

Connecting Challenges and Opportunities in Chronic Musculoskeletal Conditions



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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

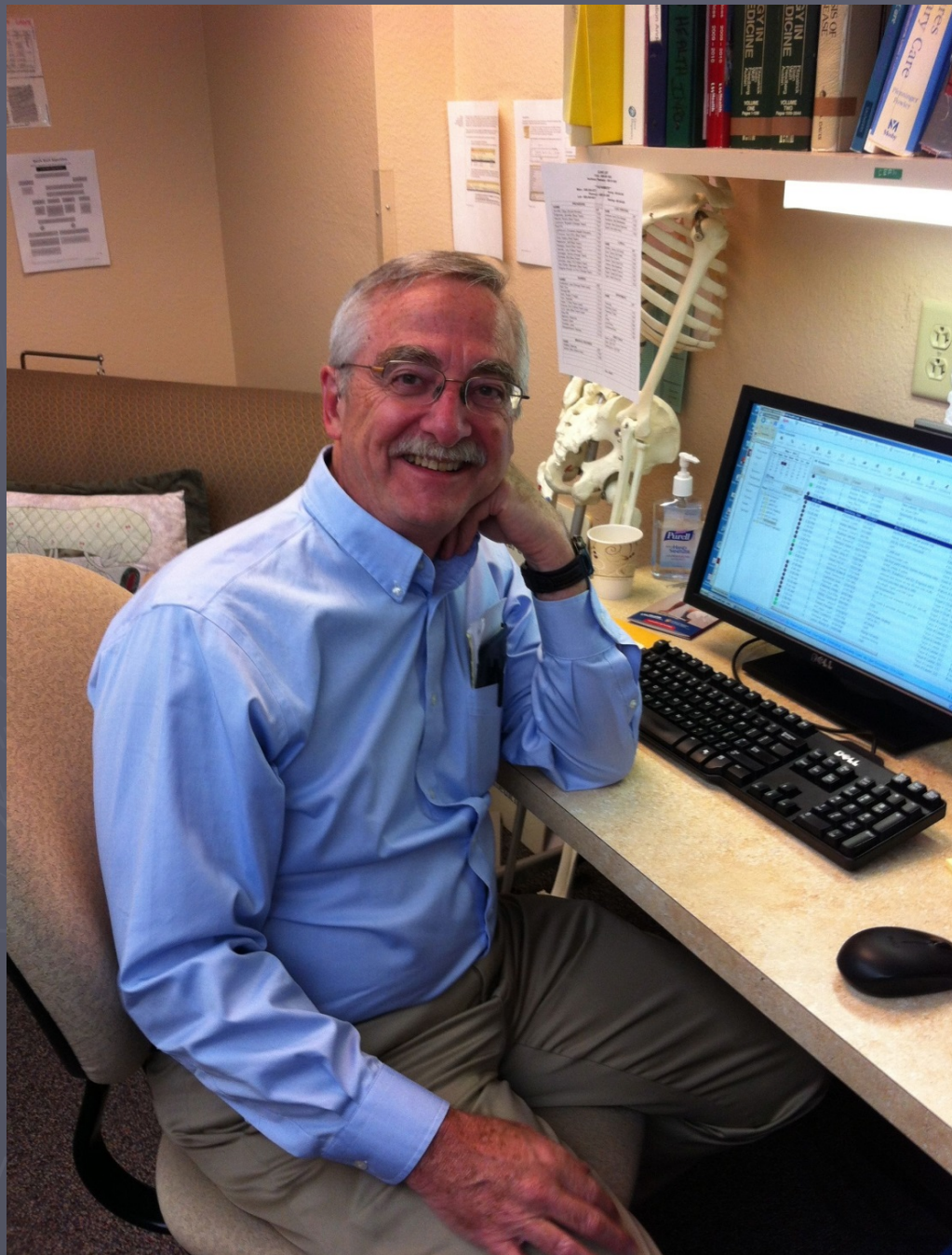
- ▶ Ben 61 yo male; generally well; BMI 29
- ▶ Progressive knee OA on clinical and radiological exams; increased pain with activity and overall reduced function
- ▶ Tried weight loss, PT, NSAIDS, HA injections
- ▶ He has difficulty at events of his grown children, and with playing with his grandchildren



