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7th EMIRATES FAMILY MEDICINE SOCIETY CONGRESS 2024

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Do Men Go Through Menopause? and Other Men's Health Topics

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Learning Objectives

Learners will be able to

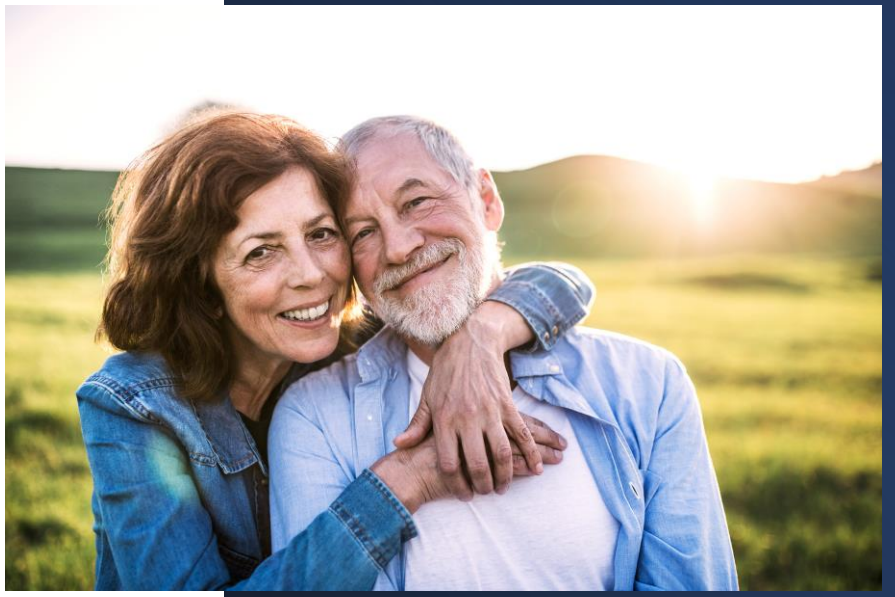
- Explore the changes in hormone production throughout life in men
- Understand physiological effects these changes have throughout life
- Discuss possible pharmacological interventions to treat these changes
- Highlight reel of other Men's health issues

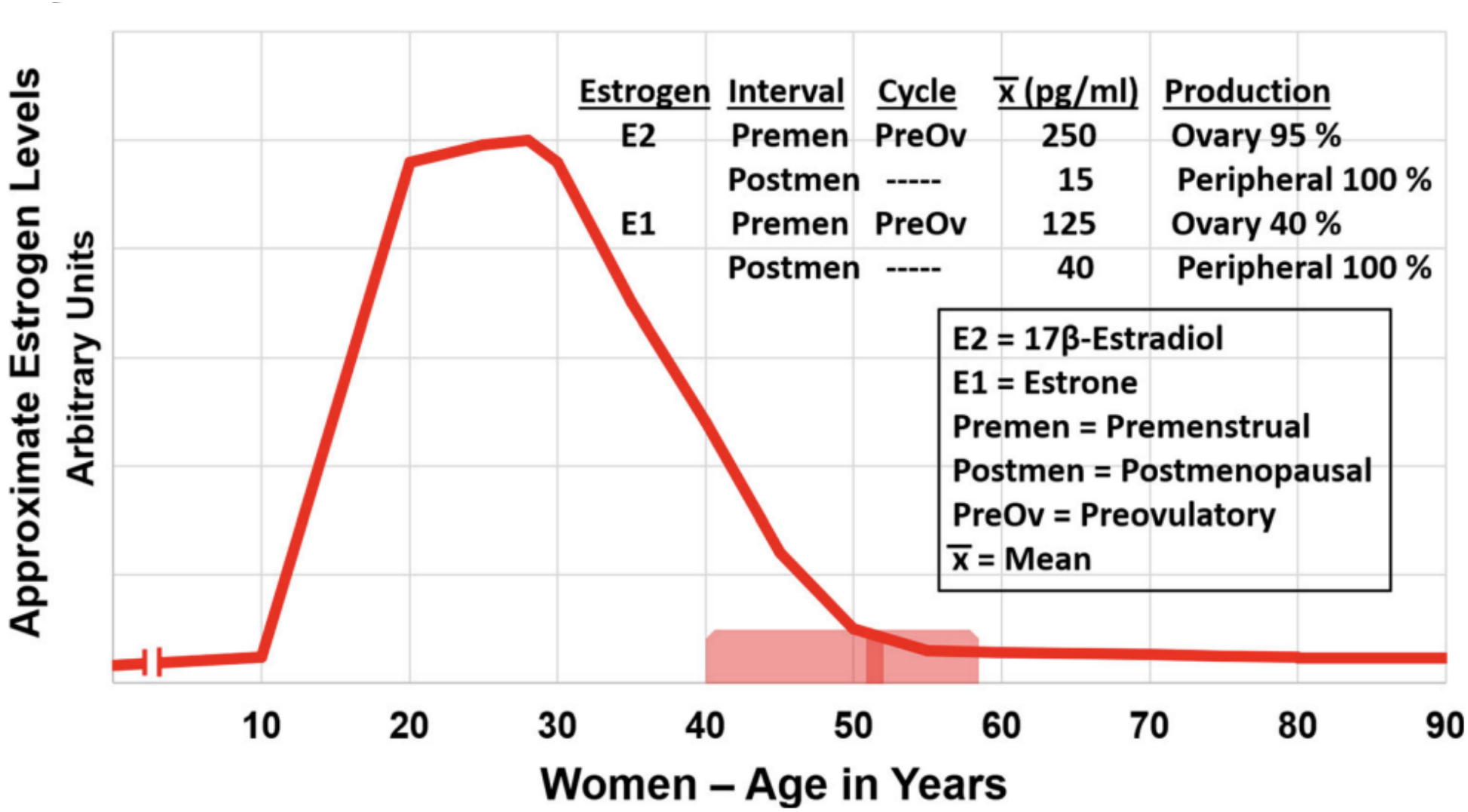
Case # 1 Omar

- 50-year-old male
  - Increased daytime sleepiness
  - Fatigue
  - Decreased libido
  - Occasional erectile dysfunction
- PMHx= HTN, BPH
- Meds- lisinopril, tamsulosin
- Social
  - Tobacco, ½-1 pack per day
  - No EtOH
  - Works in construction management
  - Sexually active with his wife
  - No exercise outside of work
- Has seen a commercial for Low T; wonders if this is the source of his problem. Wants to try a prescription for testosterone.

What Is Menopause?

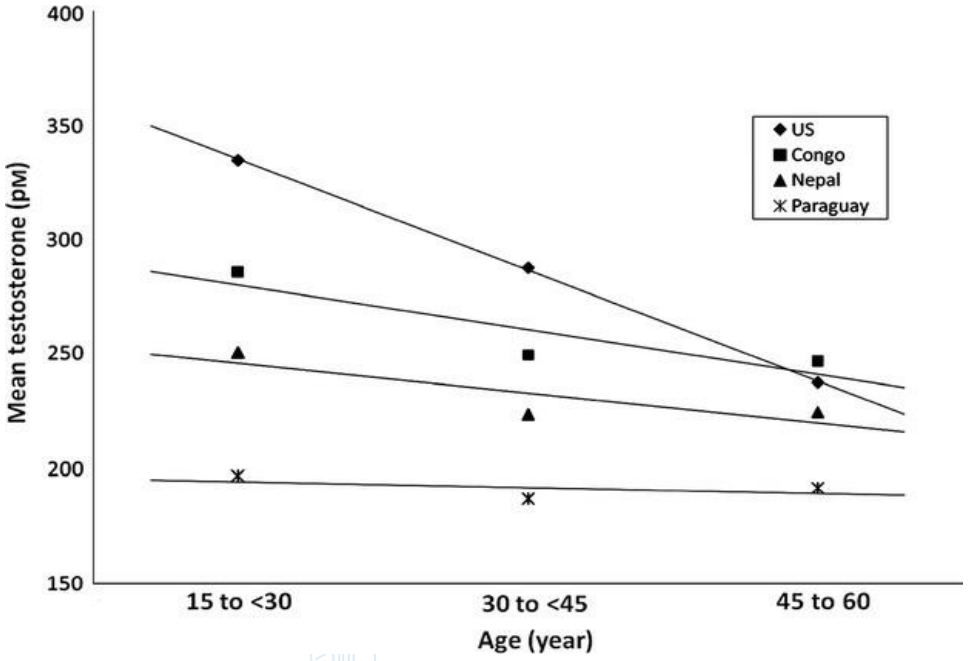
- Menopause is a natural biological process that marks the end of a woman's reproductive years.
- It is characterized by the cessation of menstrual periods and a decline in the production of estrogen and progesterone hormones.
- Men’s production of sperm continues throughout life, however the quality starts to decrease around 50




Approximate Estrogen Levels
Arbitrary Units
Estrogen Interval Cycle x̄ (pg/ml) Production
E2 Premen PreOv 250 Ovary 95 %
Postmen ----- 15 Peripheral 100 %
E1 Premen PreOv 125 Ovary 40 %
Postmen ----- 40 Peripheral 100 %
E2 = 17β-Estradiol
E1 = Estrone
Premen = Premenstrual
Postmen = Postmenopausal
PreOv = Preovulatory
x̄ = Mean
10 20 30 40 50 60 70 80 90
Women – Age in Years

Andropause

- Menopause = Clearly defined physiological event
- Andropause = Slow gradual decline in reproductive hormones
- Gradual decline in testosterone is a normal part of aging
- Testosterone contributes to maintaining muscle mass, bone density, and overall energy levels



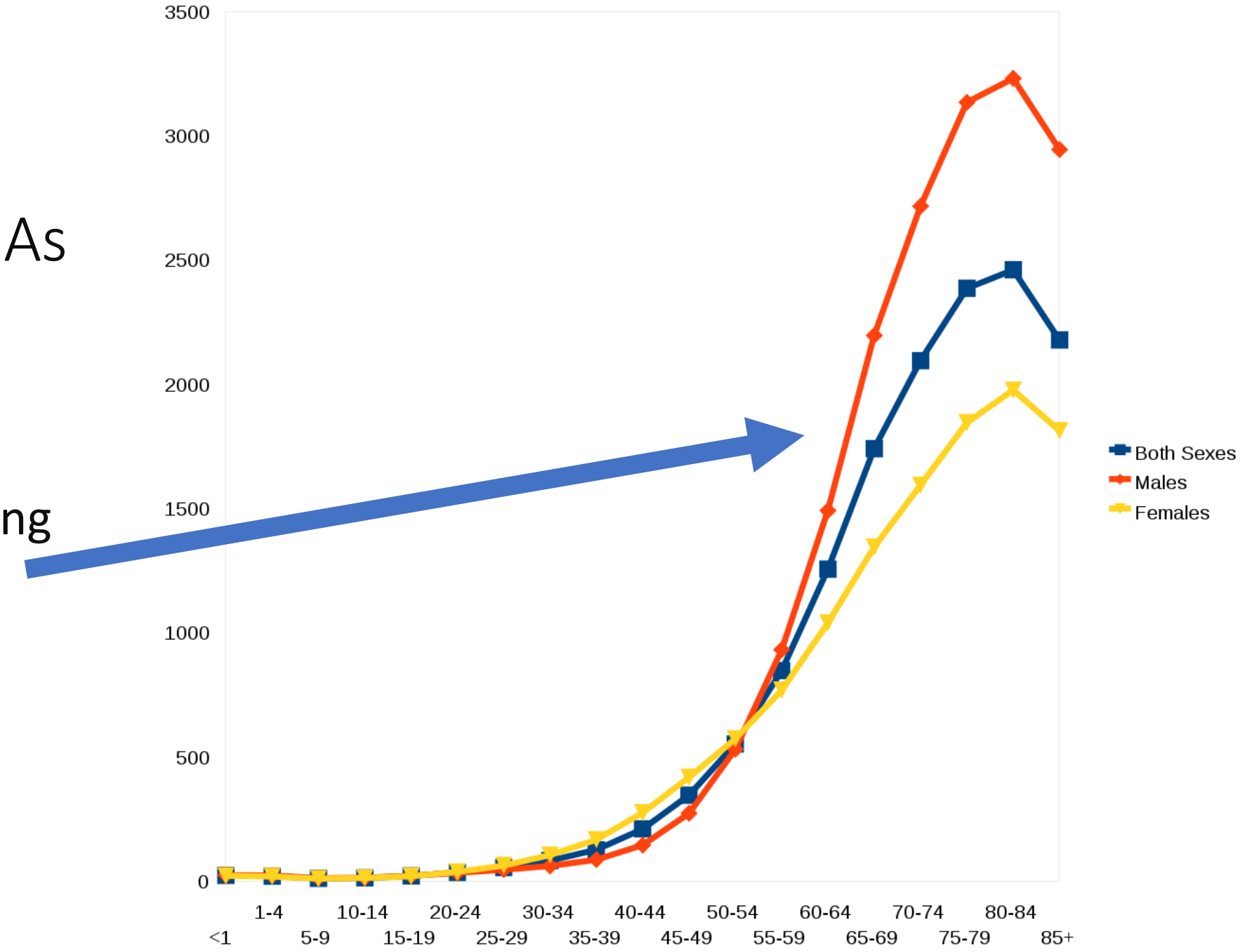
Could You Have Low T???

