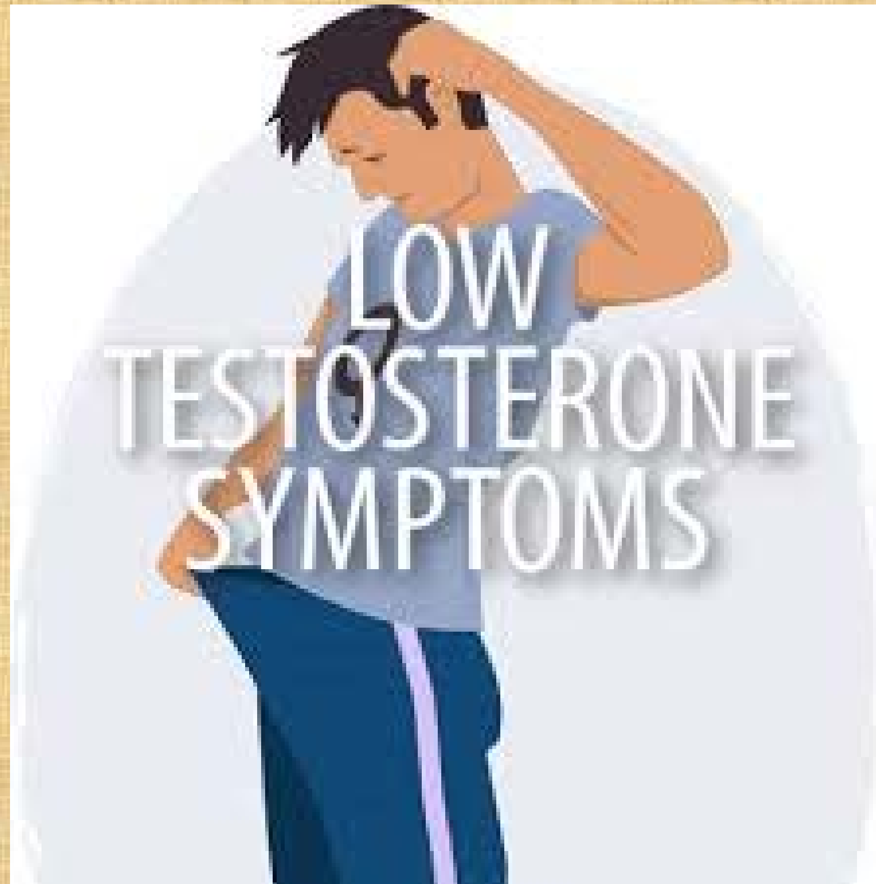
Primary Care Updates ACP conference 2015

Richard Rose, MD FACP
Assistant Professor
University of Utah Department of General Internal Medicine
VAMC - Internal Medicine

