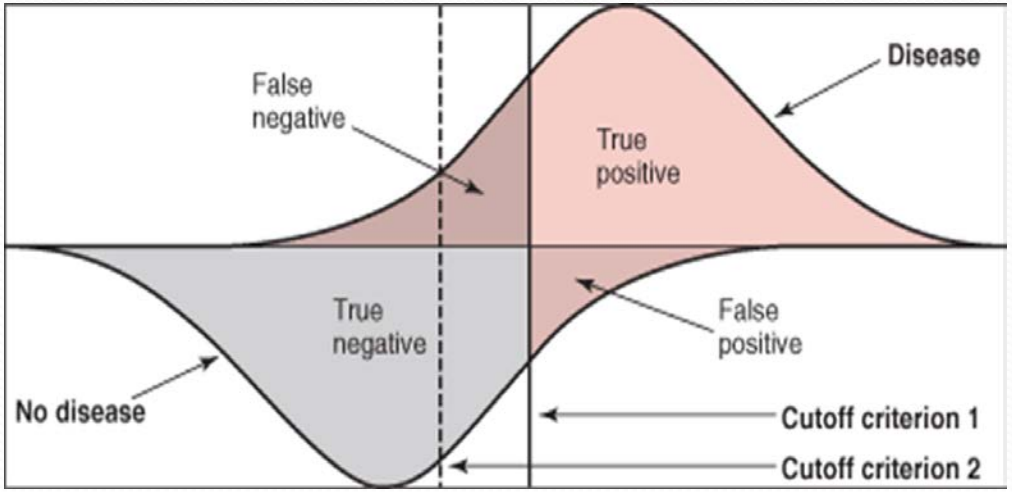
- Ideally, we'd like all of the results to be perfectly accurate (i.e. The "unicorn" – All True Positives or True Negatives)
- This is rarely the case…rather people are incorrectly labelled (i.e. False Positives, False Negatives)
- Disease often screened with **continuous variables** (e.g. blood sugar levels, blood pressure)
  - **Cut-off levels (i.e. cut points)**, therefore, must be determined to identify when a test result is considered positive and when it is considered negative. Cut-off points affect both sensitivity and specificity
- Example Link (slides 20-30)

Relationship Between Sensitivity and Specificity – cut points



Where to draw the cut point?

Examples:



If diagnostic test is expensive, may want to minimize false positives (use a cut point with a high specificity)

