# Interventional Pain Management- A Call to Change the Paradigm for the Treatment of Persistent Musculoskeletal Pain following Injury

**Scott E. Glaser, MD, DABIPP**
President, Pain Specialists of Greater Chicago
www.painchicago.com

# Are We Making Any Progress?

1. Individuals in pain from treatable causes transition from subacute to chronic musculoskeletal pain after injuries
2. The current treatment pathways are driving poor outcomes, excessive opioid use, high costs, disability, and low patient satisfaction
3. Counter-intuitive in a patient-centric, value based, payment environment

# Physicians need to address the cost of care before payors/regulators

- Musculoskeletal (MSK) pain costs the US $254 billion per year
- One in 7 Americans (36.4 million people) have musculoskeletal pain and impairment that limits or decreases their ability to function at home, work, or at play
- Two thirds of Workers Comp cases involve painful conditions of the musculoskeletal system

# Costs of Musculoskeletal Pain (MSK Pain)

- 29-35% of all occupational injuries and illnesses involving days away from work in the United States (AFL-CIO).
- 9.4 billion dollars spent on inpatient stays for lower back pain
- 7.3 million ER visits for lower back pain

# Current Paradigm- Fueling the Opioid Crisis

- Symptoms secondary to musculoskeletal pain too often treated with opioids as location of pain goes under or untreated
- This has led to devastating long term consequences for individuals, families, society
- Over 95% of patients presenting to our pain management center have had access to opioids during their treatment path.

# Acute/Subacute/Chronic Pain

- Must disrupt current system and conventional wisdom
- What has led to this state of affairs?
- What can be done to change it?
- To improve outcomes, IPM doctors need to coordinate and provide care

# Solving a National Dilemma

- Examine how patients access the care system when pain persists and channel them to care providers treating the patient utilizing a systematic approach and showing measurable outcomes
- IPM doctors are qualified by their expertise to provide care for subacute MSK pain to change the paradigm

