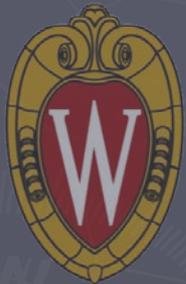


Connecting Challenges and Opportunities in Chronic Musculoskeletal Conditions



WREN 2015



David Rabago, MD

University of Wisconsin School of Medicine and Public Health
Department of Family Medicine and Community Health

National Institutes of Health-NCCIH
Hackett-Hemwall-Patterson Foundation

No Disclosures

UW HEALTH NORTHEAST FAMILY MEDICAL CENTER

Red Team



Challenges

- ▶ Therapy for MSK pain is often ineffective
- ▶ Understanding of disease is changing
 - Multifactorial
 - Complex, Less inflammatory, More degenerative
- ▶ Most Common Conditions
 - Low Back Pain
 - Overuse tendon disease (tendinopathy, plantar fasciopathy)
 - Osteoarthropathy

Challenges

- ▶ Calls for new innovative therapy and care plans for common conditions
 - Agency for Healthcare Research and Quality
 - Institute of Medicine
 - NIH, DoD
 - Patients!

Case: Knee Osteoarthritis

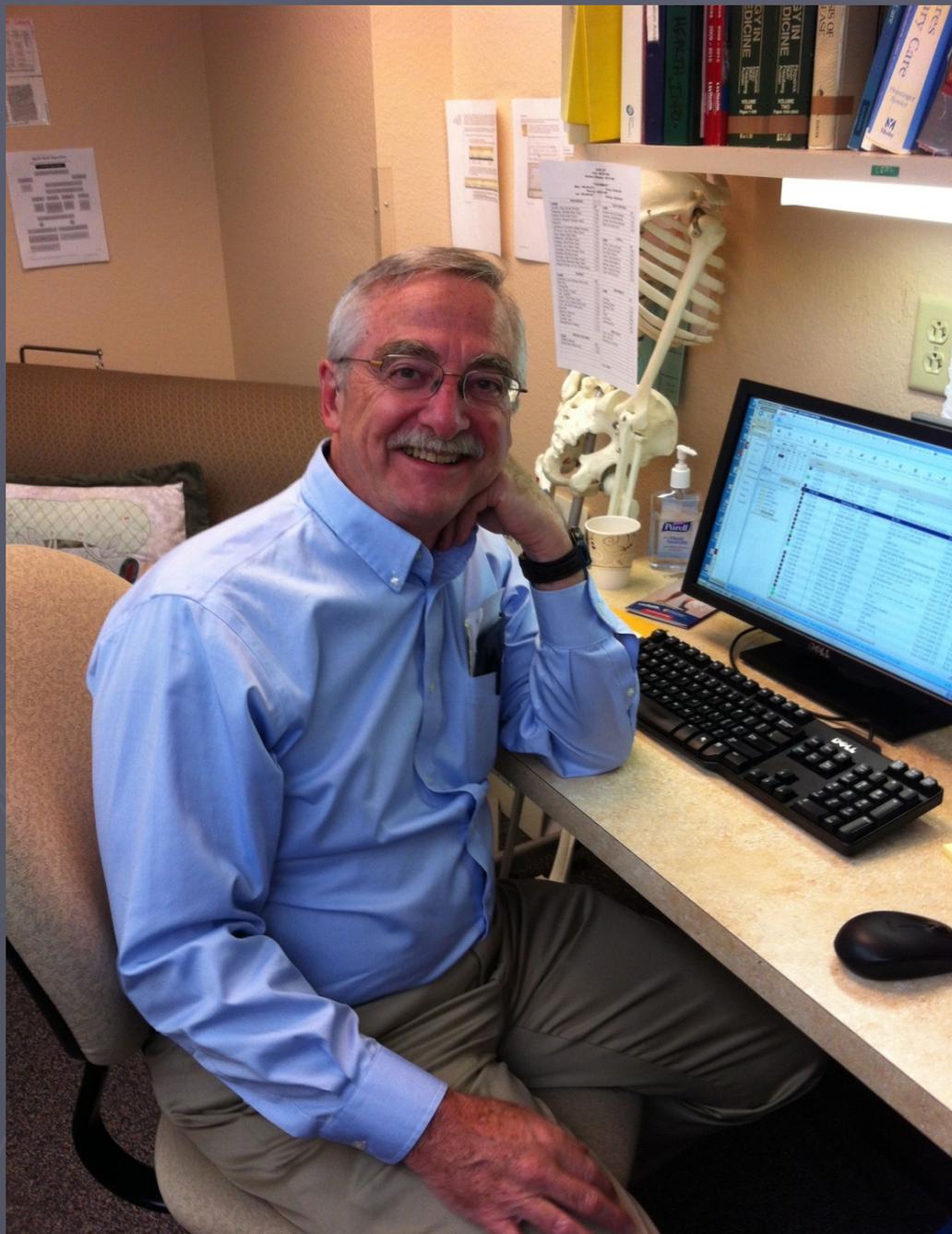
- ▶ Ben 61 yo male; generally well; BMI 29
- ▶ Progressive knee OA on clinical and radiological exams; increased pain with activity and overall reduced function
- ▶ Tried weight loss, PT, NSAIDS, HA injections
- ▶ He has difficulty at events of his grown children, and with playing with his grandchildren