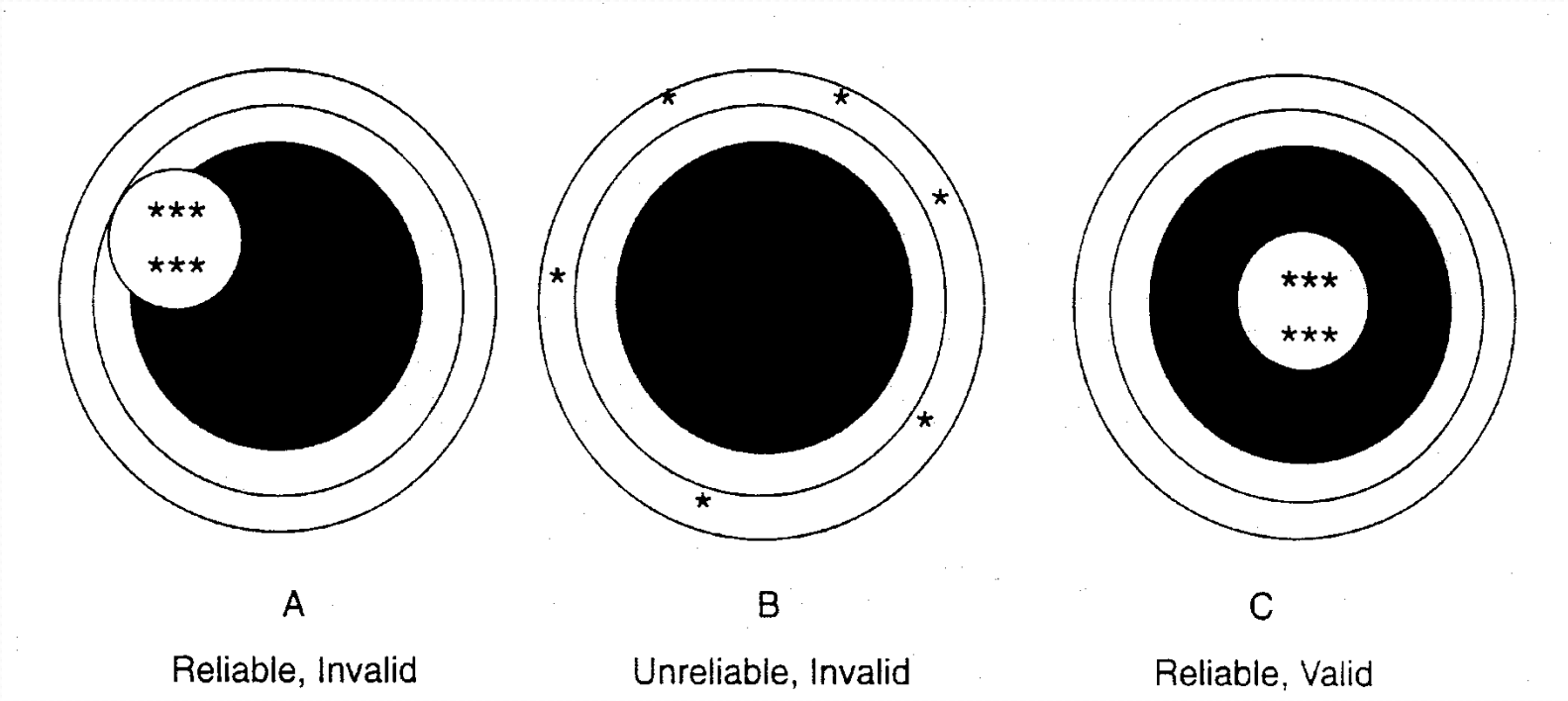
If consequence of missing a case is high, may want to minimize the false negatives (use a cut point with a high sensitivity)

Procedures to Improve Sensitivity and Specificity

- Retrain screeners
- Recalibrate screening instrument
- Use a different screen
- Use more than one screening test (staged or simultaneous testing)

Reliability and Accuracy

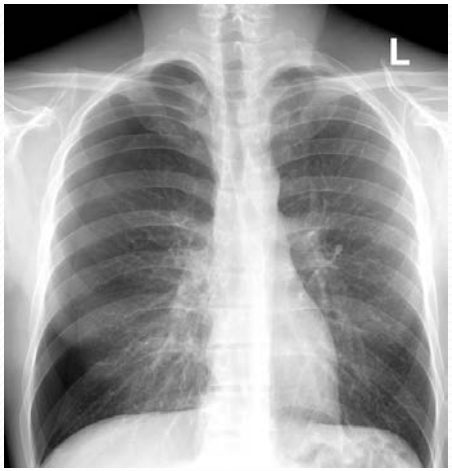
- It **is *not* possible** for a screen to be unreliable but accurate.
- It **is possible** for a screen to be reliable but inaccurate.