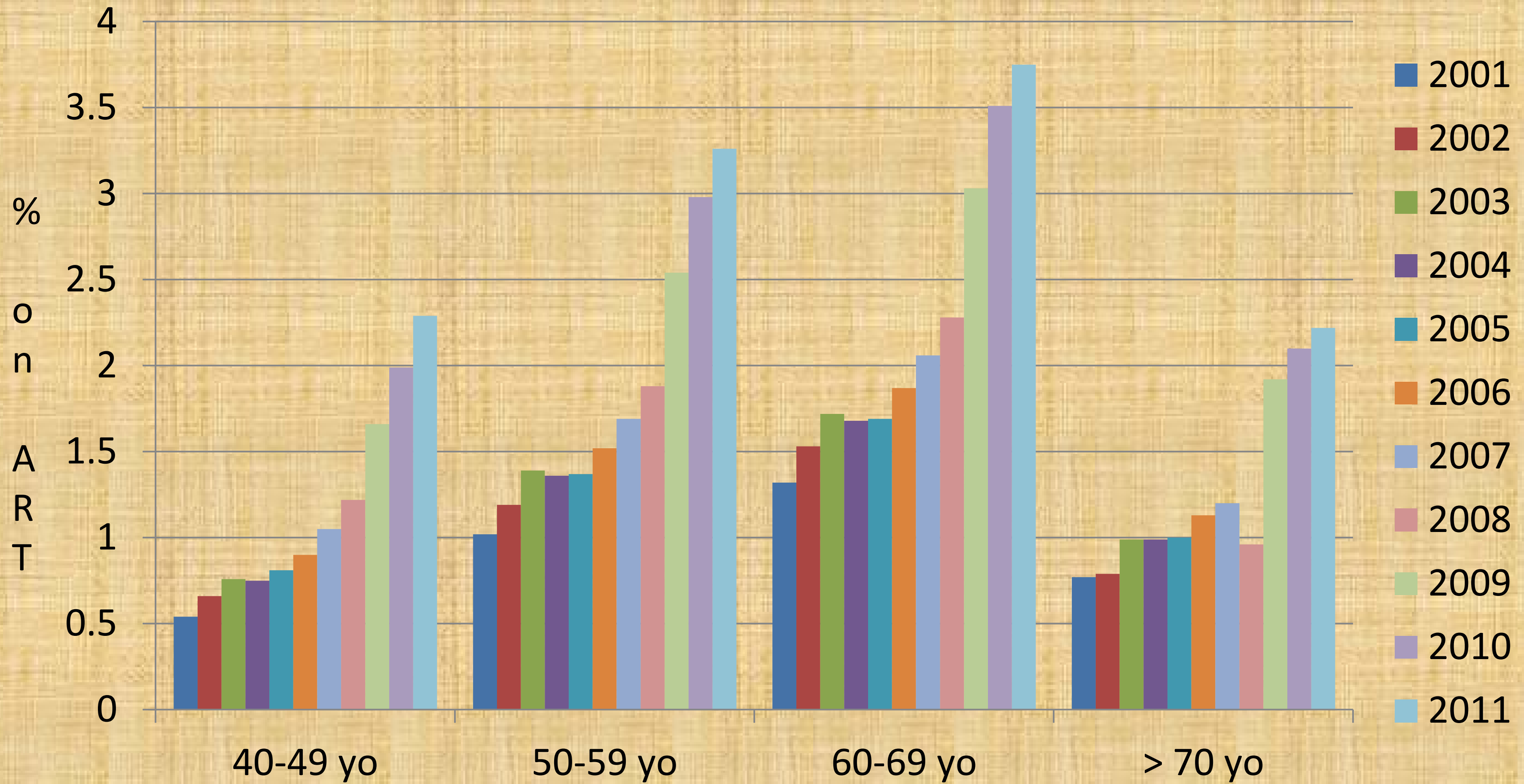
Conflicts of interest

- Nothing to disclose

Could it be low T?



Hypogonadism- an epidemic?