Opportunity

► Find Better Therapy





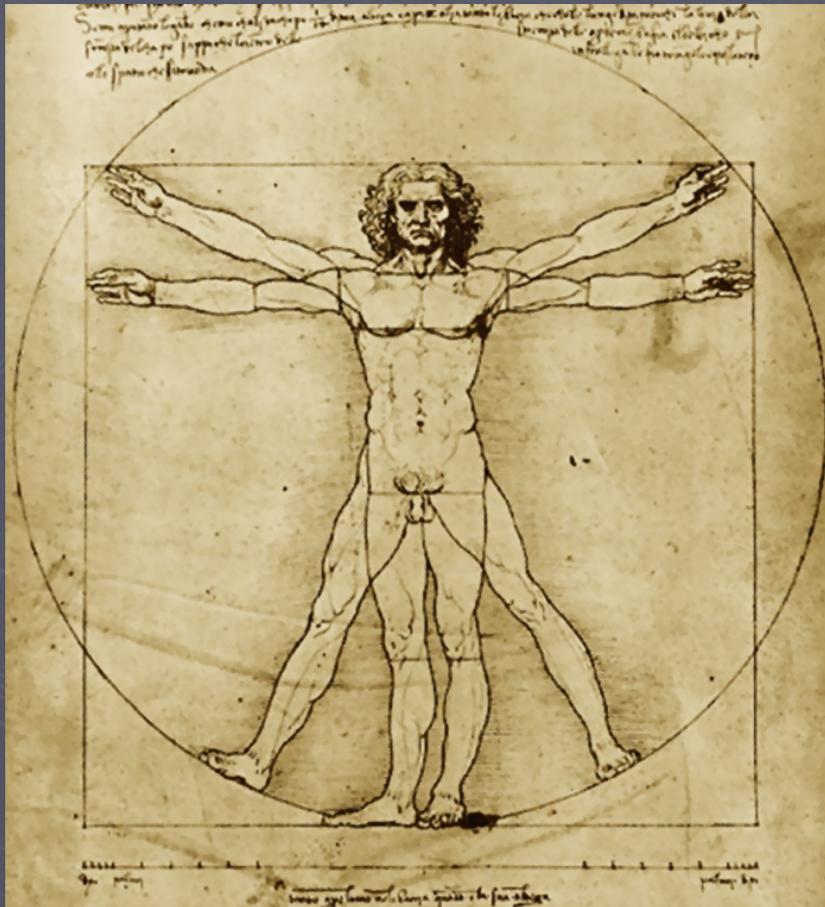
Jeff Patterson

Doctor
Teacher
Friend

Opportunity: Innovate

- ▶ Prolotherapy is an injection therapy for chronic MSK pain (LBP, tendinopathy, OA)
- ▶ Multiple injections at ligament and tendon attachments, and within joints
- ▶ Hypertonic dextrose most common injectant
- ▶ Mechanism of action unclear; multifactorial
 - Stimulates local native healing
 - ▶ Inflammation
 - ▶ Growth factors
 - ▶ Direct Neurogenic Response, Reduced Pain Response
 - ▶ Other?

Reduce Pain and Disability Restore Overall Integrity



Leonardo Da Vinci



06.16.2004

Prolo RCT for Knee OA: Hypothesis

- ▶ Prolotherapy can safely improve knee pain, stiffness and function c/t Controls and...