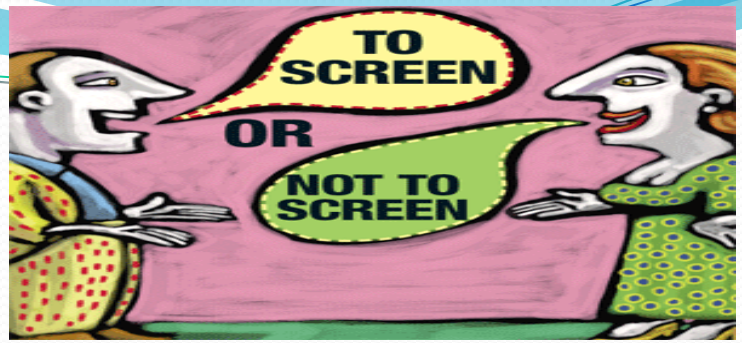
Reliability (repeatability) of a screen is affected by:

- Variability in subject (consider the conditions under which the test was performed. E.g. Blood pressure, blood sugar levels)

- Observer variability (subjective factors of the person reading the test, or of different observers reading the same test)



3. Evaluation of Screening Programs



- Can the disease be detected early?
- What is the sensitivity and specificity of the test?
- What is the positive predictive value? (next class)
- How serious is the problem of a false positive?
- What is the cost of early detection in terms of funds, resources, and emotional impact?
- Are the subjects harmed in screening?
- Is there benefit from early detection?
- What is the screening acceptable to the public?

Epi Study Designs used to Evaluate Screening Programs

1. **Clinical Trials**
   - Subjects receive either the new screening test or usual care, then followed to clinical end points.
2. **Ecologic studies**
   - Compare geographic regions with screening programs to those without.
3. **Case-control studies**
   - Cases - fatal cases of the disease
   - Controls - nonfatal cases
   - Exposure - screening program

4. When Should Screens be Introduced to Populations?

To Screen or Not to Screen…

To Screen or Not to Screen

1. Social considerations

- The health problem should be **important** for the population
- Diagnostic follow-up and intervention should be available
- There should be a **favorable cost-benefit ratio**
- **Public acceptance** for screen must be high

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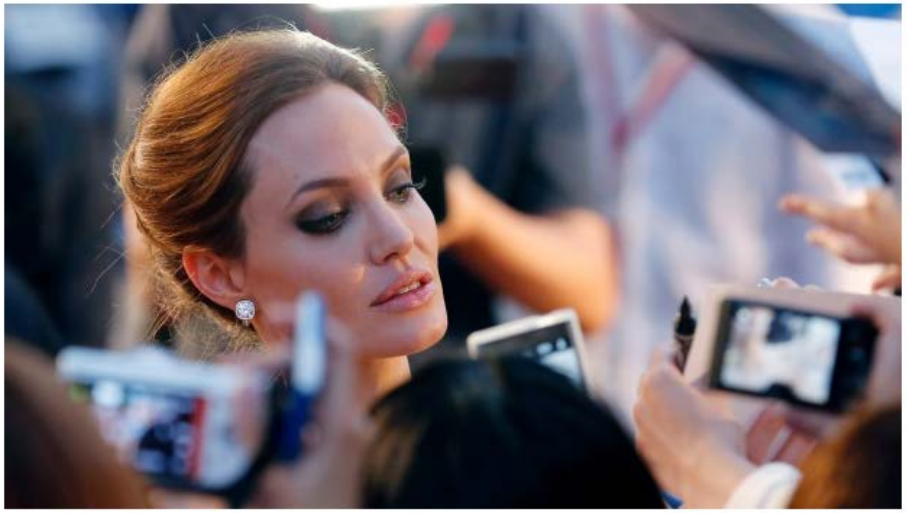
'Angelina Jolie effect' on breast cancer screening endures

Jolie's glamorous image and relationship to Brad Pitt may have boosted impact, researchers say

CBC News Posted: Sep 18, 2014 8:00 PM ET | Last Updated: Sep 18, 2014 8:00 PM ET



Angelina Jolie signs autographs for fans at the premiere of Maleficent in Tokyo in June. Her preventative double mastectomy fuelled publicity about hereditary breast and ovarian cancer. (Shizuo Kambayashi/Associated Press)

107 shares

Facebook

Twitter

The "Angelina Jolie effect" on referrals for genetic counselling for breast cancer risks was immediate and long-lasting, a new U.K. study suggests.