Opportunity

► Find Better Therapy





Jeff Patterson

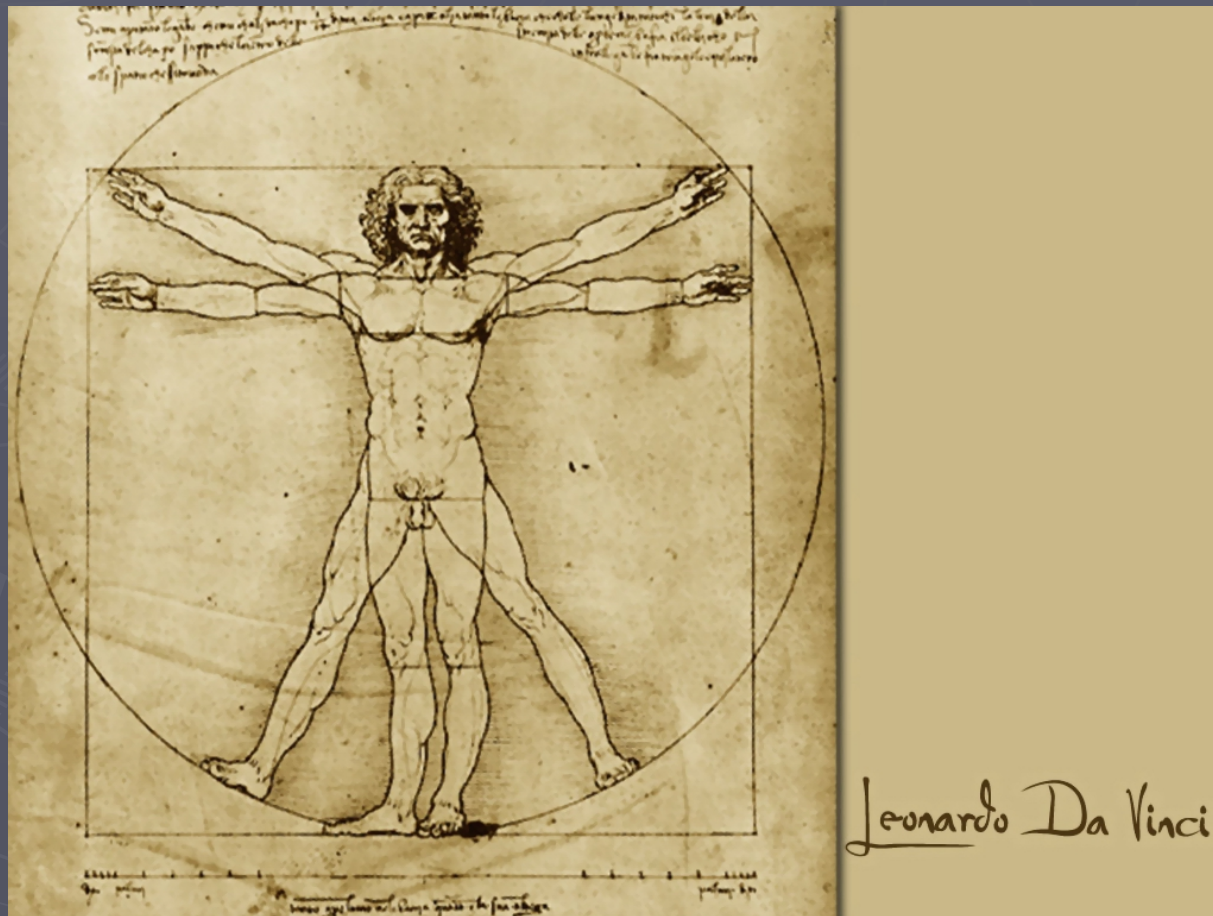
Doctor
Teacher
Friend

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