Knee OA Trial: Recruitment

**Clinic Records
Screen/Media/Direct**

Phone Screen

Case Series

**Meeting (Consent,
Randomization, Baseline Status)**

**Meeting (Info, Consent,
Q'naires)**

**Exercise
N=31**

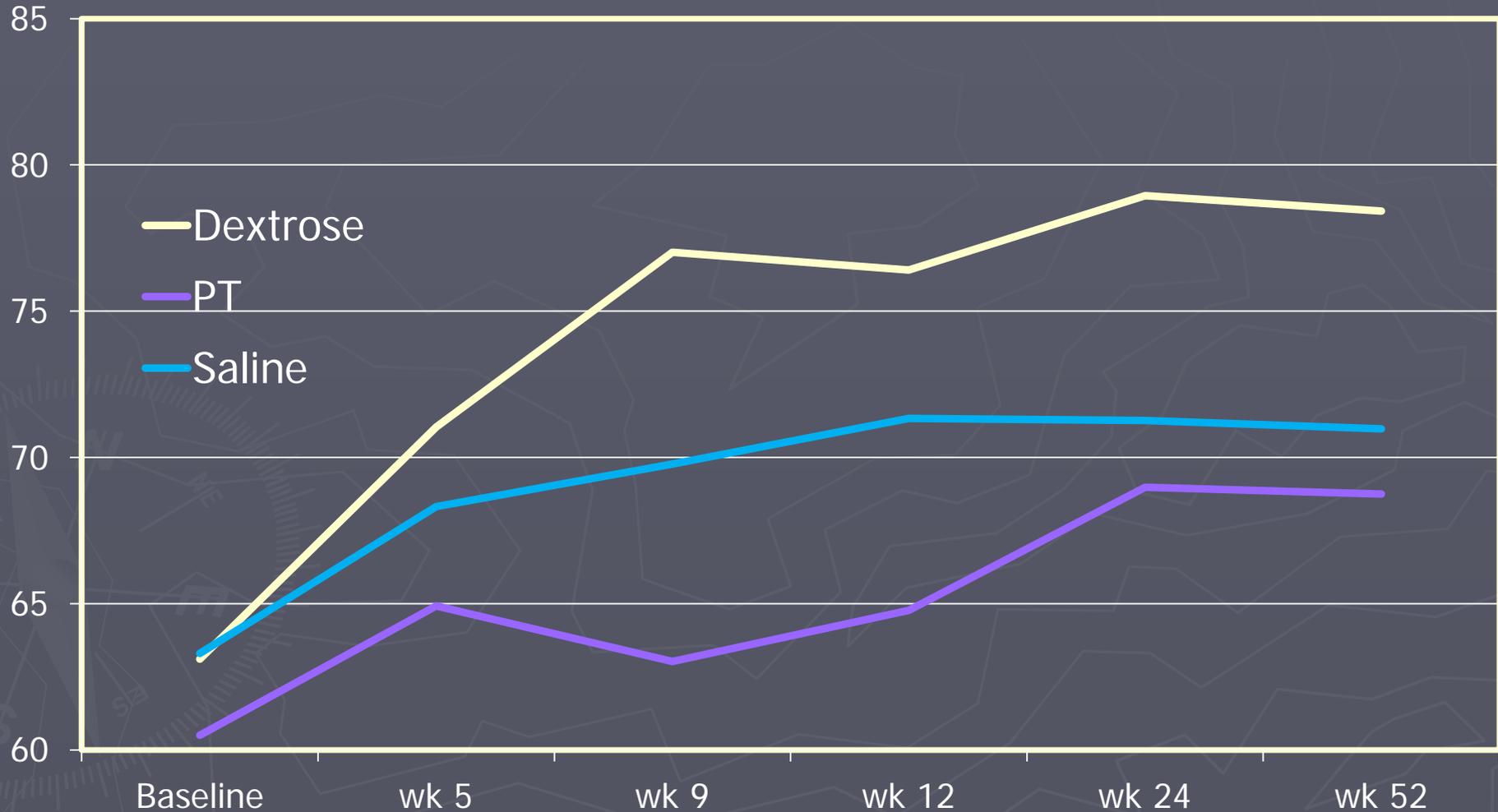
**Saline
N=29**

**Dextrose
N=30**

**Dextrose
N=36**

**Follow up questionnaires
5, 9, 12, 24 & 52 weeks**

Change in WOMAC Composite Scores over 12 Months



Change in WOMAC Composite Scores over 12 Months



What about longer term?