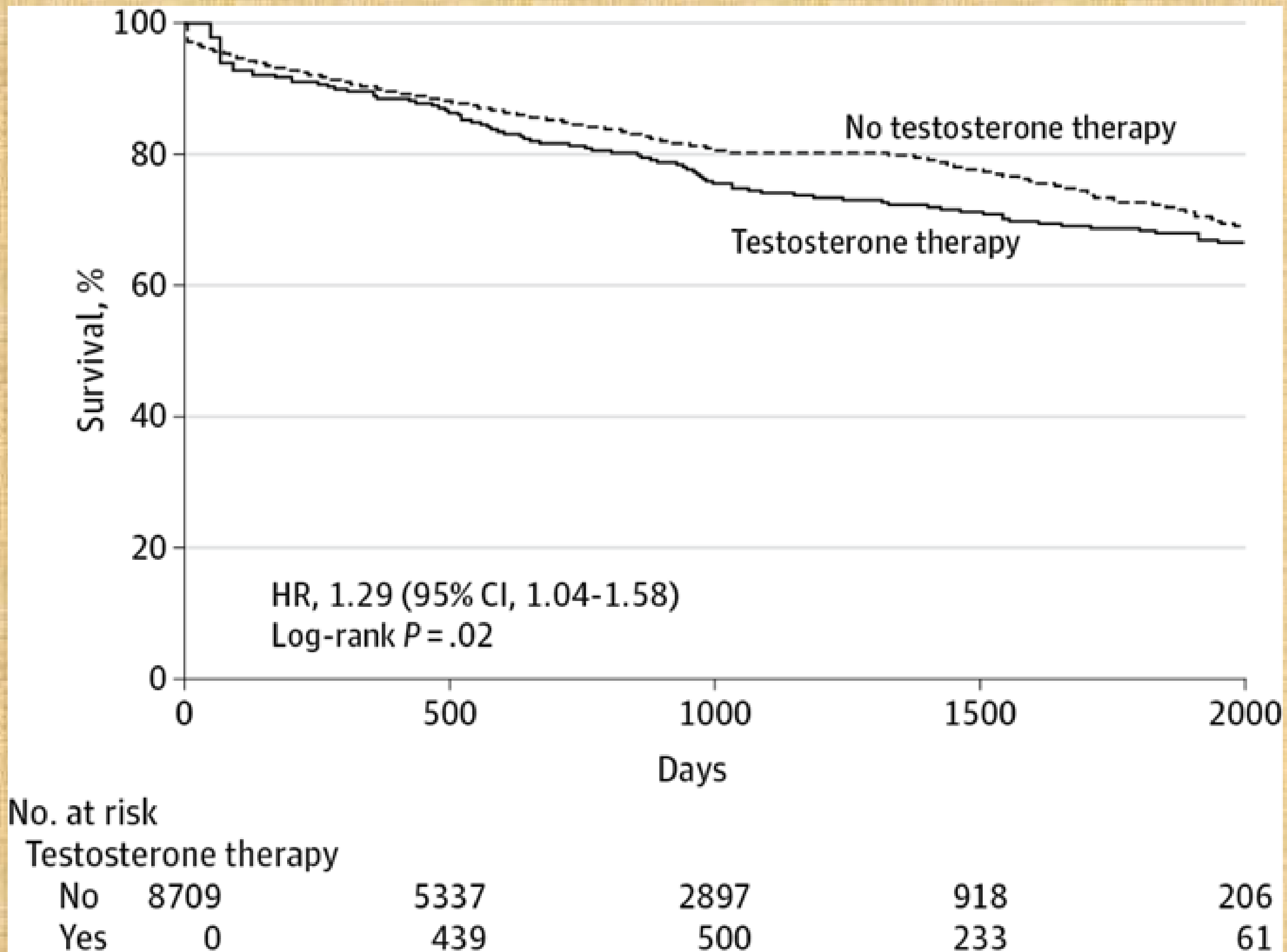


JAMA 2013; 173: 1465

Testosterone and MI risk

- JAMA 2014
- Retrospective cohort in Veteran Affairs patients
  - Evaluating the association between use of testosterone and all cause mortality, myocardial infarction, and stroke
  - Evaluated veterans who underwent coronary angiograms and had a total testosterone level checked (low T defined as < 300 ng/dL)

Kaplan – Meier survival curve



Testosterone and MI risk

- Retrospective cohort using Medicare data
  - Age 66 and up treated with intramuscular testosterone (more than one injection)
  - Matched 6,000 testosterone users with 19,000 nonusers
- Meta-analysis- 75 studies analyzed
  - Approximately 3,000 patients in testosterone supplementation group with a mean duration of therapy of 34 weeks
- No link between testosterone therapy and adverse CV events

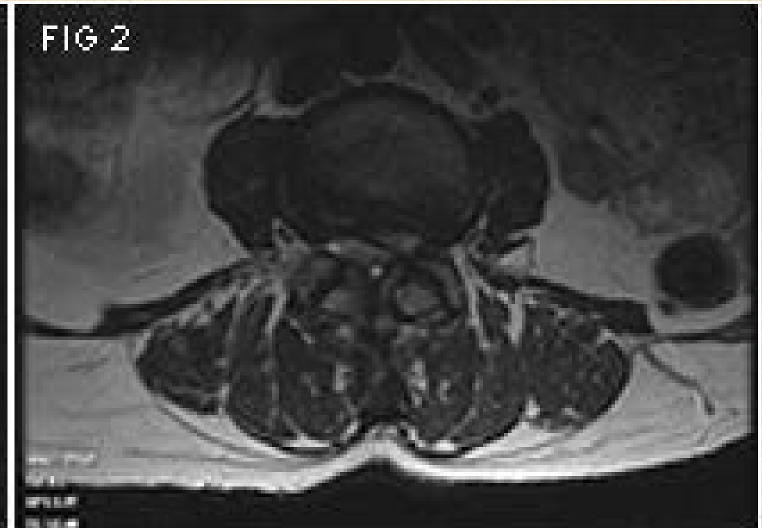
<u>Annals of Pharmacotherapy</u> 2014; 48:11138
<u>Expert Opinion Drug Safety</u> 2014; 13: 1327