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**

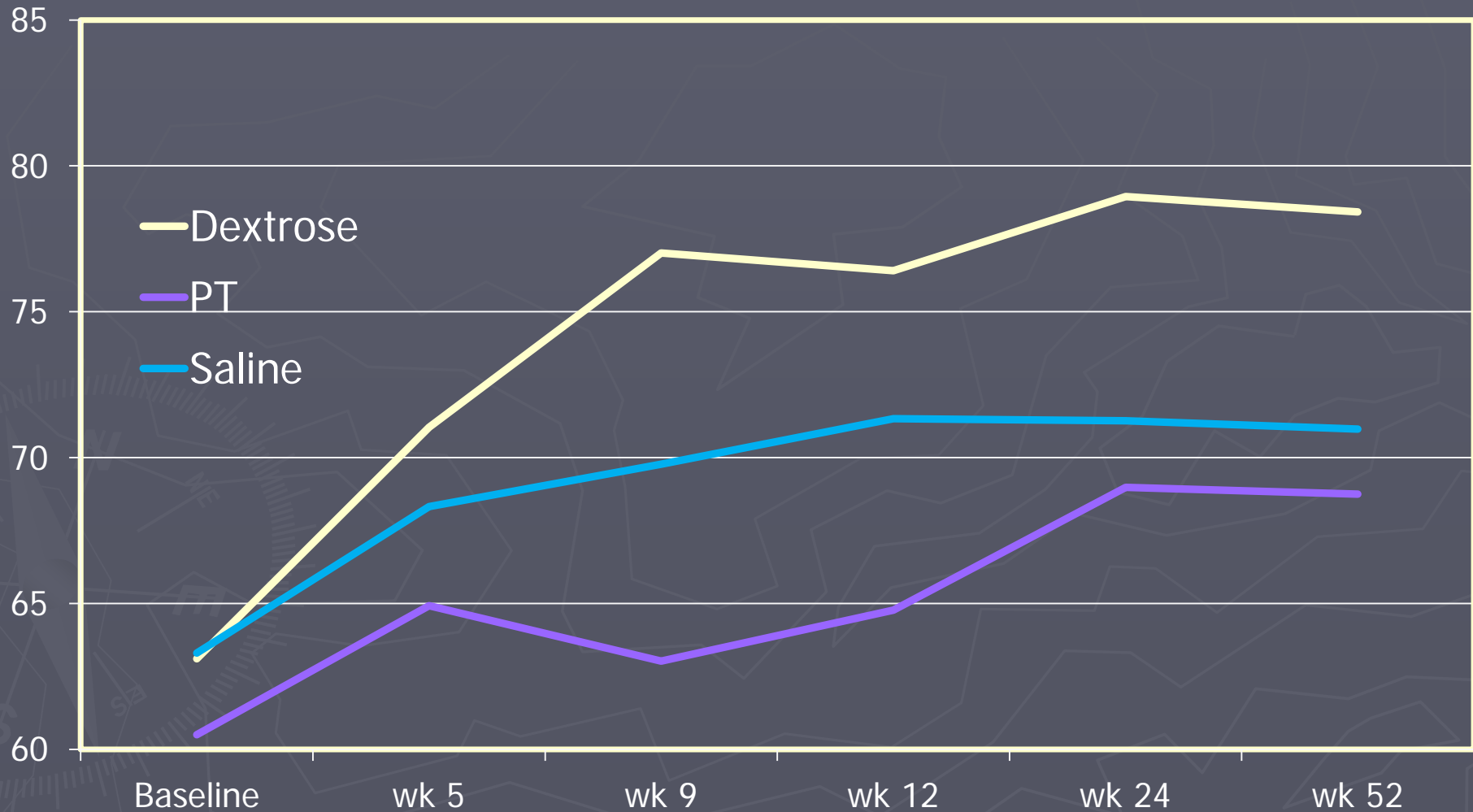
**Saline
N=29**