If you Answer YES to 3 of 1-7 or any of the last 3 = low T, or you're getting older.

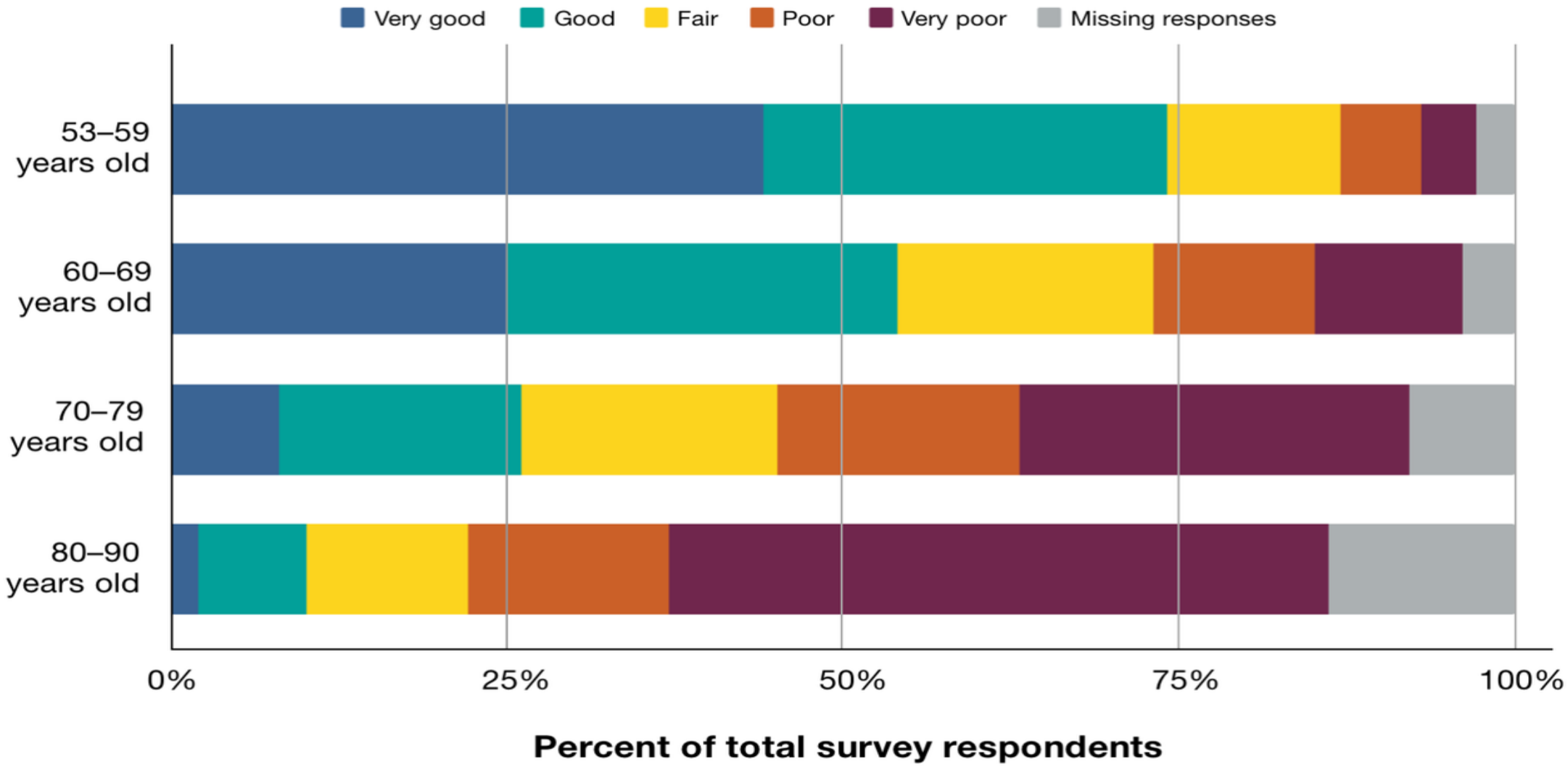
Question	Yes	No
1. Do you have a decrease in libido (sex drive)?		
2. Do you have a lack of energy?		
3. Do you have a decrease in strength and/or endurance?		
4. Have you lost height?		
5. Have you noticed a decreased "enjoyment in life"?		
6. Are you sad and/or grumpy?		
7. Are your erections less strong?		
8. Have you noticed a recent deterioration in your ability to play sports?		
9. Are you falling asleep after dinner?		
10. Has there been a recent deterioration in your work performance?		

What Happens As We Get Old?

- Diseases are waiting for you!

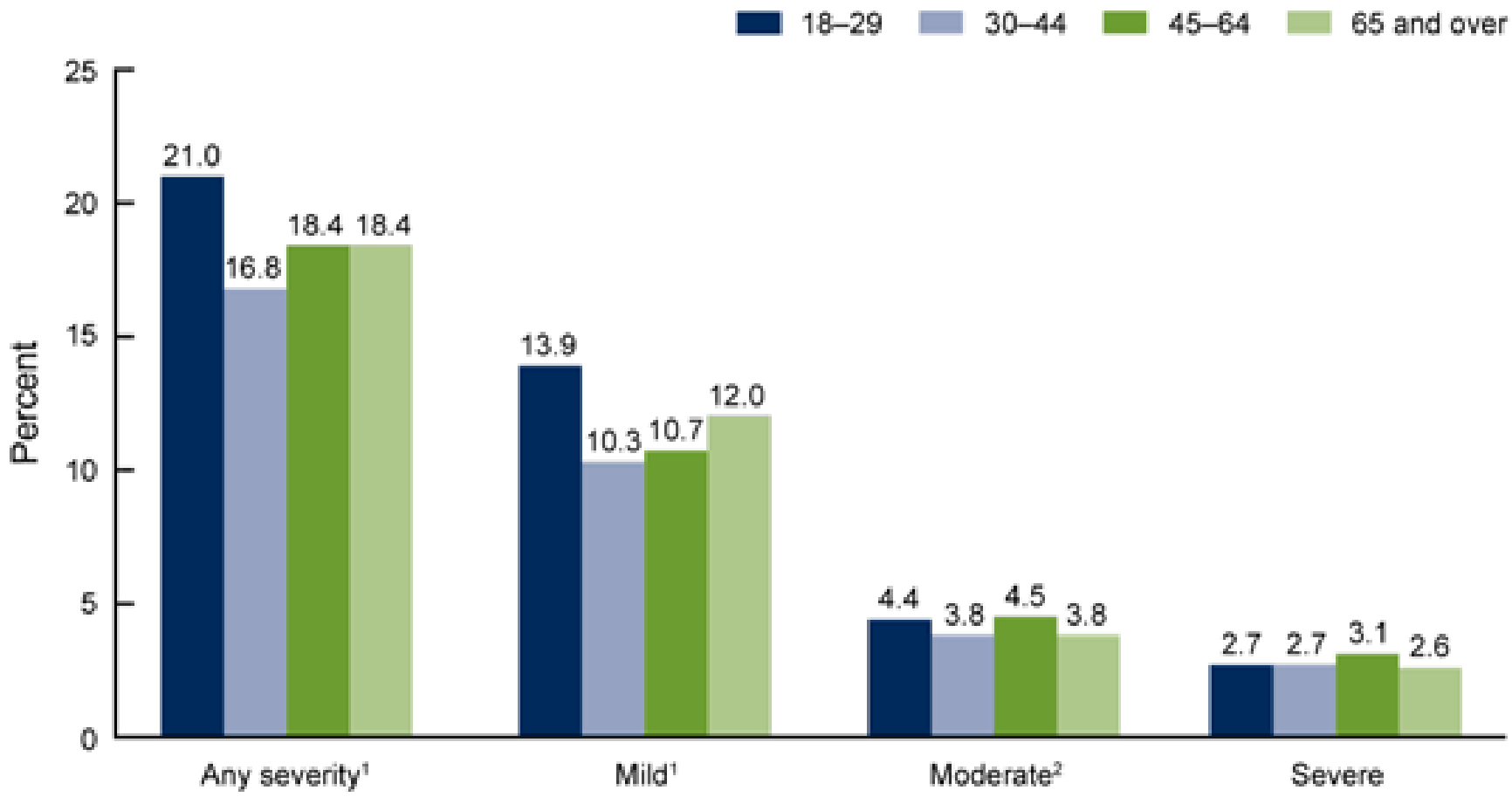


How Respondents Rated Their Overall Ability to Function Sexually



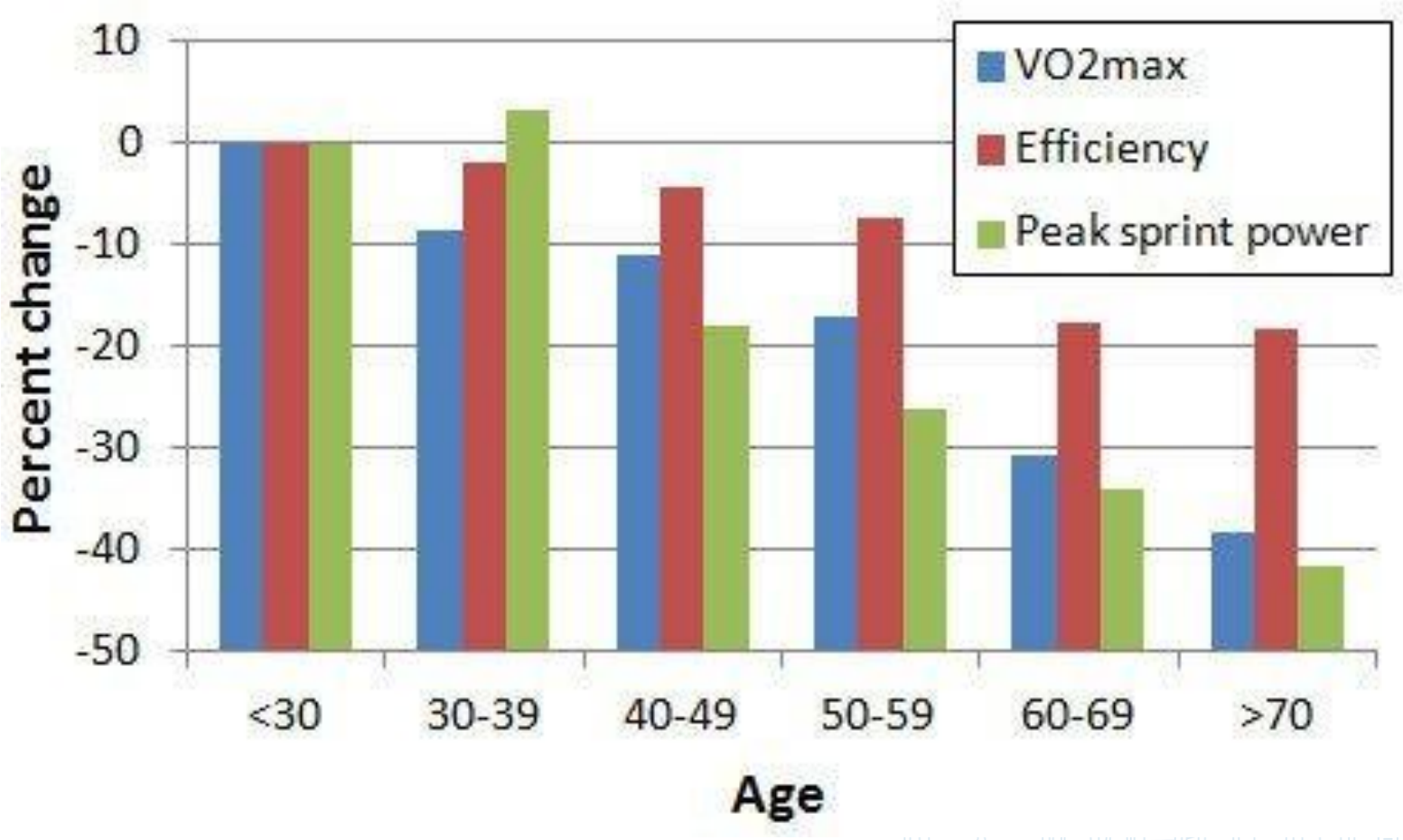
Source: Bacon, C. G., et al. (2003). Sexual function in men older than 50 years of age: Results from the Health Professionals Follow-up Study. *Ann Int Med, 139*(3), 161-168.