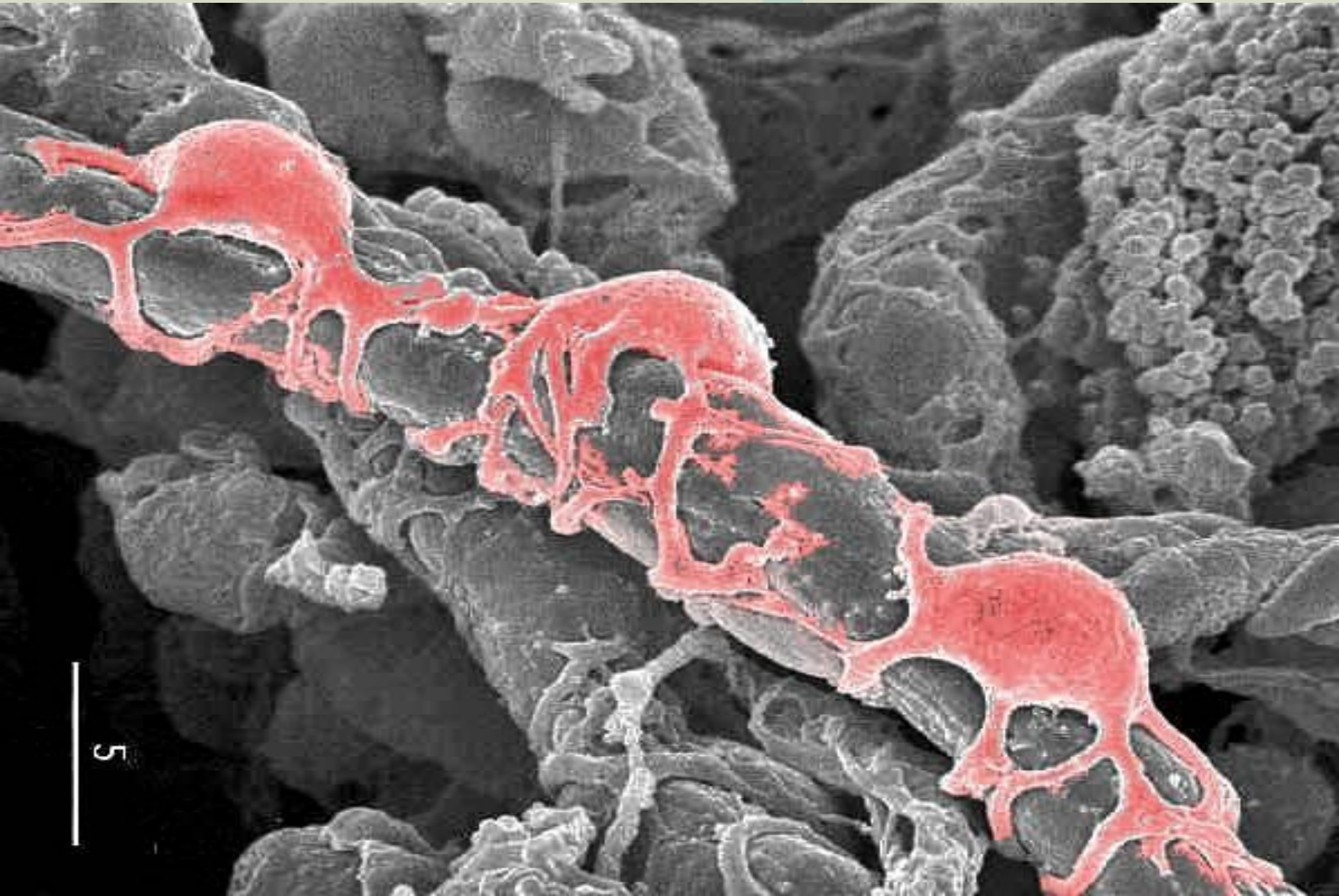
# New Paradigm

1. Confronting the current challenge
2. Experts in minimally invasive treatment of the sources of pain coordinate care and provide interventional treatment
3. Symptoms managed safely while sources of pain identified/treated

# Typical Start of MSK Pain

- Almost uniformly, pain has a starting point
- All body tissues (skin, gut, muscle, bone) respond to injury with inflammatory response
- Tissue not proximal to blood vessels will not heal with time if injury severe enough secondary to lack of stem cells
- Cartilage in joints (articular surfaces) and Tendons/Ligaments at risk for persistent pain following injuries (MSK pain)

# MSCs (Stem Cells) on Blood Vessels



# Cartilage in Joints

- In poorly perfused tissue, inflammatory response does not lead to healing, only continuous inflammation/pain
- Most common sources of persistent pain following injury- cartilage in articular surfaces
- Most common location of articular surfaces- spinal canal
- Spine pain most common persistent pain

# Acute/Subacute Pain

- Trajectory of symptoms following onset of pain is key
- Painful symptoms -improve and resolve, improve and plateau, stay the same, or worsen
- 3 trajectories lead to persistent symptoms

# Current Treatment Paradigm for Acute/Subacute Pain

- Evaluation and symptom management by primary care/OC med/orthopedic doctors/chiropractors/company doctor
- Physical therapy
- Imaging
- Referral to ortho or spine surgeon

# When Pain Persists

- The frustrated patients begin to search for other options including chiropractic tx, medications, and other methods of symptom management
- Inordinate concern re benign MRI findings
- Minimally invasive treatment provided sporadically or not at all
- No one takes responsibility for patient and outcomes

# Current Paradigm

- This approach has led to multiple doctors and other care providers involved in treatment without a strategic/systematic approach
- IPM doctors need to step up and provide care for subacute pain to change this paradigm

# Current Paradigm

The outcome of the current paradigm is obvious- delay in diagnosis, dangerous symptom management with opioids, lack of minimally invasive options, increased rates of surgery, increased hospitalizations, ER visits for pain/overdosage, lost work days, increased disability rates.

# New Paradigm- Goals

- Goals of new paradigm- reduced ER visits for pain, reduction in unnecessary diagnostic testing, reduced surgical rates, reduced hospitalizations and rehospitalization
- Concomitant goals- reducing lost work days, disability, overdosage, and death

# New Paradigm- Care Directed by IPM Physician

- This approach to musculoskeletal pain relies on expertise in diagnosing and treating painful disorders minimally invasively and educating the patient
- It relies on expertise and training in interventional treatment and in the therapeutic use and management of opioids

# Interventional Pain Management

- Interventional Pain Management specialists most qualified and ideal doctors to manage, diagnose, and treat persistent pain minimally invasively
- Education and training in risks/benefits of all methods of symptom control
- Knowledge of lack of sensitivity and specificity of exam, diagnostic tests

# Interventional Treatment of the Source(s) of Pain

- Once pain is clearly persisting, or earlier if severe, IPM doctor equipped to treat and diagnose sites of pain utilizing minimally invasively procedures and treatment algorithms
- As pain reduced with treatment, patient develops trust, hope, knowledge of options, risks and benefits

# Most Common MSK Pain-Spine

- Persistent spinal pain is secondary to large number of intervertebral joints that can be sources of pain and proximity of spinal cord and nerve roots.
- Payors, patients, and most medical providers have a significant knowledge deficit regarding spinal pain, its causes, and effective treatment
- This deficit propels the current costly and ineffective paradigm of care for spinal pain