The Hollywood celebrity announced her decision to be tested for the cancer-linked BRCA1 gene and subsequent double mastectomy, to reduce her risk of breast and ovarian cancer because of her family history, in May 2013. The announcement fuelled publicity about breast

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[LINK](#) to article

To Screen or Not to Screen

2. Scientific evidence

- Natural history of the condition must be scientifically understood.
  - Individuals are pre-symptomatic – so we must know the early markers that suggest they may have the disease.
  - Need to be sure that earlier detection will improve outcomes
  - Are there critical points in the natural history of disease
- We must know that the **prevalence** of the disease is **high**
  - There is a need for action via secondary prevention.
  - Needs to be important to the public

To Screen or Not to Screen

3. Ethical Considerations

- Can the program **alter the natural history** of the condition in a significant proportion of those screened?
- Are there **acceptable tests** for screening and diagnosis of the condition?
- Can the tests be made available to all who need it (is it equitable)?
- Don't forget about the four moral principles (Beneficence, Non-Maleficence, Respect for Autonomy, Justice)

Screening for breast cancer with mammography

Published:
4 June 2013

Authors:
Gøtzsche PC, Jørgensen K

Primary Review Group:
Breast Cancer Group

Screening with mammography uses X-ray imaging to find breast cancer before a lump can be felt. The goal is to treat cancer earlier, when a cure is more likely. The review includes seven trials that involved 600,000 women in the age range 39 to 74 years who were randomly assigned to receive screening mammograms or not. The studies which provided the most reliable information showed that screening did not reduce breast cancer mortality. Studies that were potentially more biased (less carefully done) found that screening reduced breast cancer mortality. However, screening will result in some women getting a cancer diagnosis even though their cancer would not have led to death or sickness. Currently, it is not possible to tell which women these are, and they are therefore likely to have breasts or lumps removed and to receive radiotherapy unnecessarily. If we assume that screening reduces breast cancer mortality by 15% after 13 years of follow-up and that overdiagnosis and overtreatment is at 30%, it means that for every 2000 women invited for screening throughout 10 years, one will avoid dying of breast cancer and 10 healthy women, who would not have been diagnosed if there had not been screening, will be treated unnecessarily. Furthermore, more than 200 women will experience important psychological distress including anxiety and uncertainty for years because of false positive findings.

Women invited to screening should be fully informed of both the benefits and harms. To help ensure that the requirements for informed choice for women contemplating whether or not to attend a screening programme can be met, we have written an evidence-based leaflet for lay people that is available in several languages on www.cochrane.dk. Because of substantial advances in treatment and greater breast cancer awareness since the trials were carried out, it is likely that the

Cochrane Review - How can it help you?

For 20 years, Cochrane has produced systematic reviews of primary research in human health care and health policy, and are internationally recognized as the highest standard in evidence-based health care resources. **Read more...**

LINK to paper

CTFPHC Guidelines

Overview
Obesity in Adults
Prostate Cancer
Depression
Cervical Cancer
Hypertension
Type 2 Diabetes
Breast Cancer

UPCOMING GUIDELINES

Cognitive Impairment
Obesity in Children
Colorectal Cancer
Lung Cancer
Developmental Delay

ADDITIONAL PUBLICATIONS

The Red Brick
Other guidelines (1979–2006)
Other documents (1979–2006)

Screening for Breast Cancer (2011)

View original publication

SUMMARY OF RECOMMENDATIONS FOR CLINICIANS AND POLICY-MAKERS

Recommendations are presented for the use of mammography, magnetic resonance imaging, breast self exam and clinical breast exam to screen for breast cancer. These recommendations apply only to women at average risk of breast cancer aged 40 to 74 years. They do not apply to women at higher risk due to personal history of breast cancer, history of breast cancer in first degree relative, known BRCA1/BRCA2 mutation, or prior chest wall radiation. No recommendations are made for women aged 75 and older, given the lack of data.