Depression in the Last 2 Weeks by Age



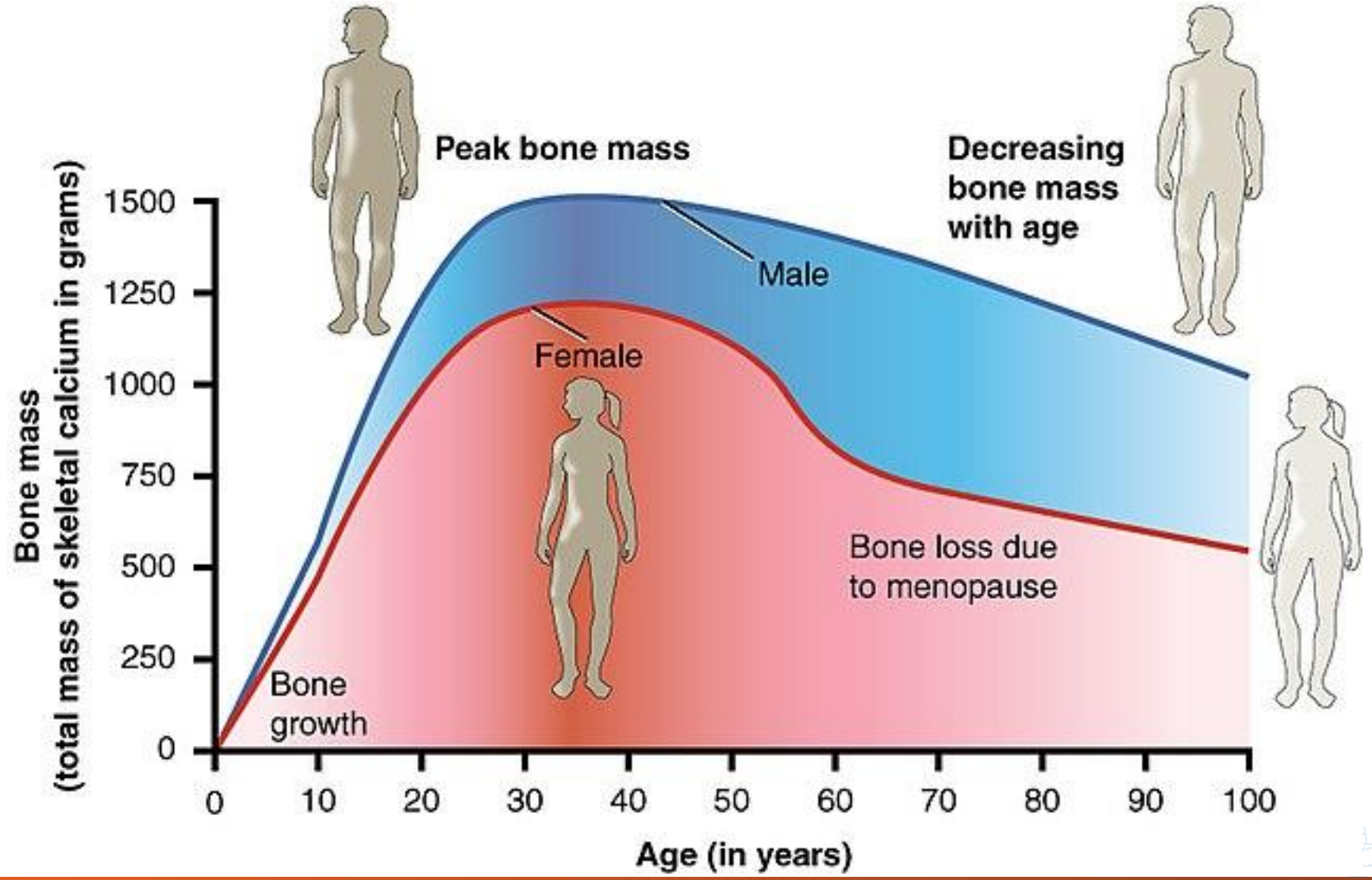
https://www.cdc.gov/nchs/products/databriefs/db379.htm

Endurance vs Age

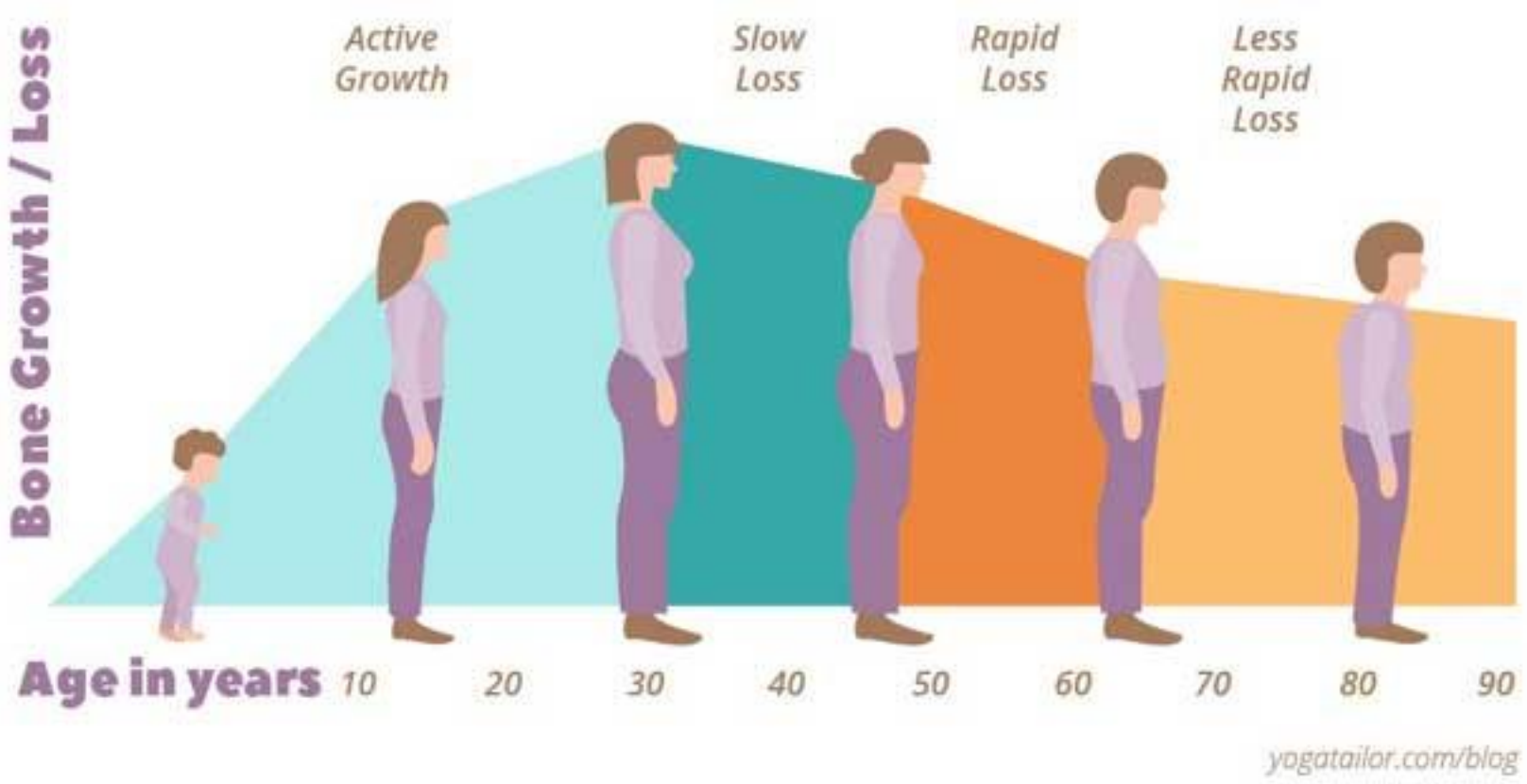


https://www.runnersworld.com/uk/training/a772179/age-related-decline-and-endurance-sport/

Bone Mass vs Age



Height vs Age



Is There a Problem Here?

- $5 Billion a year in sales because we think we need to avoid aging
- So many new diseases!!!
  - Low T = Andropause = Geriatric hypogonadism = Male Menopause = Mel climacteric = Late onset male hypogonadism
- Consumer driven via direct advertising
- Ghost written medical articles sponsored by industry
- Testosterone sales
  - 2002 =$3.24 million, 2012 = $2 billion, 2017 =$5 billion
- $100 million spent in 2012 on advertising
- $40 million to “educate physicians”
- Manufactures = "20 million men" vs 10-20k prior to new medication formulations

Well, It Might Help?

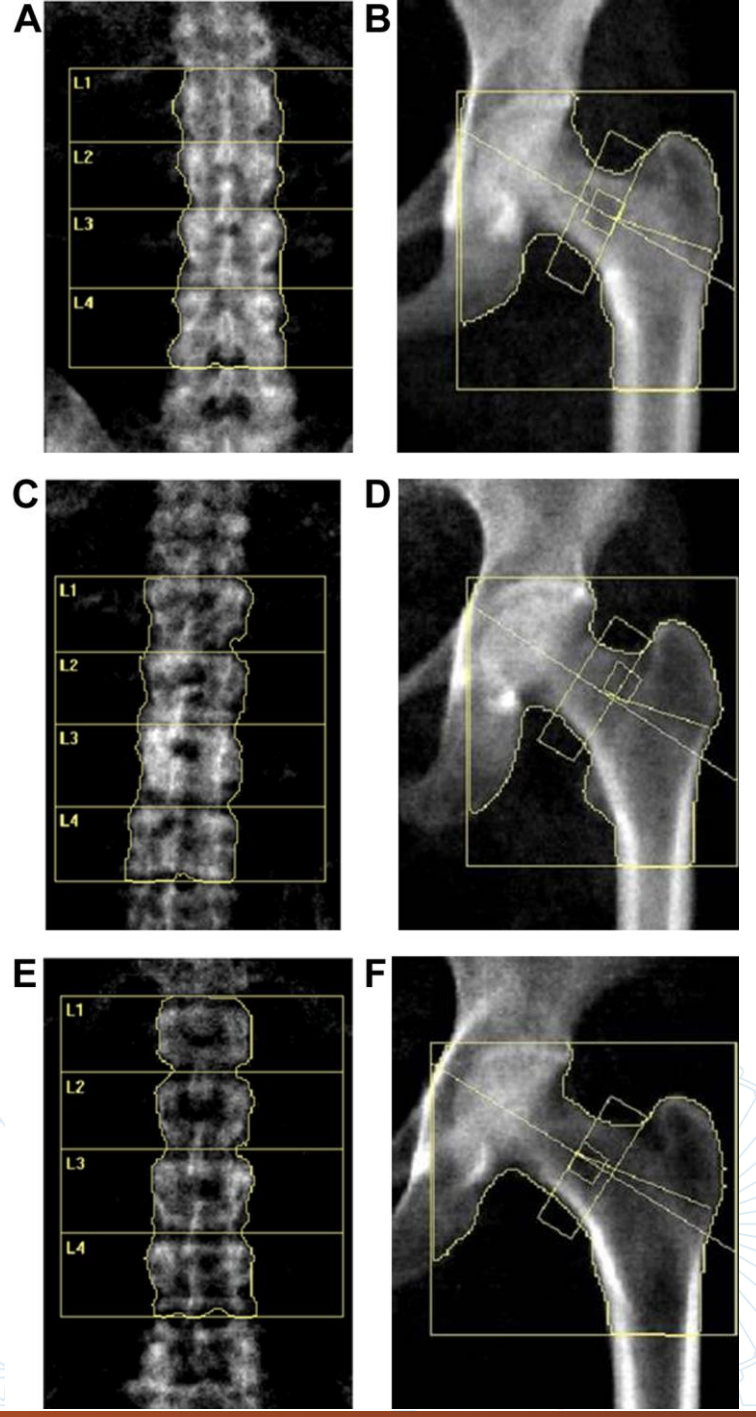
- Or it Might Hurt!
  - Once men start treatment cessation it is difficult due to prolonged hypogonadism and recovery due to supplementation.
  - Diminish spermatogenesis, decreased testicular size, increased alopecia.
  - Erectile dysfunction- there are better options.