**Dextrose
N=30**

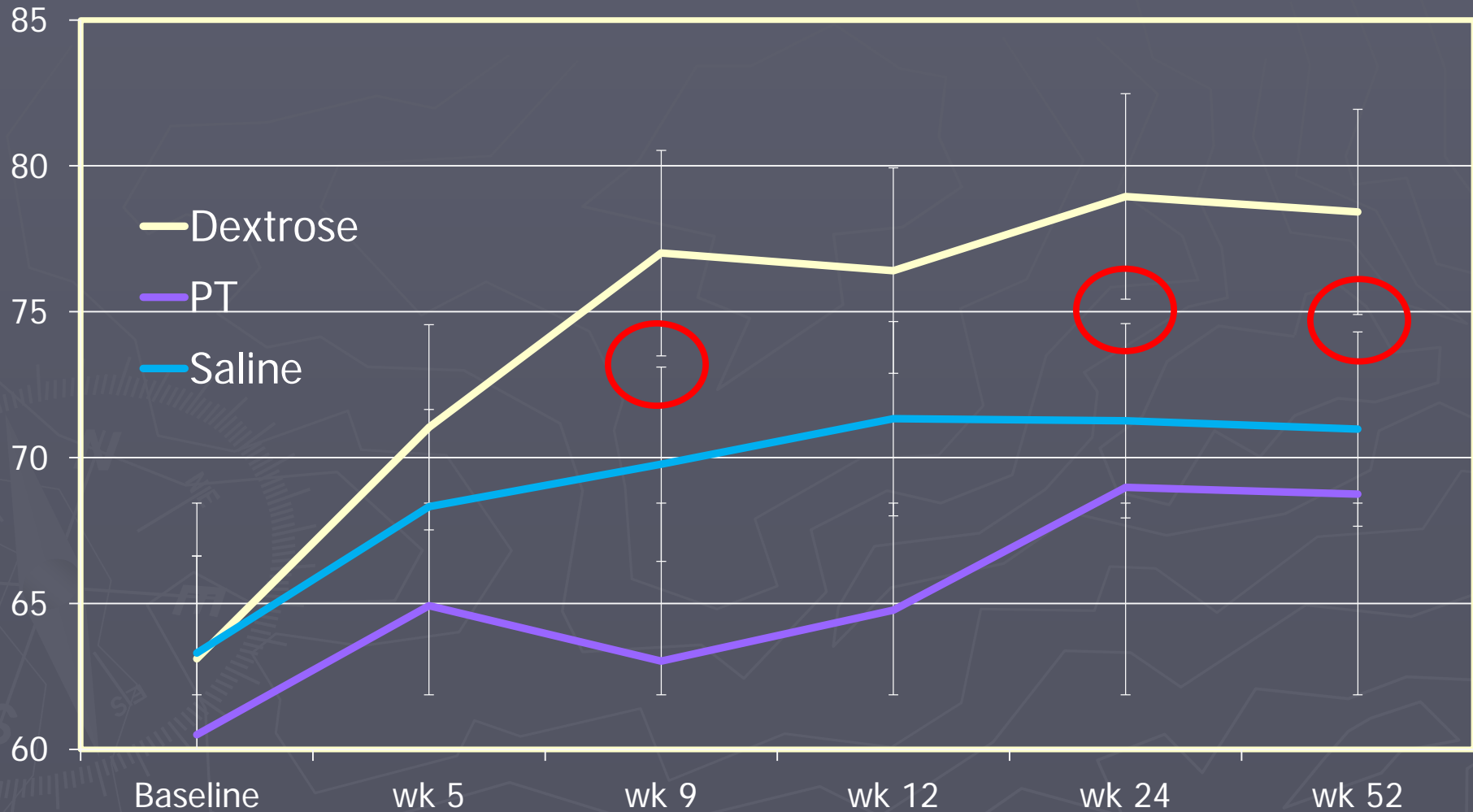
**Dextrose
N=36**

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