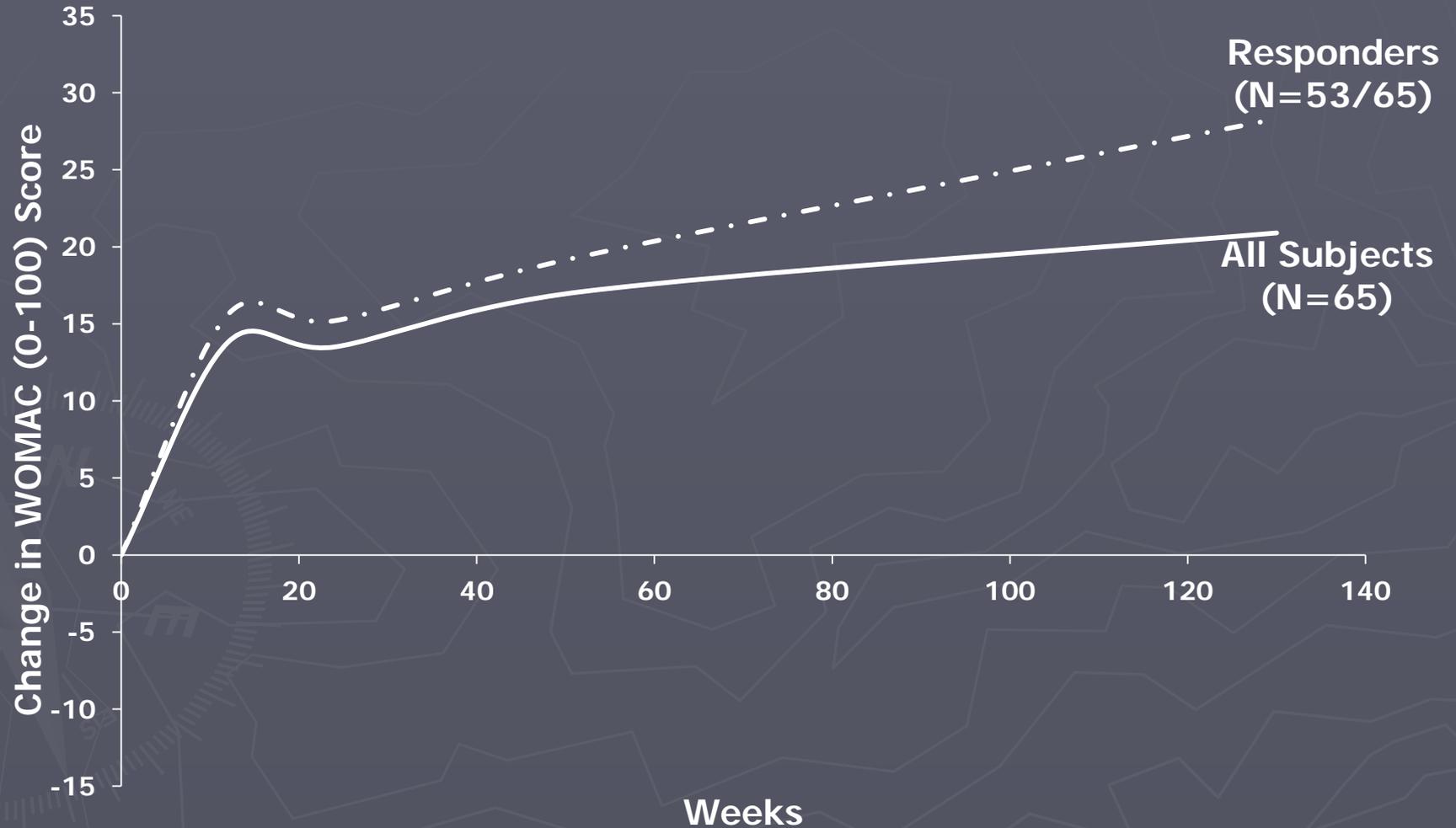
Long-Term Follow-Up



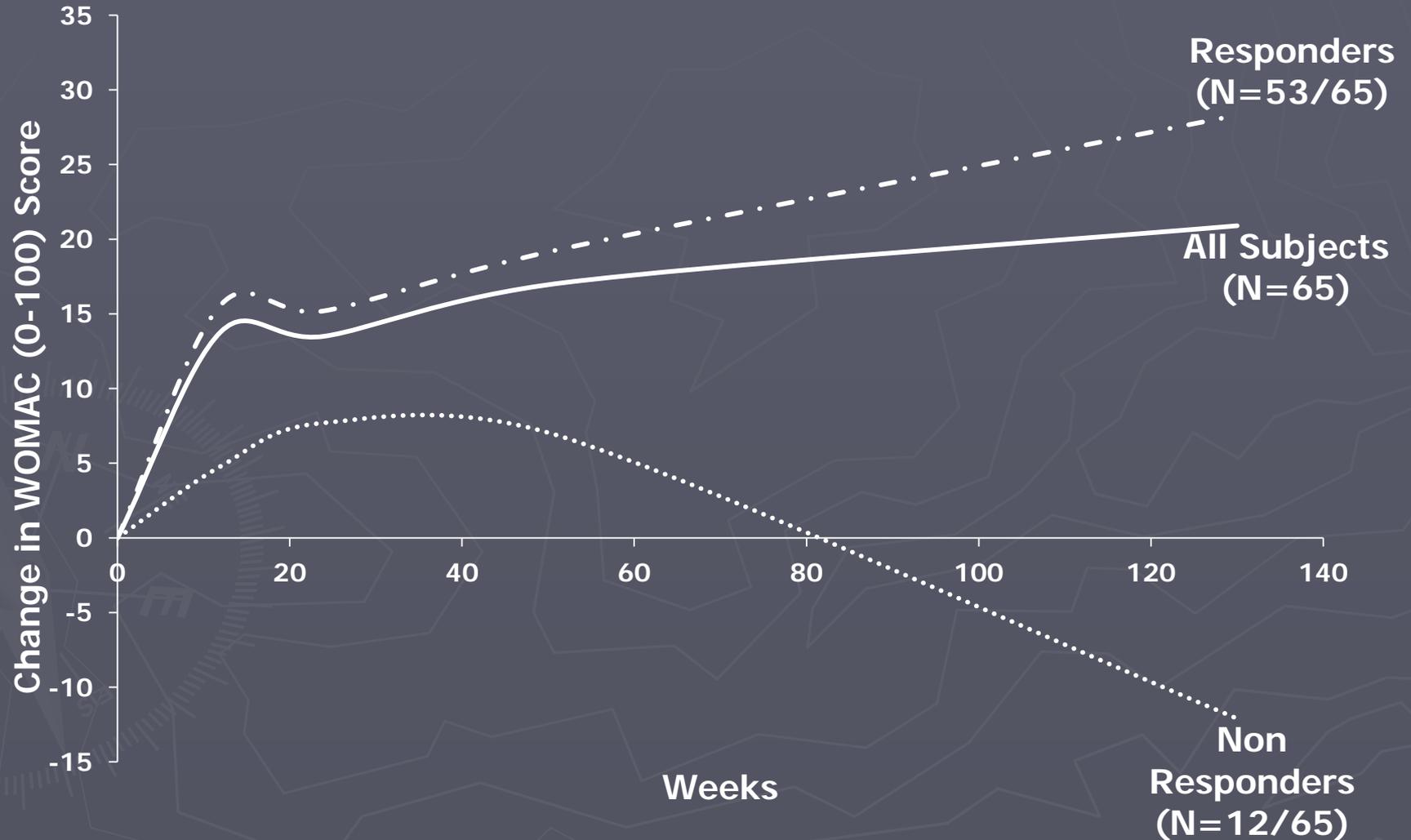
Long-Term Follow-Up



Long-Term Follow-Up



Long-Term Follow-Up



Clinical Context

- ▶ Rigorous methodology
- ▶ Substantial improvement c/t baseline among prolotherapy participants for most
- ▶ Safe, well tolerated, high satisfaction
- ▶ Compare well to standard of care
- ▶ Covered by Unity, but only Unity

Case: Knee Osteoarthritis

- ▶ Ben 61 yo male; generally well; BMI 29
- ▶ Progressive knee OA on clinical and radiological exams; increased pain with activity and overall reduced function
- ▶ Tried weight loss, PT, NSAIDS, HA injections
- ▶ He has difficulty at events of his grown children, playing with his grandchildren
- ▶ **Post-Prolo: increased activity, decreased pain; danced at daughter's wedding; plays with grandkids; satisfied at one year.**

Take Intellectual Risks: Assess new therapy

▶ Regenerative Therapy

- Prolotherapy
- Platelet Rich Plasma
- Mesenchymal Stem Cells

▶ Manual Therapies

- Osteopathy

▶ Others

▶ Accessible team based care

Thanks!