The CTFPHC will continue to carefully monitor the scientific development in breast cancer screening and report back to Canadians within 5 years with an update of the 2011 Breast Cancer Screening guideline.

RECOMMENDATIONS (MAMMOGRAPHY)

- For women aged 40–49 we recommend not routinely screening with mammography.

  (*Weak recommendation; moderate quality evidence*)

- For women aged 50–69 years we recommend routinely screening with mammography every 2 to 3 years.

  (*Weak recommendation; moderate quality evidence*)

- For women aged 70–74 we recommend routinely screening with mammography every 2 to 3 years.

  (*Weak recommendation; low quality evidence*)

News Release Embargoed until Monday, November 21, 2011, noon ET

Please credit CMAJ*, not the Canadian Medical Association.* CMAJ *is an independent medical journal; views expressed here do not necessarily reflect those of its owner, the CMA.*

CMAJ headlines:

- New Canadian breast cancer screening guidelines released
- More than one-quarter of Canadians projected to have hypertension in 2012/13
- Families report adverse events in hospitalized children not tracked by health care providers

New breast cancer screening guidelines released
Canadian Task Force on Preventive Health Care issues updated guidelines

New breast cancer screening guidelines for women at average risk of breast cancer, published in *CMAJ(Canadian Medical Association Journal)*, recommend no routine mammography screening for women aged 40-49 and extend the screening interval from every 2 years, which is current clinical practice, to every 2 to 3 years for women aged 50-74. The guidelines also recommend against routine clinical breast exam and breast self-examination in asymptomatic women.

The guidelines, aimed at physicians and policy-makers, provide recommendations for mammography, magnetic resonance imaging (MRI), breast self-exams and clinical breast exams by clinicians. They target average-risk women in three age groups (40-49, 50-69 and 70-74 years) who have not had breast cancer and do not have a family history of breast cancer in a mother, sister or daughter.

"As the Guideline on Breast Cancer Screening was last updated in 2001 and breast cancer screening has since become a subject for discussion amongst doctors and patients, the revitalized Canadian Task Force selected breast cancer screening as the topic for its first guideline," said Dr. Marcello Tonelli, Chair of the Task Force on Preventive Health Care and Associate Professor at the University of Alberta, Department of Medicine, in Edmonton, Alberta. "We intend that this Guideline, which reflects the latest scientific evidence in breast cancer screening, be used to guide physicians and their patients regarding the optimum use of mammograms and breast examination."

According to the guideline, outcomes of breast cancer screening such as tumour detection and mortality must be put into context of the harms and costs of false-positive tests, overdiagnosis and overtreatment. False-positive results can have a significant impact on the emotional well-being of patients and families. They can cause lifestyle disruptions and result in costs to both patients and the health care system.