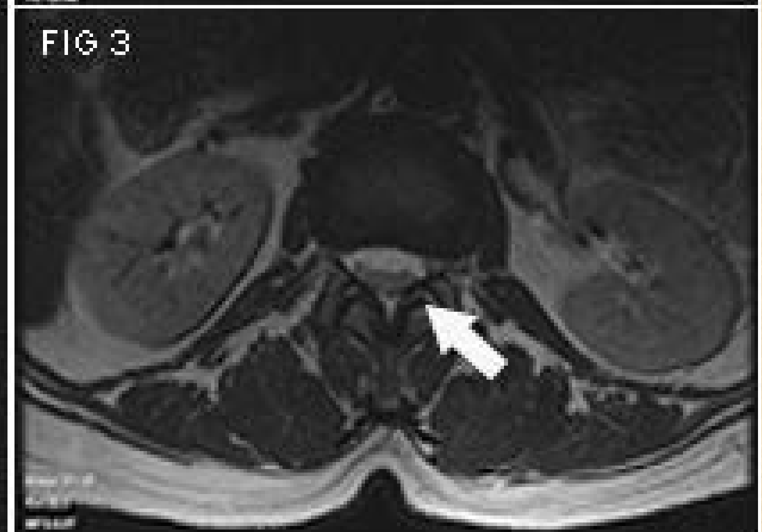
How do we reconcile conflicting data?

- European medicines agency in October of 2014 releases statement:
  - Only treat if there are signs and symptoms of low testosterone and confirmed lab abnormality, discuss potential risks
  - That there is limited safety data in men over age 65
- Endocrine society guidelines published in 2011
  - "We recommend making a diagnosis of androgen deficiency only in men with consistent symptoms and signs and unequivocally low serum testosterone levels."
  - "We recommend against a general policy of offering testosterone therapy to all older men with low testosterone levels."
- Salt Lake City VAMC approach
  - Requires: 2 low morning testosterone levels, FSH, LH, symptoms + signs compatible with hypogonadism
  - Requires discussion with patient re: potential risk and lack of clear benefits