Case 2 continued

- After discussing the patient's symptoms together, you decide to proceed with a workup.
- What does your workup include?
  - Signs and Symptoms of 2nd hypogonadism
  - Labs
  - Treatment Options

Signs and Symptoms

- Specific
  - Low libido
  - Decreased morning erections
  - Loss of body hair
  - Low bone mineral density
  - Gynecomastia
  - Small testes
- Non Specific
  - Fatigue
  - Depression
  - Anemia
  - Reduced muscle strength
  - Increased fat mass



How Do We Test for Testosterone Deficiency?

- #1 Clinical symptoms consistent with hypogonadism

- #2 Three low fasting serum testosterones
  - <260-300ng/dl
    - Reports of oral glucose load artificially suppressing testosterone

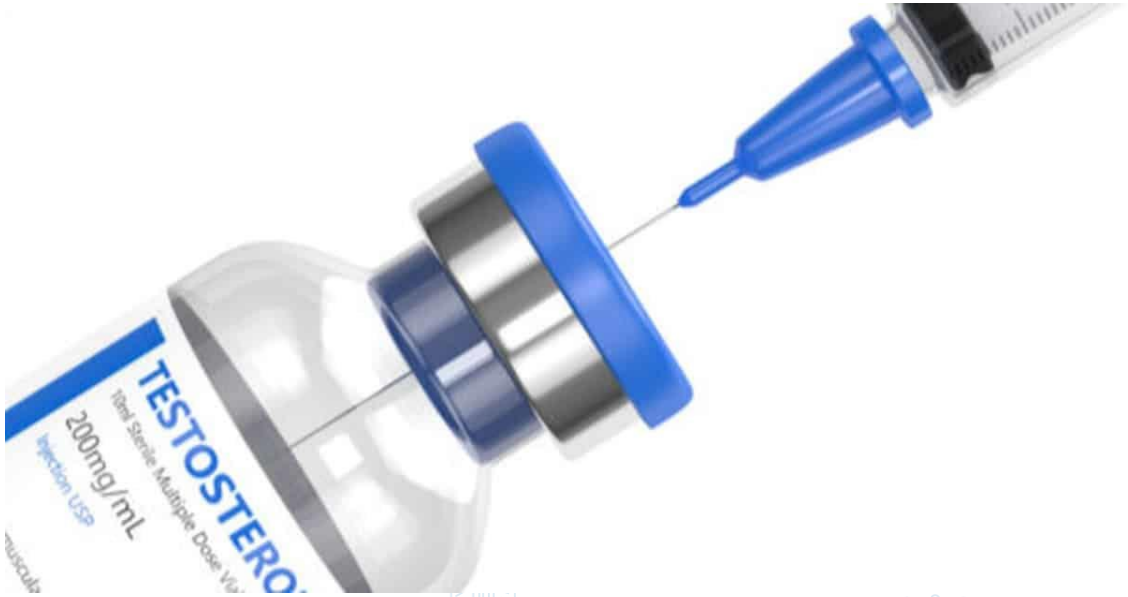
Benefit in Older Men?

- Older men with low testosterone and symptoms of hypogonadism?
  - RCT screened
    - 25,000,
    - 790 qualified. (3%) 2 serum testosterone <275 ng/dl,
    - excluded if prostate cancer
  - Small Improvement in
    - Sexual function and desire
    - Mood and depressive symptoms
  - No improvement in
    - Physical function (6 min walk)
    - Vitality
  - No increased harms

Snyder PJ, et al Testosterone Trials Investigators. Effects of Testosterone Treatment in Older Men. N Engl J Med. 2016 Feb 18;374(7):611-24.

Treatment Regiments

- Topical
  - 1%,1.6%, 2%, usually reach steady state after a month
  - Concerns for contamination with others
- Injection
  - Suspended in oil results in prolonged availability every 1-3 weeks
  - Long acting injections 750-1000mg injected every 6 weeks, then every 10-14 weeks
- Not currently recommended
  - Subcutaneous pellet – require surgery to place
  - Oral- poor clinical improvement
  - Nasal sprays- unproven clinical effectiveness



Potential Benefits in Hypogonadal Men

- Virilization (3-6 months)
- Increased libido (3-6months)
- Decreased muscle wasting (3-6 months)
- Increased muscle strength/fat-free mass (3-6 months)
- Increase bone density (2 years)

- Mood - Inconsistent results
- Cognition- Inconsistent results

Contraindications to Use

- Prostate Cancer and BPH
- Breast Cancer
- Myocardial infarction
  - Increase risk for All cause mortality, MI, Stroke, HR 1.29,95% CI 1.04-1.58, ARR 1.3 %
- Lower Urinary Tract Symptoms
- Erythrocytosis - hematocrit >50%
- Sleep apnea
- Heart Failure
- Risk of secondary exposure

Supplements

- **Results:** 90% of supplements claimed to "boost T", 50% "improve libido", and 48% "feel stronger"
  - 109 unique components average 8.3/ product
  - NO specific studies to support any one supplement
  - 24.8% of supplements had ingredients that potentially increase in testosterone with supplementation
  - 10.1% had data showing a decrease in testosterone
  - 18.3% had data showing no change in testosterone
  - 61.5% no data of supplements on their effect on testosterone
  - Most include excessive vitamins especially B vitamins

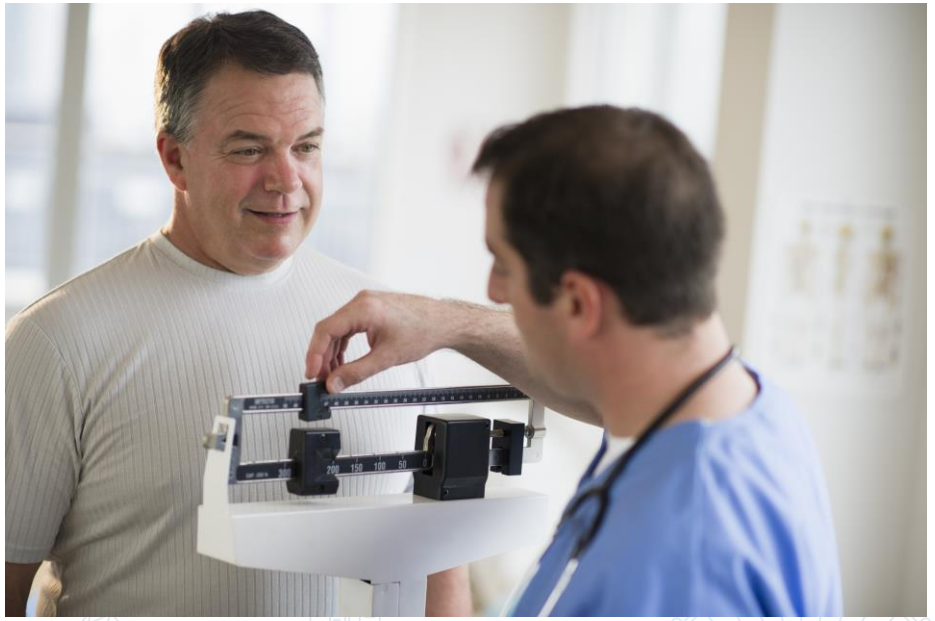
- **Conclusions:** No data to support supplement use. Excessive vitamins.

Clemesha CG, Thaker H, Samplaski MK. 'Testosterone Boosting' Supplements Composition and Claims Are not Supported by the Academic Literature. World J Mens Health. 2020 Jan;38(1

Endocrine Society Guidelines

- Diagnosis
  - Signs and symptoms consistent with testosterone (T) deficiency
  - Three fasting 8:00am-10:00am low serum testosterone concentrations

- Treat
  - Symptomatic with T deficiency with a goal of mid normal levels (~450)
  - Eval to see if it is making any difference
    - Goal = induce and maintain secondary sex characteristics
    - Correct symptoms of hypogonadism
    - Risk and benefits

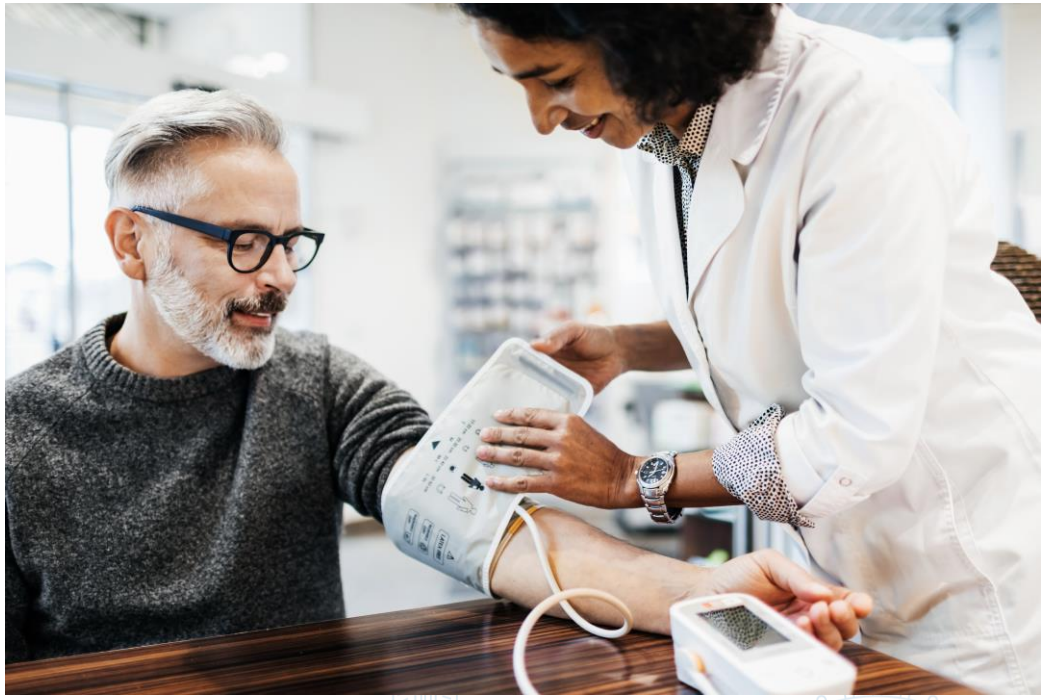


Case 1 Omar

- Patient’s laboratory values are not suggestive of hypogonadal findings.
- Clarification shows his main problem is male sexual dysfunction.