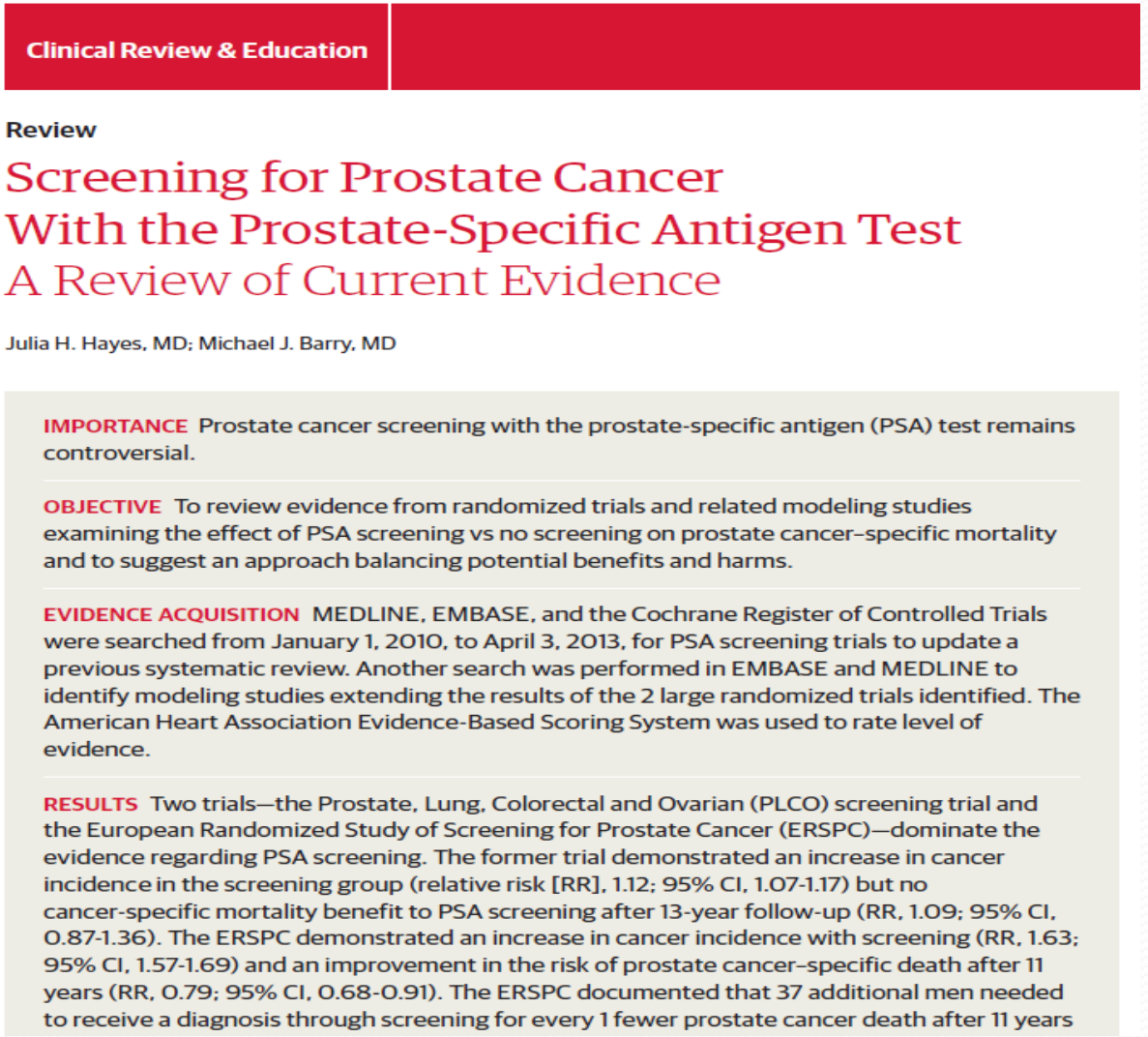
"Providing Canadians with guidelines that reflect the most current scientific evidence is our priority," said Dr. Tonelli. "We encourage every woman to discuss the risks and benefits of screening with their doctor before deciding on the best approach for them."

Key recommendations:

LINK to article

PSA Screening for Prostate Cancer?

- http://www.cancer.org/healthy/findcancerearly/cancerscreeningguidelines/chronological-history-of-acs-recommendations



Clinical Review & Education

Review

Screening for Prostate Cancer With the Prostate-Specific Antigen Test
A Review of Current Evidence

Julia H. Hayes, MD; Michael J. Barry, MD

IMPORTANCE Prostate cancer screening with the prostate-specific antigen (PSA) test remains controversial.

OBJECTIVE To review evidence from randomized trials and related modeling studies examining the effect of PSA screening vs no screening on prostate cancer–specific mortality and to suggest an approach balancing potential benefits and harms.

EVIDENCE ACQUISITION MEDLINE, EMBASE, and the Cochrane Register of Controlled Trials were searched from January 1, 2010, to April 3, 2013, for PSA screening trials to update a previous systematic review. Another search was performed in EMBASE and MEDLINE to identify modeling studies extending the results of the 2 large randomized trials identified. The American Heart Association Evidence-Based Scoring System was used to rate level of evidence.