Change in WOMAC Composite Scores over 12 Months



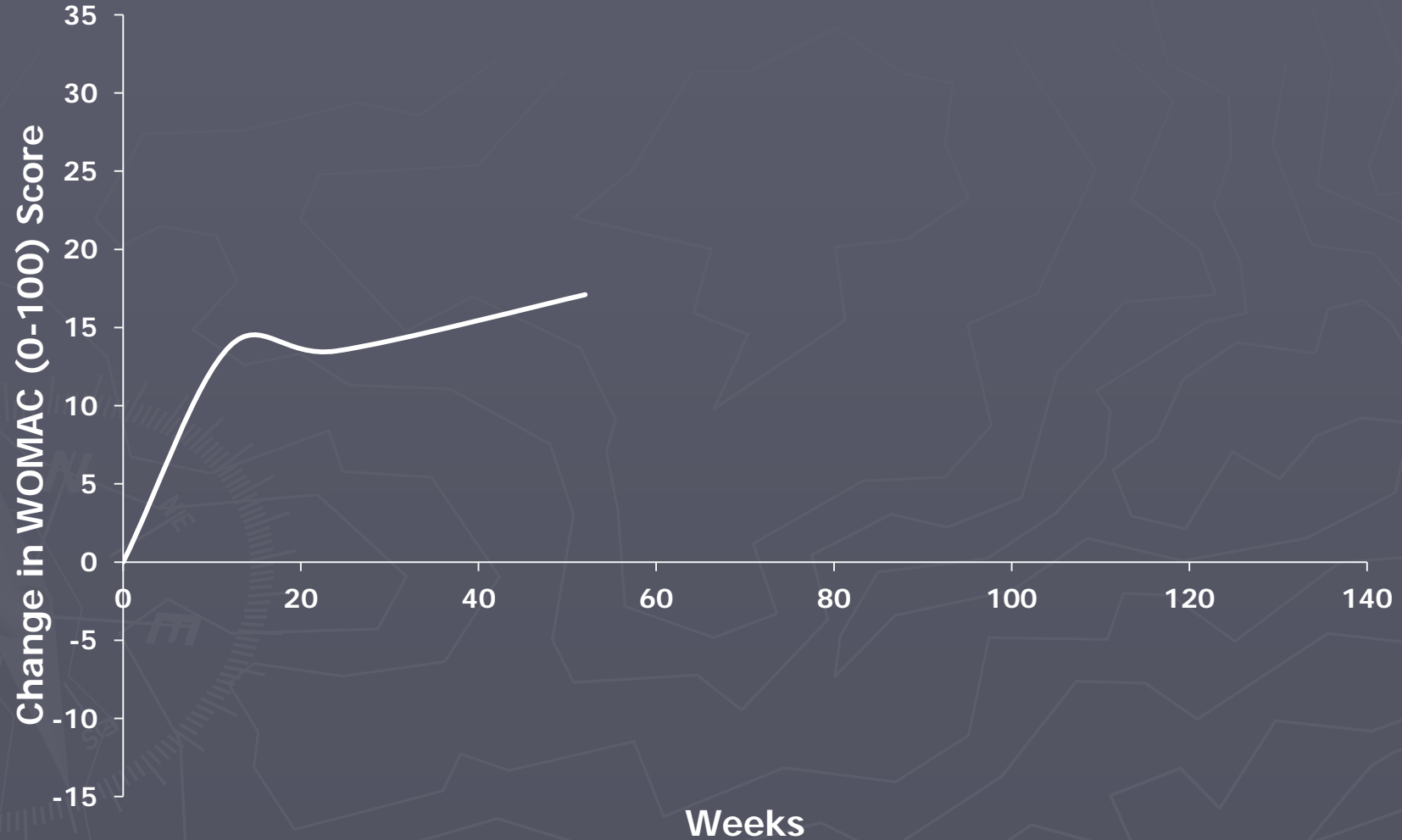
Change in WOMAC Composite Scores over 12 Months



What about longer term?