Male Sexual Dysfunction

- Are you talking about it?
- Identify etiology
  - ED alone or with loss of libido etc.
  - Morning erections
  - Psychogenic- How is your relationship?
  - Medication- SSRI's , opioids, alcohol
  - Low Testosterone, TSH, estradiol, 5 alpha reductase for BPH?
  - CV- Tobacco, obesity, HTN
- Goals of therapy
  - Improve libido
  - Improve ability to to acquire and maintain an erection



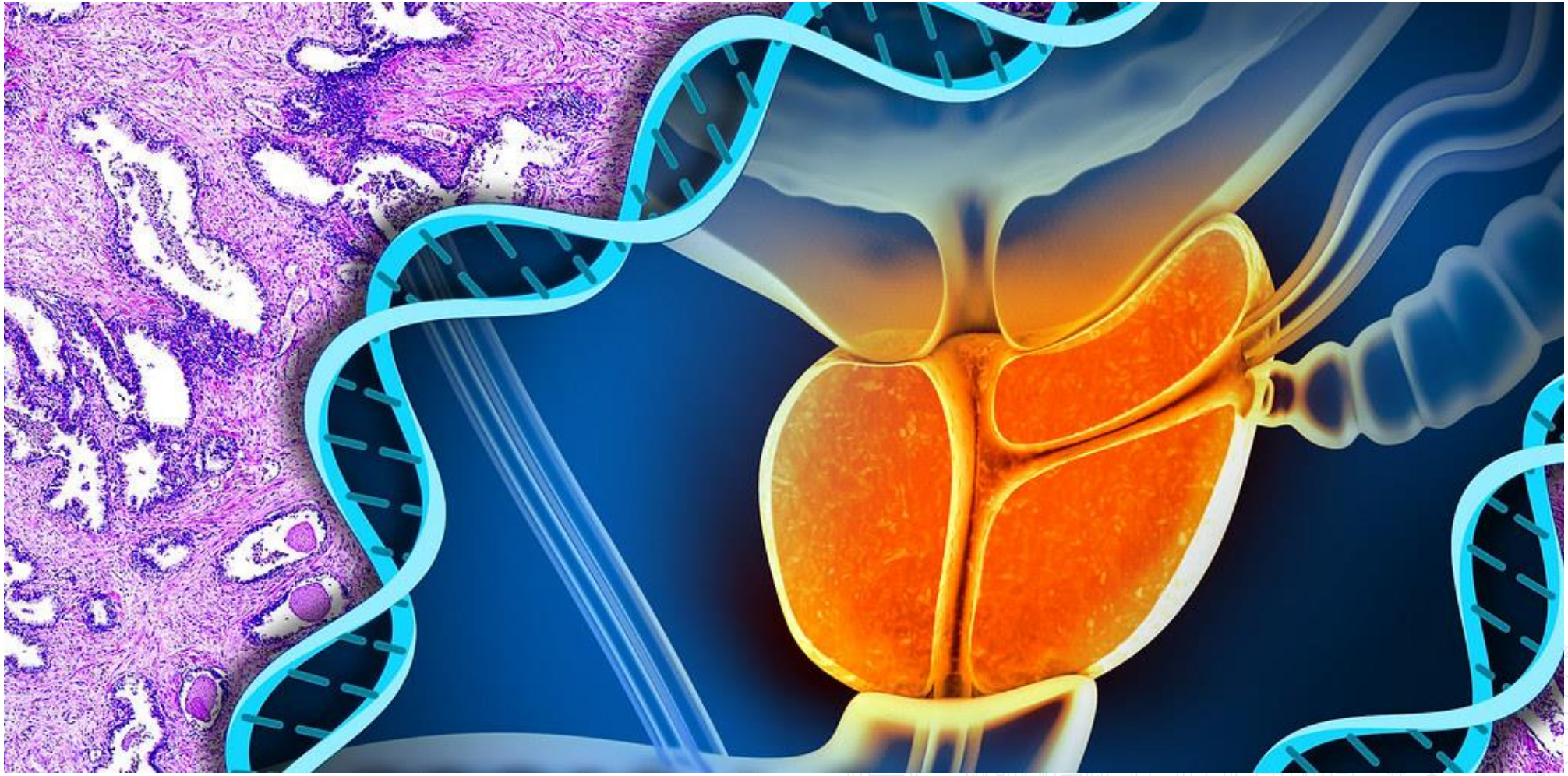
Male Sexual Dysfunction = Treatment

- Psychogenic ED
  - Relationship safety?
  - Counseling
  - SSRI
- Other Health Risks
  - Weight loss, tobacco cessation
- Erectile Dysfunction
  - Phosphodiesterase- 5 inhibitors
    - Avoid with nitrates due to hypotension risk
  - Penile self injections with vasoactive drugs
  - Other options
    - Vacuum devices, penile prosthesis, testosterone in hypogonadal

Case 1 Wrap-up

- You discuss quitting smoking, increasing exercise to help with fatigue, ED, change in mood.
- Discuss options for a trial of phosphodiesterase inhibitor if ED doesn't improve with quitting smoking and increased exercise

Prostate Cancer



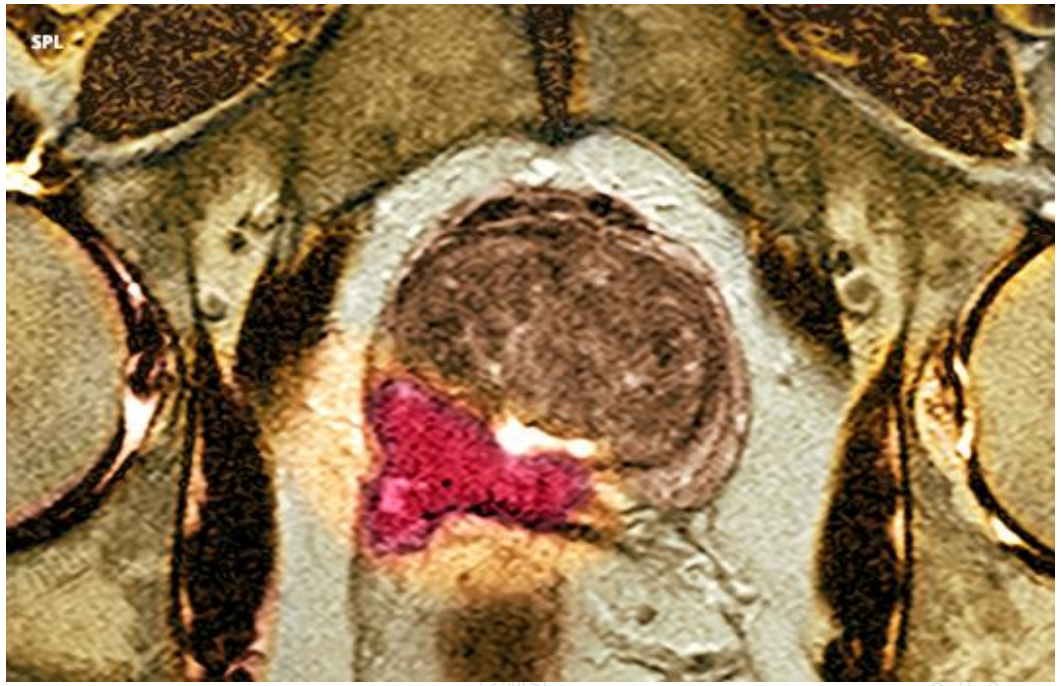
Prostate Cancer: Introduction

2nd most common cancer in men, 1.3 million cases a year, 5th leading cause of cancer death, 3rd leading cause of cancer death in men

At time of presentation: 80% local to the prostate and often asymptomatic (found on screening)

1/3 of prostate tumors grow aggressively- focus for benefit from screening

2/3 will never be problematic

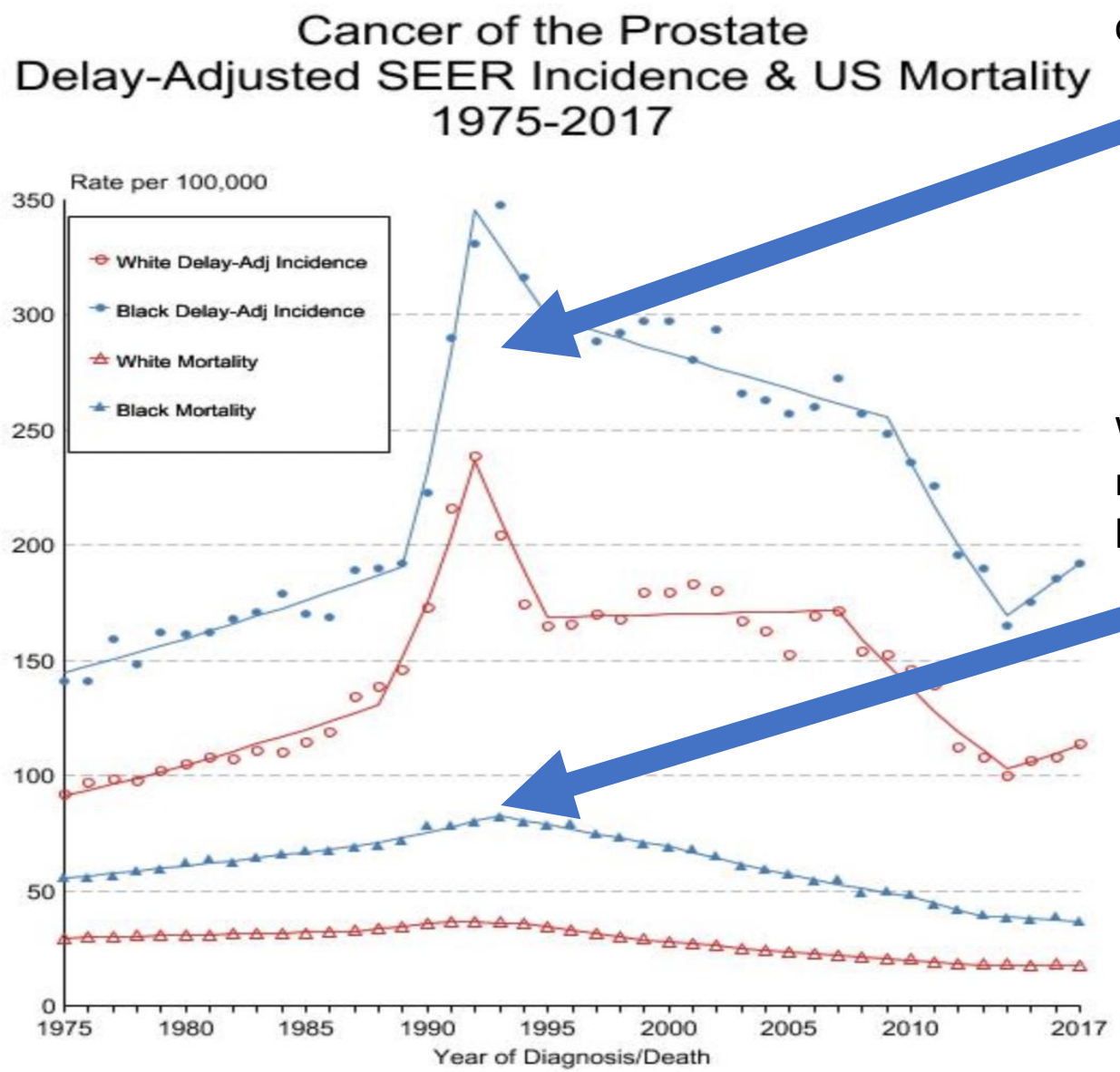


Approved for screening test 199(

2012 USPSTF stop recommendin as a screening tool

Screening increased incidence

Overall decrease in prostate canc of low-risk disease while an increased incidence of metastati disease. (6.2 to 7.1/100K in men 50-74, 16.8-22.6 in men >75)