RESULTS Two trials—the Prostate, Lung, Colorectal and Ovarian (PLCO) screening trial and the European Randomized Study of Screening for Prostate Cancer (ERSPC)—dominate the evidence regarding PSA screening. The former trial demonstrated an increase in cancer incidence in the screening group (relative risk [RR], 1.12; 95% CI, 1.07-1.17) but no cancer-specific mortality benefit to PSA screening after 13-year follow-up (RR, 1.09; 95% CI, 0.87-1.36). The ERSPC demonstrated an increase in cancer incidence with screening (RR, 1.63; 95% CI, 1.57-1.69) and an improvement in the risk of prostate cancer–specific death after 11 years (RR, 0.79; 95% CI, 0.68-0.91). The ERSPC documented that 37 additional men needed to receive a diagnosis through screening for every 1 fewer prostate cancer death after 11 years

CTFPHC Guidelines

Screening for Prostate Cancer (2014)

View original publication

SUMMARY OF RECOMMENDATIONS FOR CLINICIANS AND POLICY MAKERS

This clinical practice guideline applies to all men not previously diagnosed with prostate cancer. This includes men with lower urinary tract symptoms (nocturia, urgency, frequency and poor stream) or with benign prostatic hyperplasia (BPH). The CTFPHC will continue to carefully monitor the scientific development in prostate cancer screening and report back to Canadians within 5 years with an update of the 2014 Prostate Cancer Screening guideline.

RECOMMENDATIONS

- For men aged less than 55 years, we recommend not screening for prostate cancer with the prostate-specific antigen test.

  (*Strong recommendation; low quality evidence*)

- For men aged 55–69 years, we recommend not screening for prostate cancer with the prostate-specific antigen test.

  (*Weak recommendation; moderate quality evidence*)

- For men 70 years of age and older, we recommend not screening for prostate cancer with the prostate-specific antigen test.

  (*Strong recommendation; low quality evidence*)

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Treating the masses, overtreating the few

In the US, overly aggressive treatment is estimated to cause 30 000 deaths among Medicare recipients alone each year. Reporter Jeanne Lenzer has investigated the problem for the BMJ, and explains why she thinks profit driven healthcare is to blame.

And, experience of treating rare conditions can take time to build. Rej Bhumbra, a surgical trainee in orthopaedic oncology, explains how his time in India fast tracked his learning.

See also
Could a passage to India be the way to get more surgical experience?
BMJ video: The harms of overtreatment
Unnecessary care: are doctors in denial and is profit driven healthcare to blame?