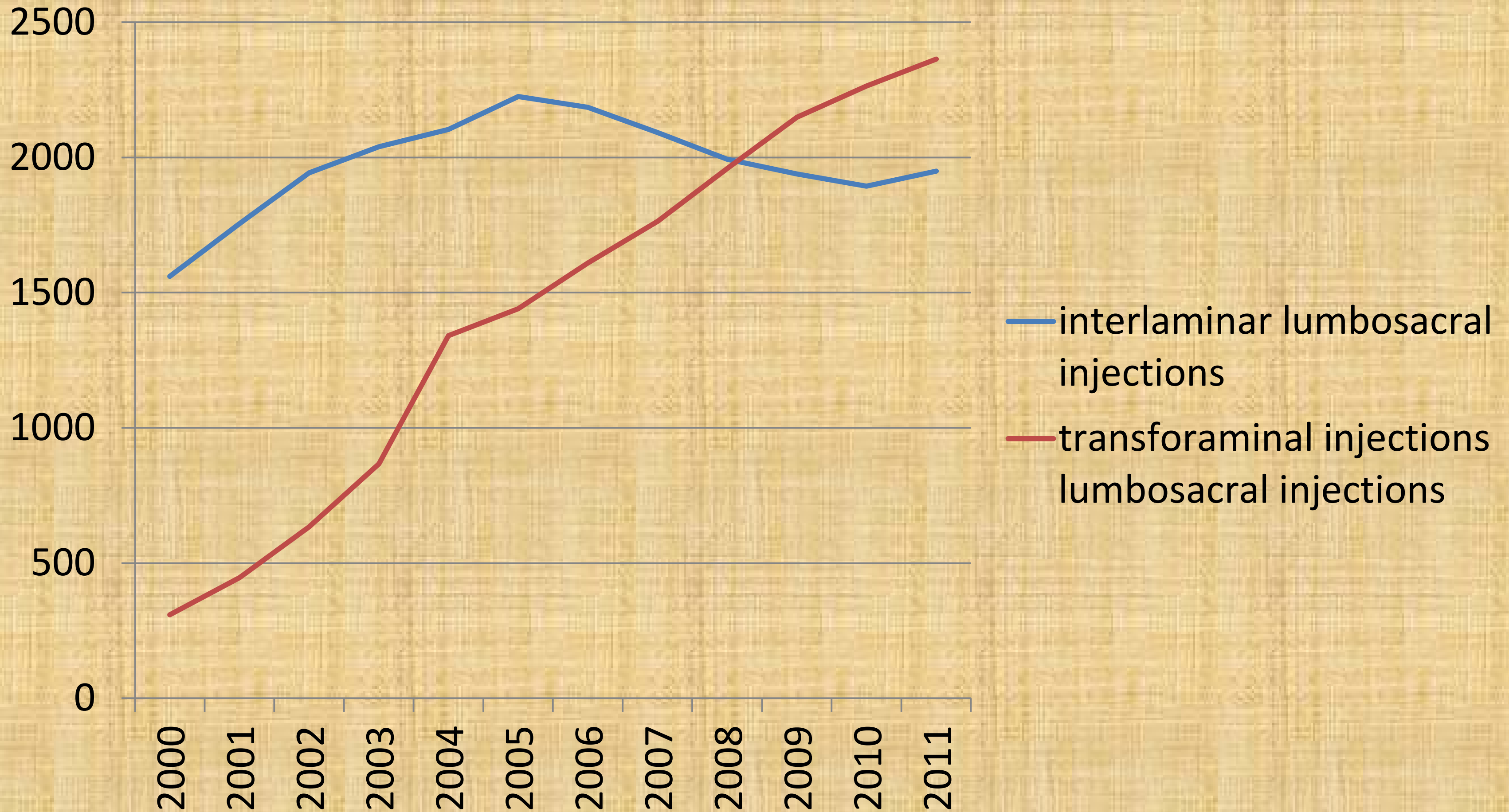
Lumbar spinal stenosis

FIG 1





Epidurals per 100,000 Medicare beneficiaries



Pain physician 2013; 16:E349

Lumbar spinal stenosis

- Randomized to lidocaine +/- steroid
- Injection could be repeated at 3 weeks , if patient desired
- Could cross over after 6 weeks
- 26 physicians performed the injections
  - All trained in the same manner of injection
  - Transforaminal or interlaminar were at the MD's discretion
  - Steroids varied: betamethasone, dexamethasone, methylprednisolone

Lumbar spinal stenosis

- 400 patients randomized out of 2,224 (most eliminated due to prior back surgery or history of recent epidural injection)

- Baseline characteristics
  - Age – 68 yo
  - BMI ≈ 30
  - Pain score in leg 7.2 / 10
  - RMDQ – 16 / 24

Lumbar spinal stenosis

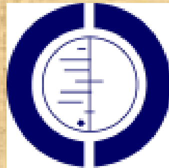
- Results
  - Adverse events
    - Steroid group with more cortisol suppression
    - More adverse events in steroid group
  - 6 weeks
    - Both groups had improvement in RMDQ scores but no significant differences between groups
    - No difference between groups who had 30% or 50% improvements in pain or disability scores
    - Adjustment for duration of pain showed a 1.2 point difference in RMDQ scores between groups (favoring steroid)
    - PHQ-8 more improvement in steroid group
    - SSSQ- steroid group more satisfied
    - Interlaminar steroid injections better at 3 weeks but not at 6 weeks

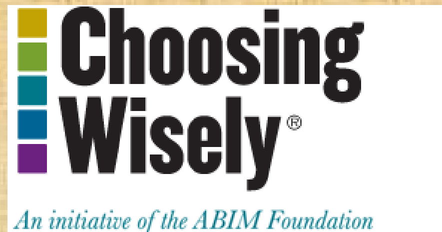
Lumbar spinal stenosis

North American Spine Society 2013- insufficient evidence for or against efficacy of transforaminal steroid injection in the treatment of radicular pain for EITHER central or foraminal stenosis

Cochrane review 2013– low quality evidence

Choosing wisely – repeat injections should be avoided in patients who fail to respond to an initial injection





Anesthesiology 2013; 119:907

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Pneumococcal 13-valent Conjugate Vaccine (Diphtheria CRM_{197} Protein)