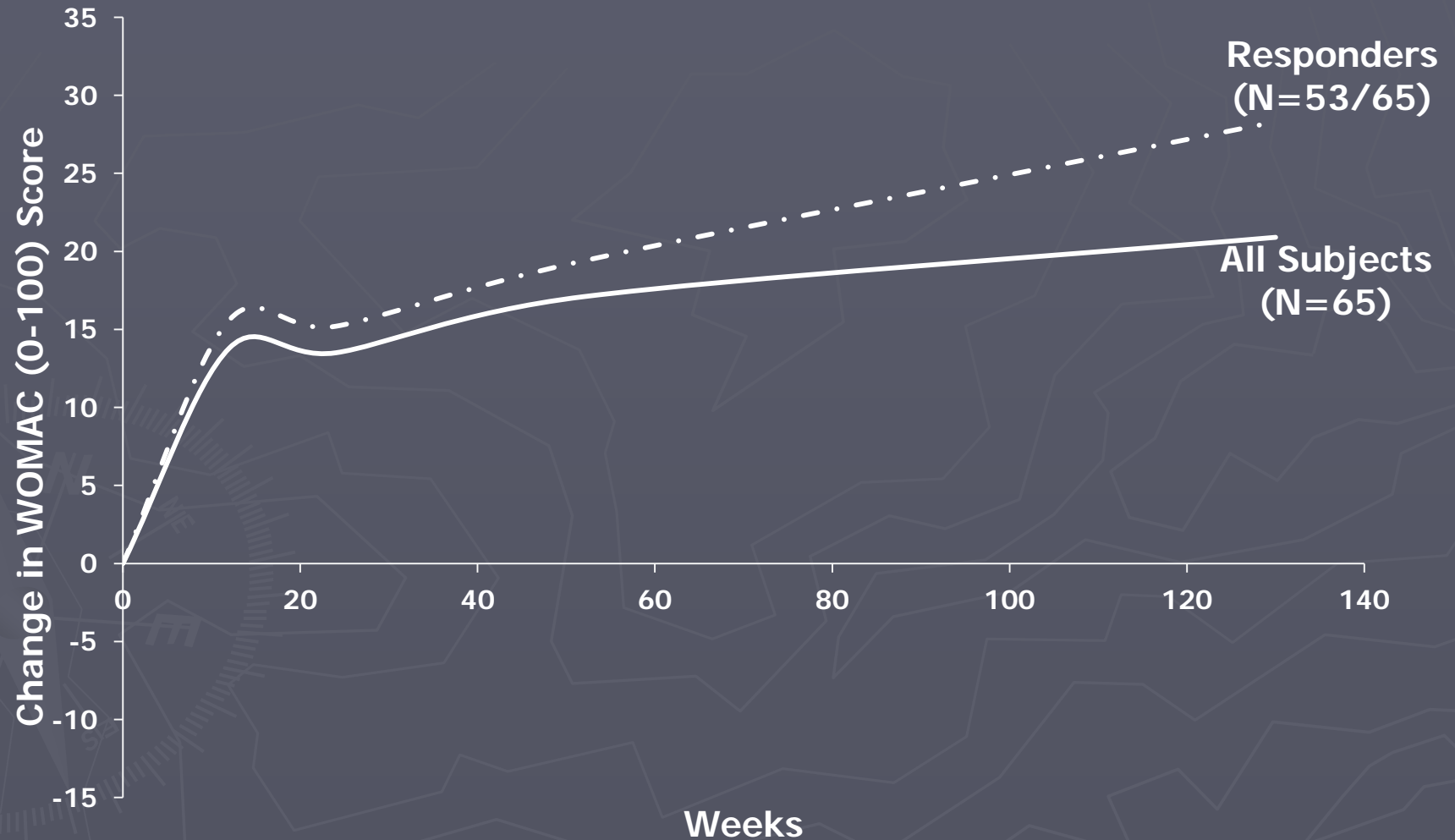
Long-Term Follow-Up



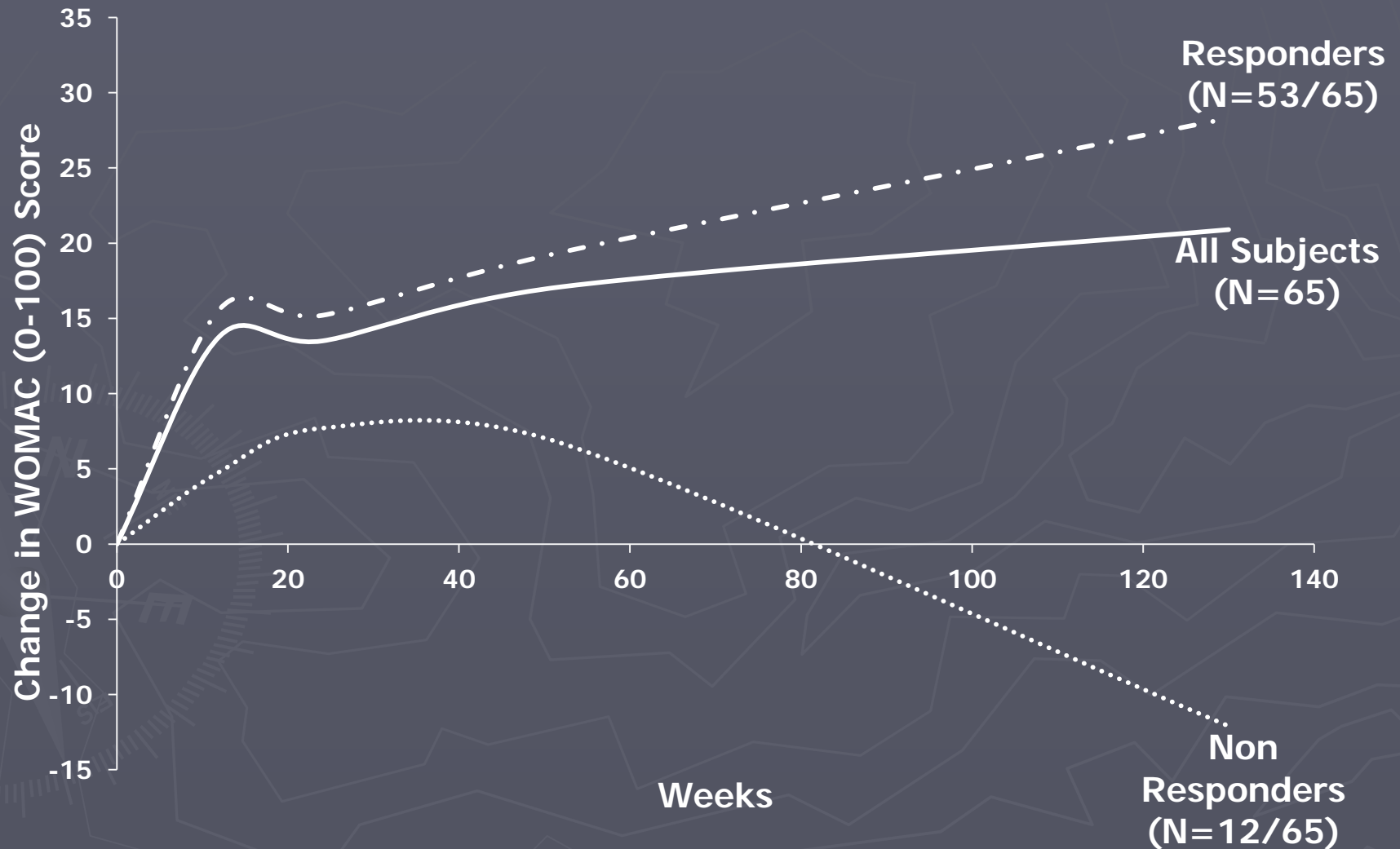
Long-Term Follow-Up



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

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- ▶ 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!