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link

In order to determine sensitivity, you must have a gold-standard test available

A. True

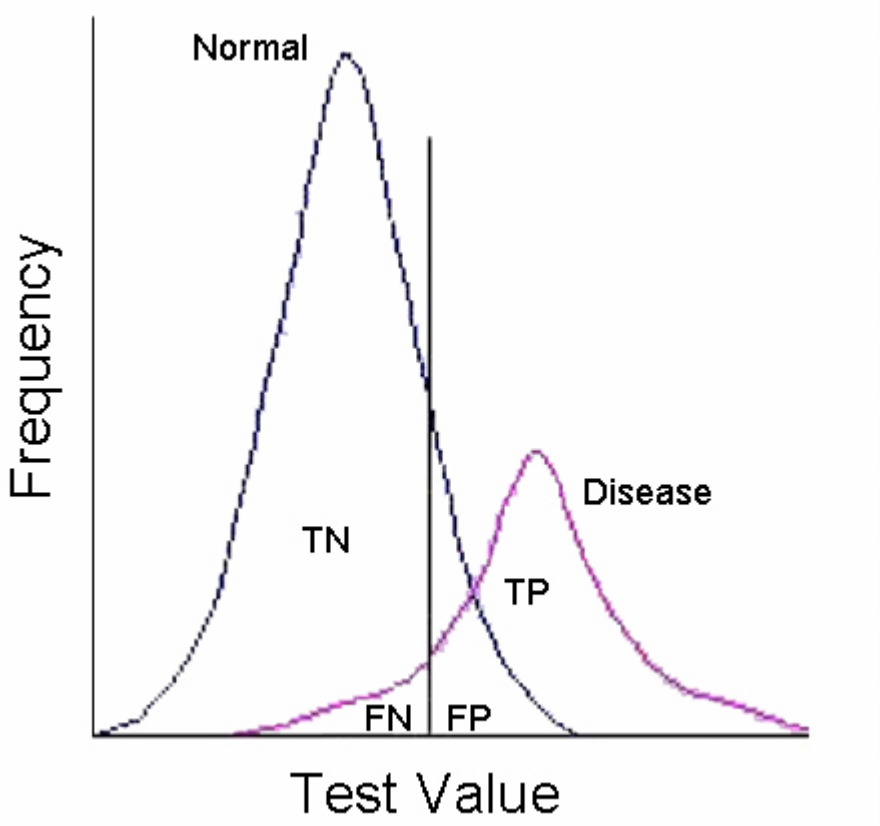
B. False

When determining cut point for a screening test wherein the disease has a high case fatality rate and effective treatment with early detection, you should ideally:

A. Move the cut point to the right

B. Move the cut point to the left

C. Leave the cut point where it is



iclicker.

A screening test with 95% specificity is performed on 623 people, 200 of which do not have the disease. This will result in:

A. 190 True Negatives

B. 190 True Positives

C. 591 True Negatives

D. 591 False Positives

Screening tests can be used to diagnose disease.

.

A. True

B. False

cbcradio

White Coat, Black Art

with Dr. Brian Goldman

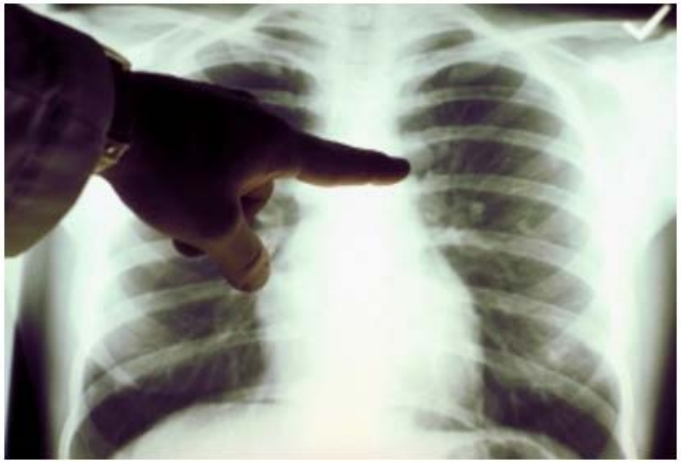
EPISODES BLOG ABOUT CONTACT

Time to screen smokers for lung cancer

By Dr. Brian Goldman

This year, more than 26 thousand Canadians will be diagnosed with lung cancer and close to 21 thousand will die of it. That's according to the **Canadian Cancer Society**. A controversial new set of screening guidelines **just published** in the Canadian Medical Association Journal say doctors should do more to save lives.

The guidelines say adults age 55 to 74 who are at high risk should be screened for lung cancer once a year for up to three years. By high risk, the guidelines mean men or women who are current heavy smokers or former heavy smokers who have



(Courtesy of the American Cancer Society via Getty Images)

LINK

Screening and the "Worried Well"

STOP!

Are YOU Healthy?

ARE YOU SURE??

Did you know that there is a malignant disease called Screeningitis?

DON'T PANIC

There is a screening test available …

… and it is accurate …

… MOST of the time …

… BUT the treatment is PAINFUL !! …

… AND HAS A LOW SUCCESS RATE !!!