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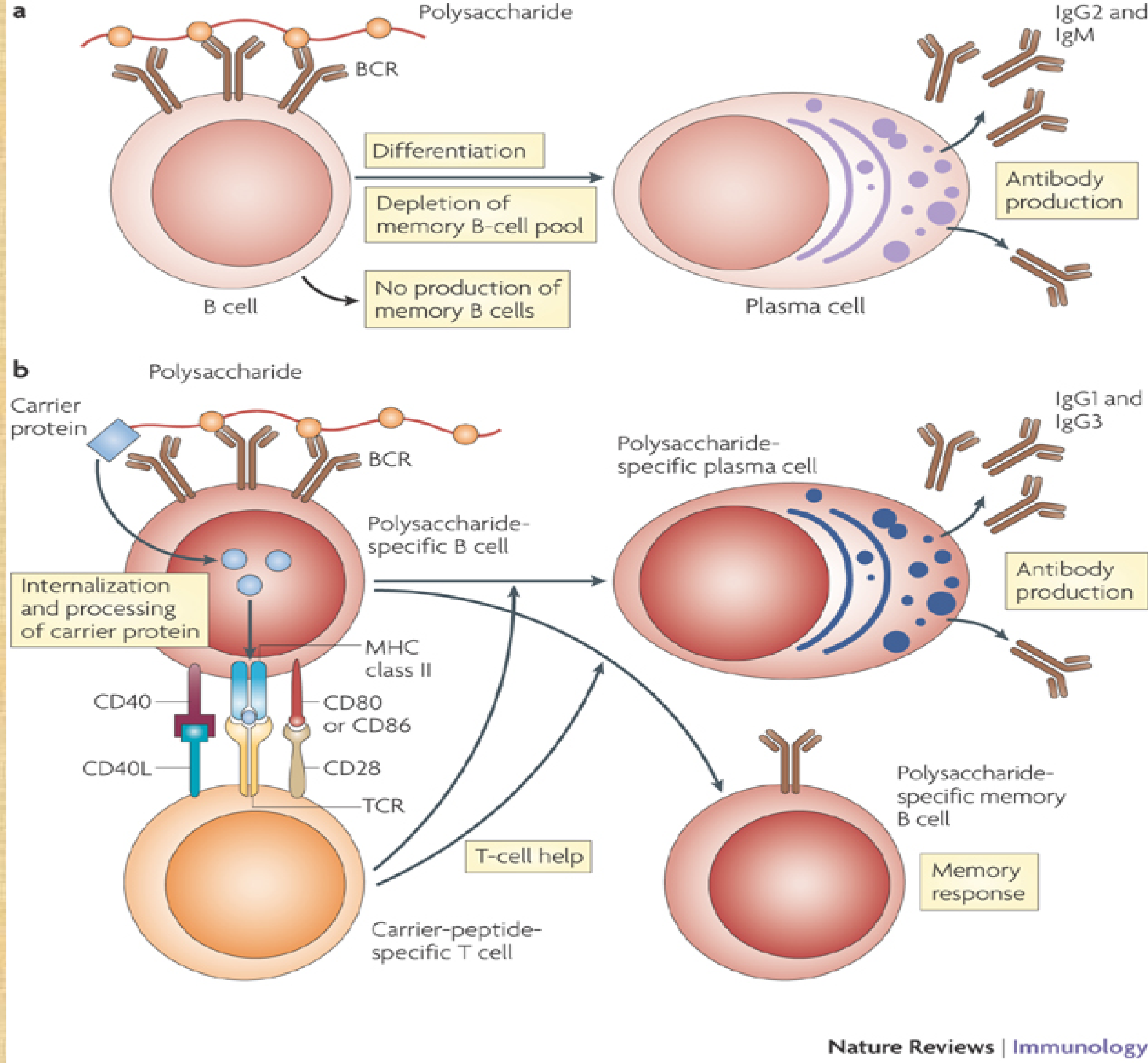


Nature Reviews Immunology 2009;9: 213

Community acquired pneumonia immunization trial in adults CAPITA

- Background
  - No decrease in pneumonia from 23 valent vaccine
    - 23 valent vaccine accounts for 90% of serotypes in Western countries
  - CAPITA examined the efficacy of a 13 valent vaccine to prevent a first episode of vaccine specific serotype pneumococcal pneumonia in **community dwelling elders** > 65 yo

Lancet Inf Dis 2003; 3:71
Netherlands Journal of Medicine 2008; 66: 378

CAPITA

Netherlands do not routinely use 23 valent vaccine in the elderly

Inclusion:

- 65 yo or older

Exclusion:

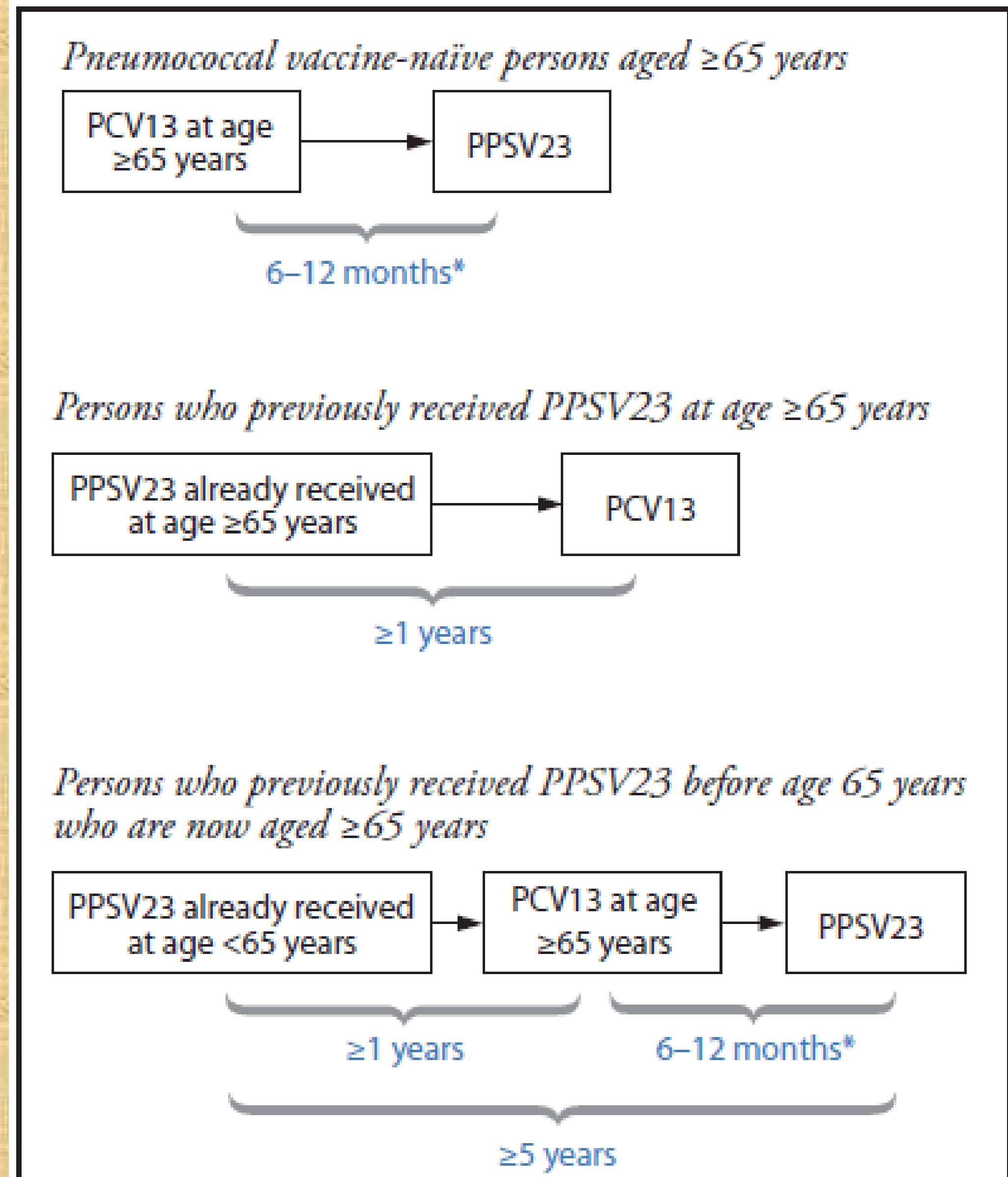
- Prior pnvx
- Residence of long term care facility
- Contraindication to vaccine / flu vaccine
- Allergy to vaccine
- Inability to get flu
- Immunodeficiency / suppression

CAPITA

85,000 participants

- **45 %** fewer episodes of vaccine-type pneumonia ($p=0.0006$)
- **45 %** fewer first episodes of non-bacteremic / non-invasive vaccine type CAP ($p=0.0067$)
- **75%** fewer first episodes of vaccine type invasive pneumococcal disease ($p= 0.0005$)

ACIP Recommendations



Sir James Black Centre

Beta Blockers

REACH TRIAL

Primary outcome: CV death, nonfatal MI, nonfatal stroke.