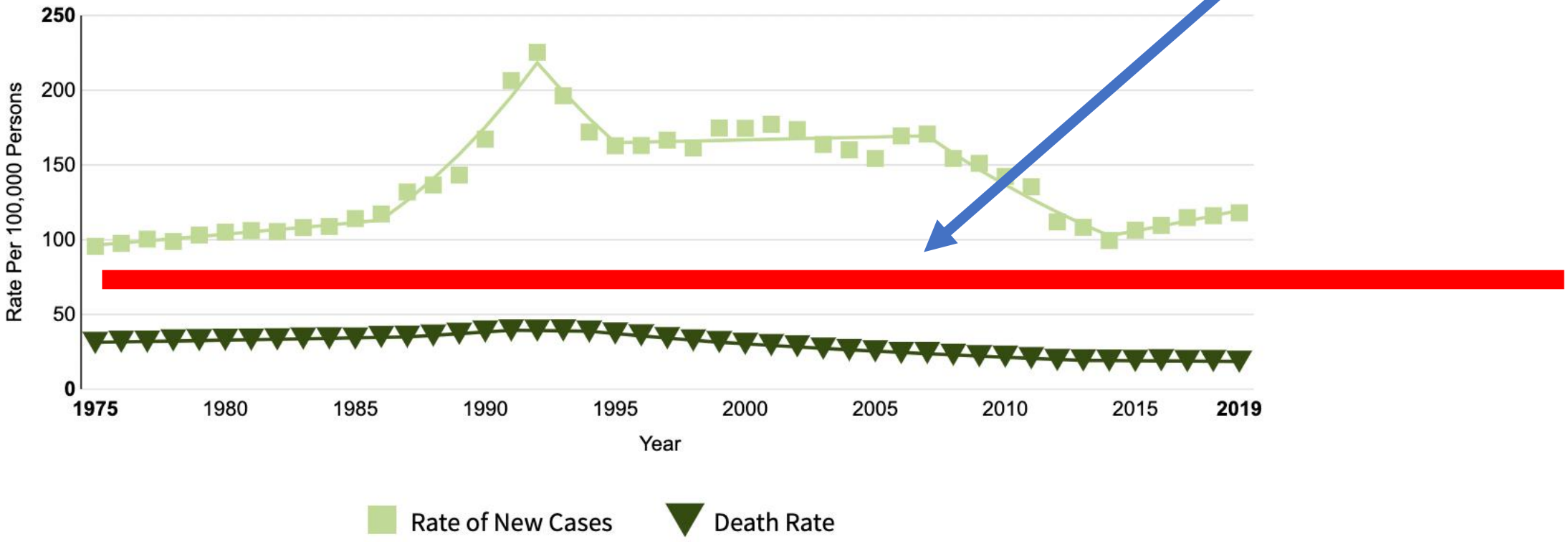
Look at all this cancer!

Why isn't the mortality getting better?

NIH cancer facts https://seer-cancer-gov.offcampus.lib.washington.edu/statfacts/html/prost.html

New Cases, Deaths and 5-Year Relative Survival

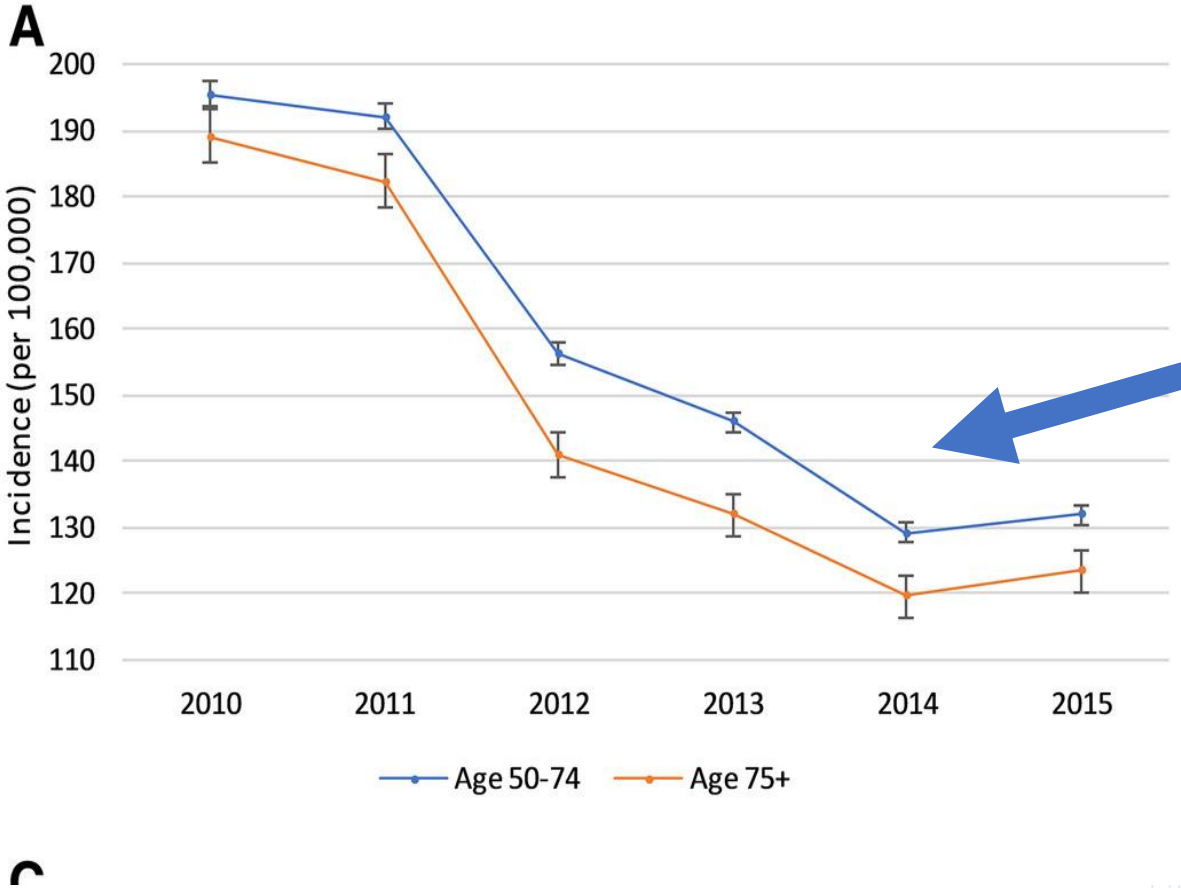
Overdiagnosis



New cases come from SEER 8. Deaths come from U.S. Mortality.
All Races, Males. Rates are Age-Adjusted.
Modeled trend lines were calculated from the underlying rates using the Joinpoint Trend Analysis Software.

https://seer.cancer.gov/statfacts/html/prost.html

We Got What We Wanted

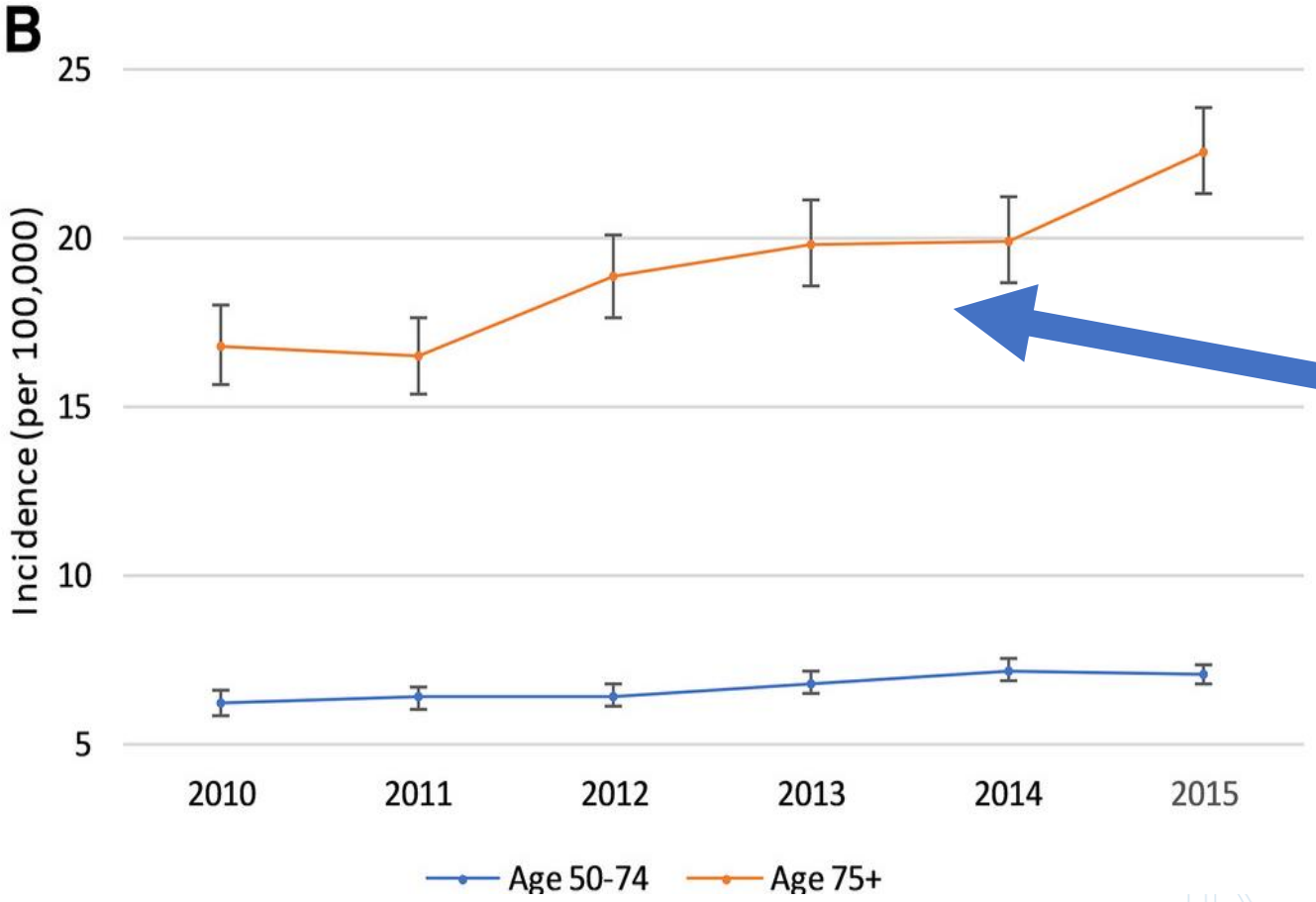


A Decrease in diagnosis of local, non-concerning disease!! (N0M0)

We Did it!!!
Say goodbye to overdiagnosis!

Cancer, Volume: 126, Issue: 4, Pages: 717-724, First published: 03 December 2019, DOI: (10.1002/cncr.32604)

What We Also Got…



An increase in the incidence of late-stage prostate cancer, metastatic disease.

Cancer, Volume: 126, Issue: 4, Pages: 717-724, First published: 03 December 2019, DOI: (10.1002/cncr.32604)

Criticism of USPSTF Level D Recommendation

- Heterogenous RCTs for benefit data excluding cohort, harms included cohort data
- Overaggressive treatment (90% of all diagnosis seek aggressive tx)
- Excluded one large RCT that showed clear benefit (Goteborg)

- PLCO: 85% non-Hispanic white, 1/3 of both groups already screened prior to enrollment
  - 80% of men in the control group also got screened!!!!
  - Lack of PSA confirmation (40% Flux)
  - Was 11-year follow-up enough in a very slow growing cancer?

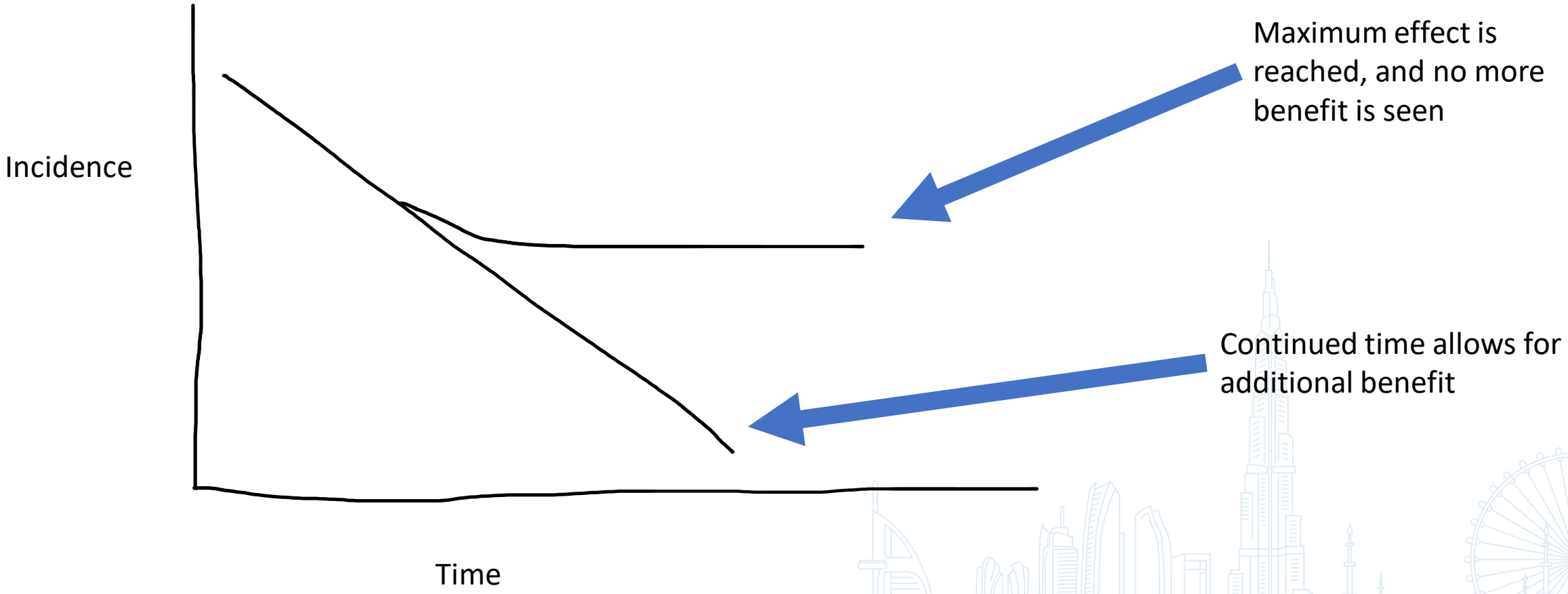
- EPSPC: 12 years showed a 30% not 20% lower risk of metastatic disease
  - Absolute risk reduction 3.1/100 cases of metastatic disease
  - Are we seeing increased metastatic disease?

Reanalysis of ERSPC & PLCO 2017

- Everybody goes to the correct group
- Controls that got screened are now considered screened
- 7-9% reduction in risk of prostate cancer death/year
- 25-32% lower risk of prostate cancer (relative reduction) in mortality

Tsodikov A, Gulati R, Heijnsdijk EAM, Pinsky PF, Moss SM, Qiu S, de Carvalho TM, Hugosson J, Berg CD, Auvinen A, Andriole GL, Roobol MJ, Crawford ED, Nelen V, Kwiatkowski M, Zappa M, Luján M, Villers A, Feuer EJ, de Koning HJ, Mariotto AB, Etzioni R. Reconciling the Effects of Screening on Prostate Cancer Mortality in the ERSPC and PLCO Trials. Ann Intern Med. 2017 Oct 3;167(7):449-455. doi: 10.7326/M16-2586. Epub 2017 Sep 5. PMID: 28869989; PMCID: PMC5734053.

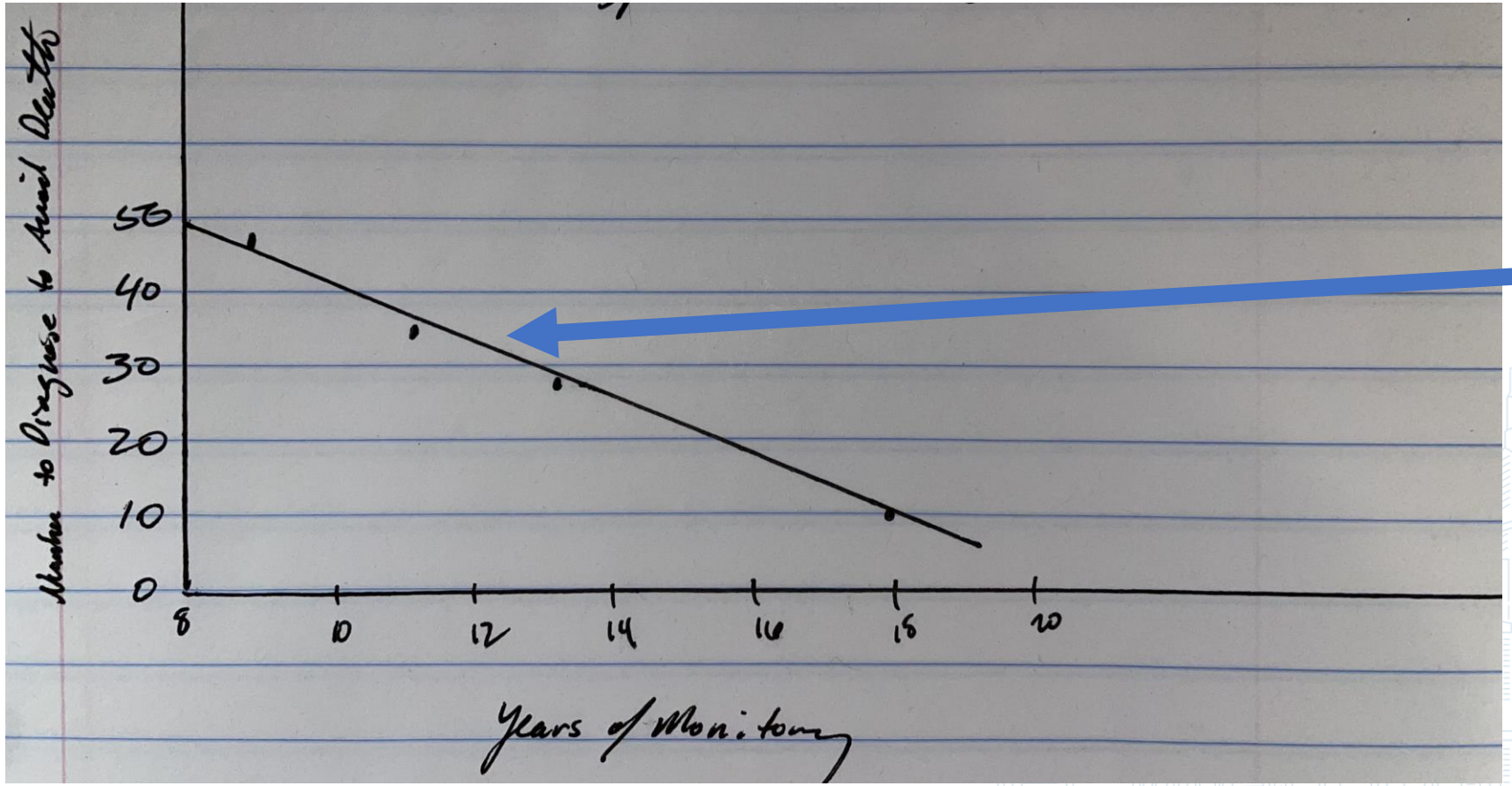
What Kind of Line Are We Seeing?



Should We Run a Longer Trial?

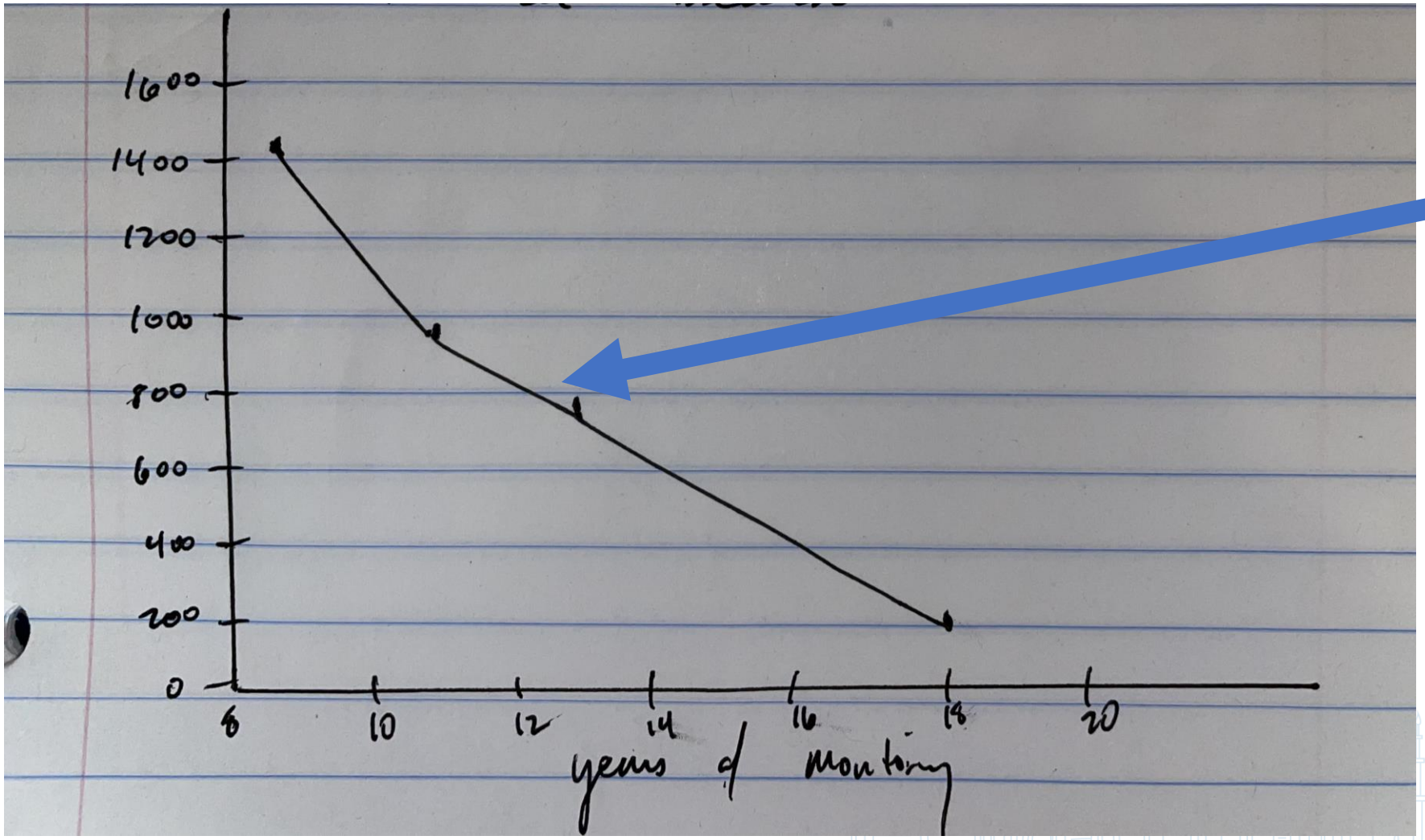
- Gotenburg- Swedish arm of the ERSCP, just kept going. (N=20,000 18 yr f/u)
- 1396 screening, 962 controls had been diagnosed with PC [hazard ratio 1.51, 95% confidence interval (CI) 1.39-1.64]
- Cumulative PC mortality 0.98% screening (95% CI 0.78-1.22%) vs 1.50% (95% CI 1.26-1.79%) in controls, an Absolute reduction of 0.52% (95% CI 0.17-0.87%)
- To prevent one death from PC, the number needed to invite was 231 and the number needed to diagnose was 10 at 18 years.
- Systematic PSA screening demonstrated greater benefit in PC mortality for men who started screening at age 55-59 years (RR 0.47, 95% CI 0.29-0.78) and men with low education (RR 0.49, 95% CI 0.31-0.78).

of Cancers to Diagnosis To Avoid 1 Cancer Specific Death



When we stopped looking.

to Screen to Avoid 1 Cancer Death



When we stopped looking

Is the Pendulum Swinging?