Secondary outcome: primary outcome plus hospitalization for atherothrombotic event or revascularizaton

- Known prior MI cohort
  - HR 0.90 p = 0.14
- Known CAD without MI
  - HR 0.92 p = 0.31
- CAD risk factors only
  - HR 1.18 p = 0.02 (higher event rates in β-blocker group)

JAMA. 2012;308(13):1340-1349

Beta Blockers

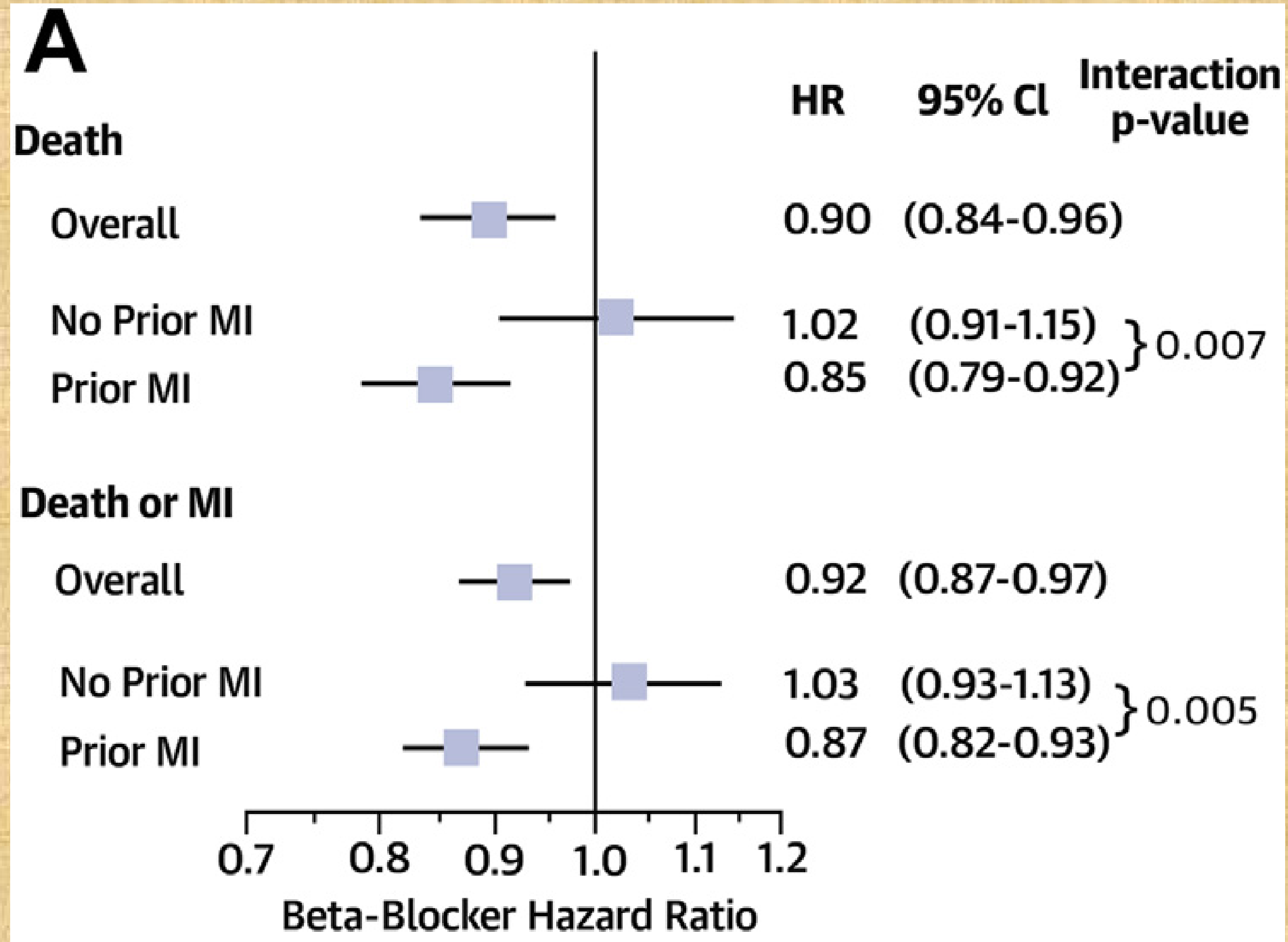
- Followed all patients from 2000-2008 with:

  new diagnosis of NSTEMI, STEMI, unstable angina, CABG, or PCI
- 27,000 patients included in analysis
- Population characteristics
  - Age 65
  - 70% male
  - 50% of patients w/ MI (NSTEMI or STEMI)

JACC 2014; 64: 247-252

Beta Blockers

- Results



- Current guidelines suggest-
  - LVEF < 40 % should get β-blockers (bisoprolol, Toprol XL, Coreg)   evidence 1A
  - 3 years after MI or ACS   evidence 1B
  - Reasonable in patients with coronary or other vascular disease   evidence IIB

Circulation. 2011;124: 2458-2473