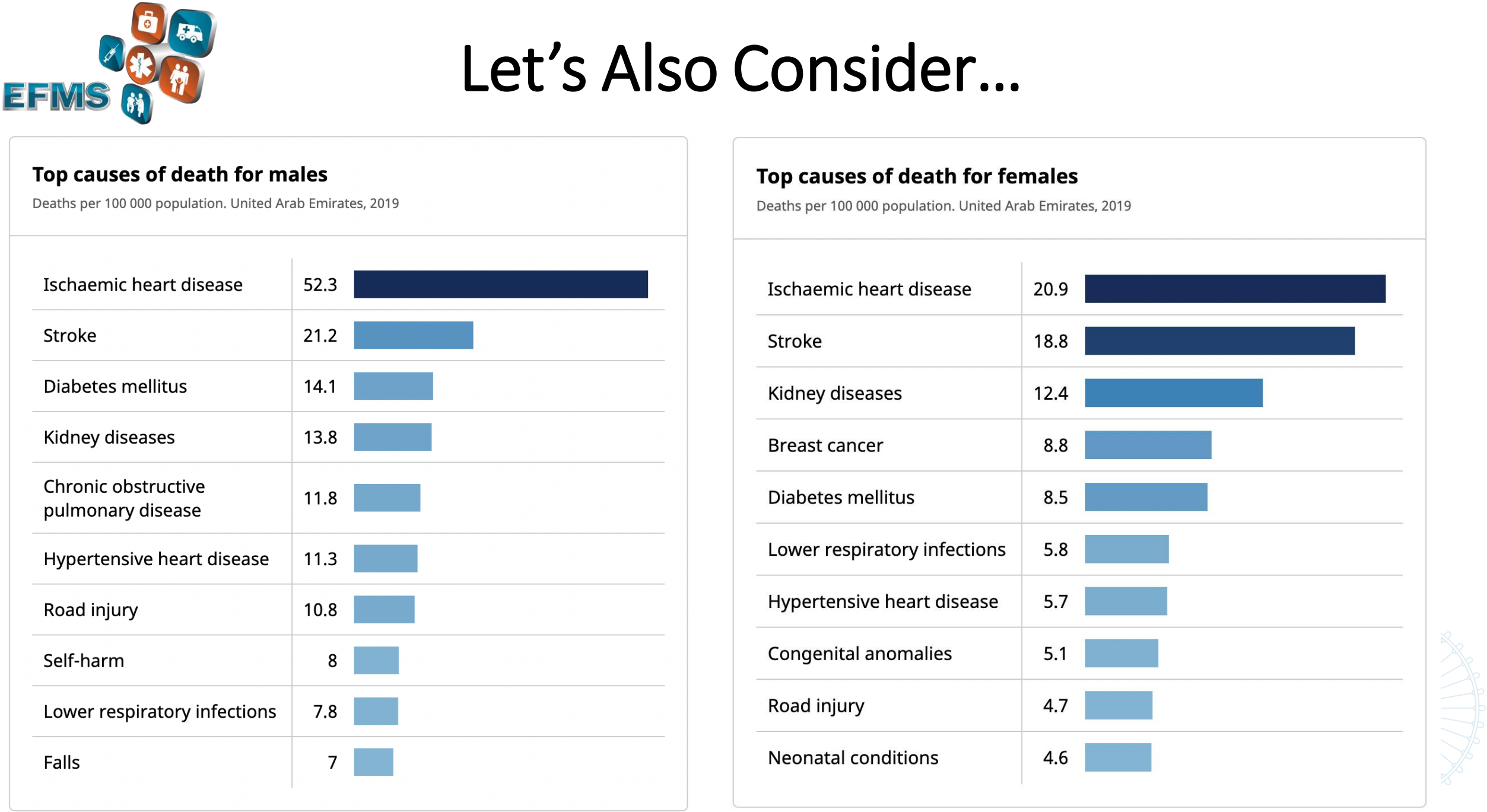
Science Advice by European Academics March 2022

"There is also good scientific evidence for the benefit of organized, population-based PSA-based prostate cancer screening, particularly in combination with additional MRI scanning as a follow-up test and the use of active surveillance rather than immediate treatment.

Offering ad hoc PSA testing for men without symptoms should be discouraged in order to reduce the risk of overdiagnosis and overtreatment, especially in older men"

- USPSTF guideline currently under reevaluation

Let's Also Consider...



Vascular Disease Screening and Treatment

- CVD risk >20 yrs every 3-5 years risk calculator
  - Are you targeting modifiable risk factors
    - Diet
    - Physical Activity - Prevents up to 1/3 of CV disease
    - Tobacco
    - Hypertension - Yearly Screening
    - Dyslipidemia - Start at 25 in high risk, 35 without high risk, stop at 65
    - Physical activity – Prevents 1/3 of CV disease
    - Diabetes Mellitus –25 if HTN + HLD, BMI >25 screen early, otherwise start >35
  - AAA screening 65-75 in current and former smokers, and one time in men 65-75 with family hx of relative needing a repair.

Immunizations

- Annual
  - Flu & probably Covid soon?
- 10 year
  - Tdap
- Once
  - Varicella,
  - HPV- Up to age 26
  - Zoster > 50 yrs old
  - Pneumococcal age 19 and up
  - Meningococcal
  - Hep B all adults < 60

Cancer

Table 1

The most common primary malignant tumors in UAE for both genders, 2017 [3,5,6].

Cancer Type	No. of Cases and %	Cancer Type	No. of Cases and %
Colorectal	256 (13.67%)	Breast	825 (36.67%)
Leukemia	196 (10.46%)	Thyroid	302 (13.42%)
Prostate	155 (8.28%)	Colorectal	166 (7.38%)
Skin	134 (7.15%)	Leukemia	118 (5.24%)
Lip, Oral cavity and Pharynx	112 (5.98%)	Uterus	111 (4.93%)
Thyroid	110 (5.87%)	Cervix uteri	82 (3.64%)
Non-Hodgkin Lymphoma	107 (5.71%)	Skin	74 (3.29%)
Bronchus and Lung	103 (5.50%)	Ovary	70 (3.11%)
Urinary bladder	91 (4.86%)	Non-Hodgkin Lymphoma	65 (2.89%)
Stomach	59 (3.15%)	Lip, Oral cavity, and Pharynx	39 (1.73%)

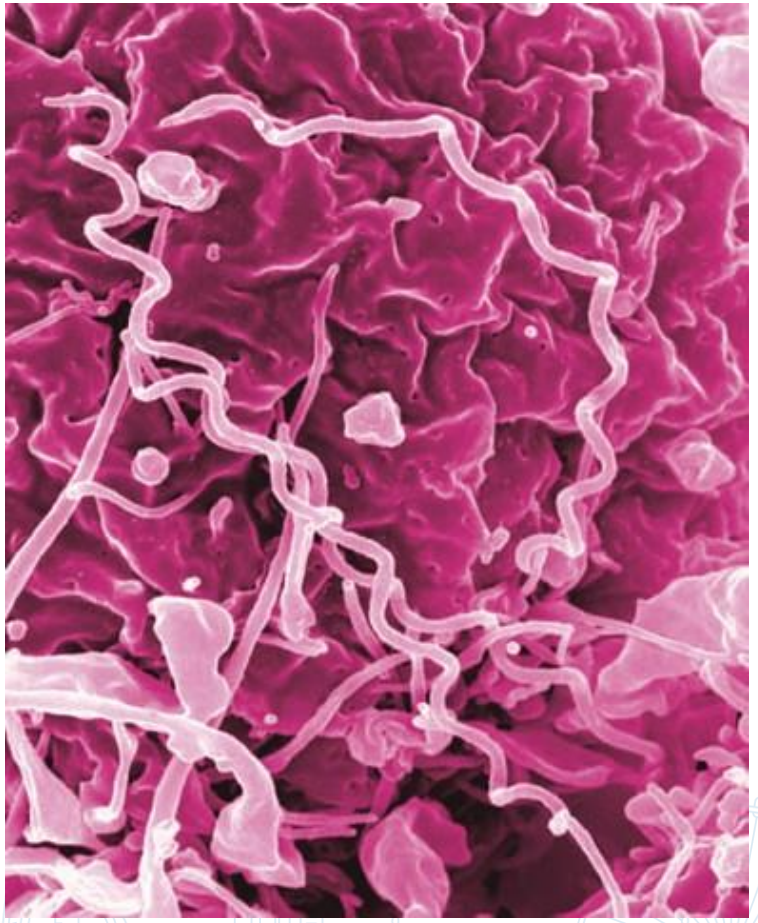
Open in a separate window

Other Cancer screenings

- Colorectal Cancer
  - 45 and older USPSTF Level B
  - 50 Level A
  - Stop 75 or less than 10 years life expectancy
- Lung Cancer –
  - Annually with low dose CT in high risk-based individuals

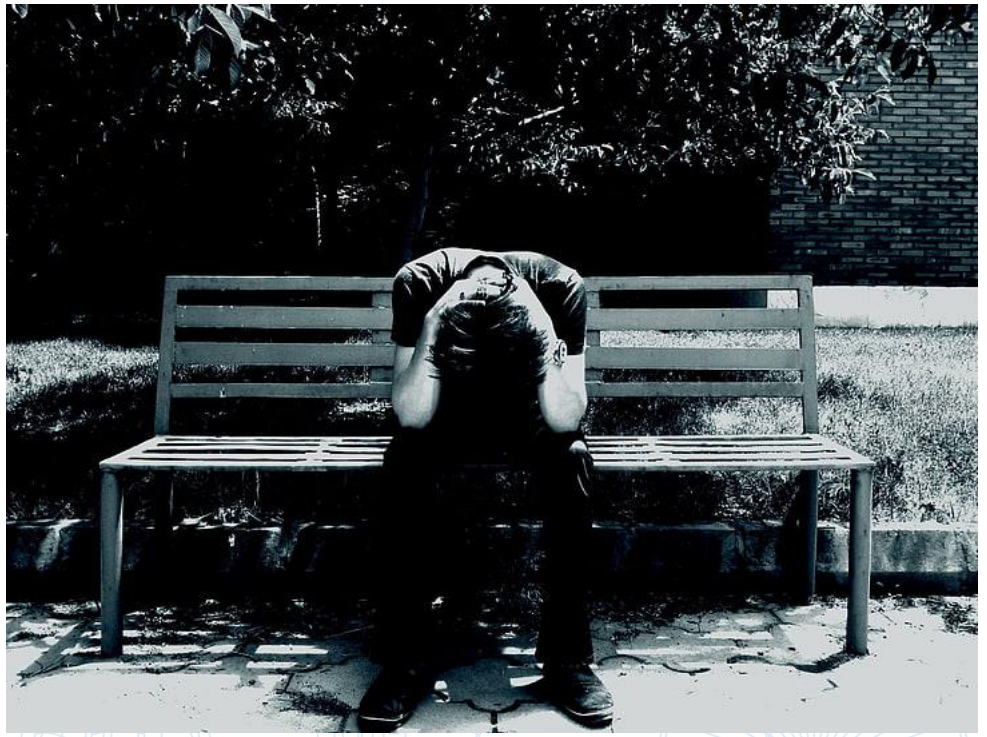
STI

- Are you asking, and looking?
- Men in high-risk populations
  - Gonorrhea and Chlamydia
- Hep B & C one time
- HIV one time + high risk
- Syphilis – high Risk



Mental Health

- Depression – PhQ starting age 12 and in adults
- Anxiety 13-64 GAD 7
- Alcohol Use
- Drug Use
- Intimate Partner Violence



Should I Always Screen?

- Is it going to help?
- Screening comes with possible harm as well as possible benefit
- Stop colon, breast, cervical, colorectal prostate if life expectancy under 10 years no benefit.

Practice Recommendation

- Primary and secondary hypogonadal disease is real, but uncommon
  - Don’t over-treat
- Prostate Cancer
  - Did your counseling change?
- Sexual Health
  - Is it part of your practice?
- Cardiovascular disease
  - Are you addressing your modifiable risk factors?
- Colon Cancer
  - How are you screening?
- Mental Health
  - In-office Screening

Questions?