# Spine Pain- Axial and Radicular

- Prime example of MSK pain syndrome whose treatment paradigm is being changed (slowly) by IPM physicians
- Well researched, effective, minimally invasive treatments for radicular and axial symptoms
- Published peer reviewed guidelines based on systematic reviews of the literature

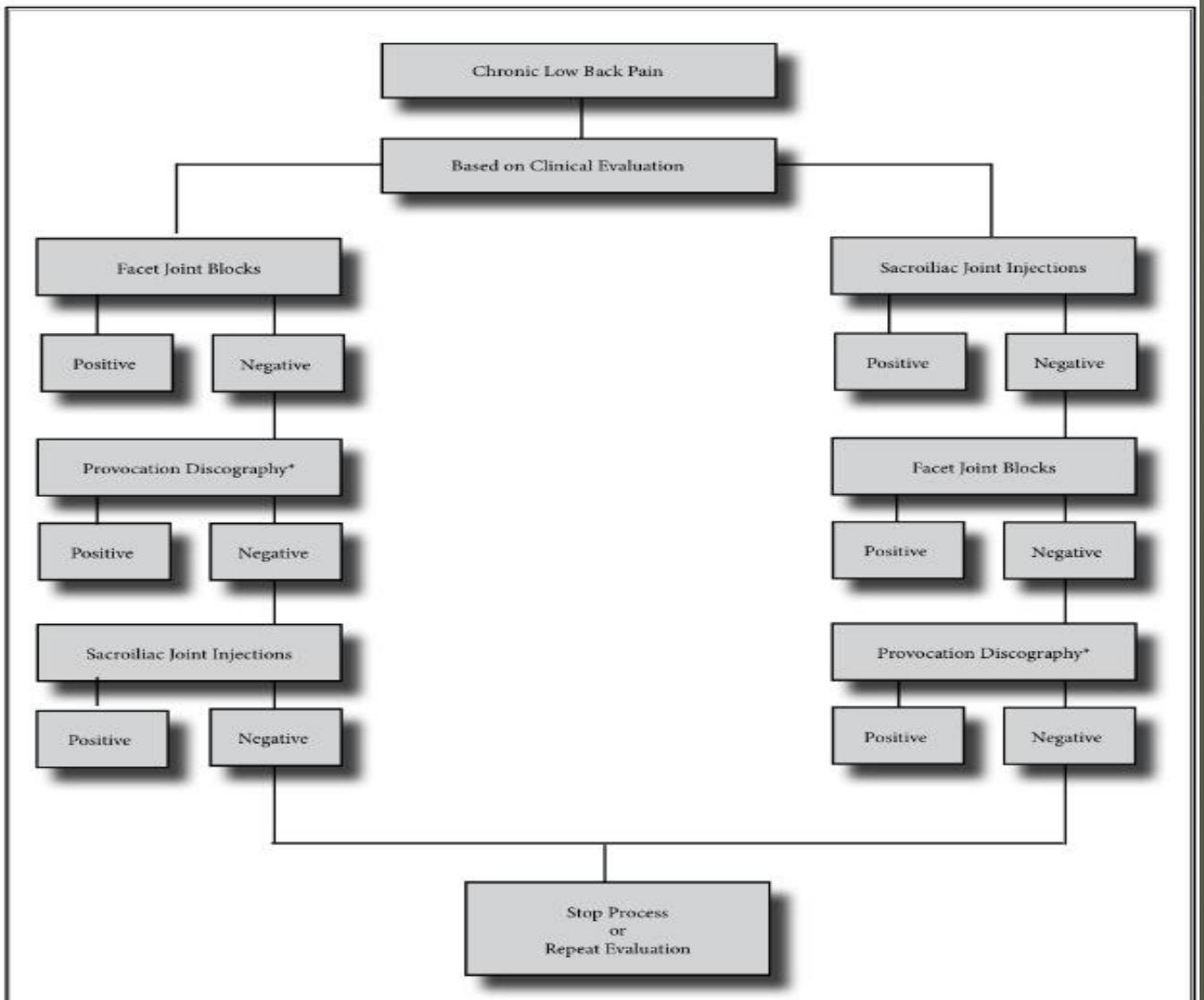



Fig. 9. *An algorithmic approach to diagnosis of chronic low back pain without disc herniation.*
* Discography is performed if an appropriate treatment is available.

- Current Paradigm
  - Delayed diagnosis
  - Dangerous symptom management
  - Surgery
  - Hospital and ER admissions
  - Lost productivity
  - Disability
  - Chronic pain

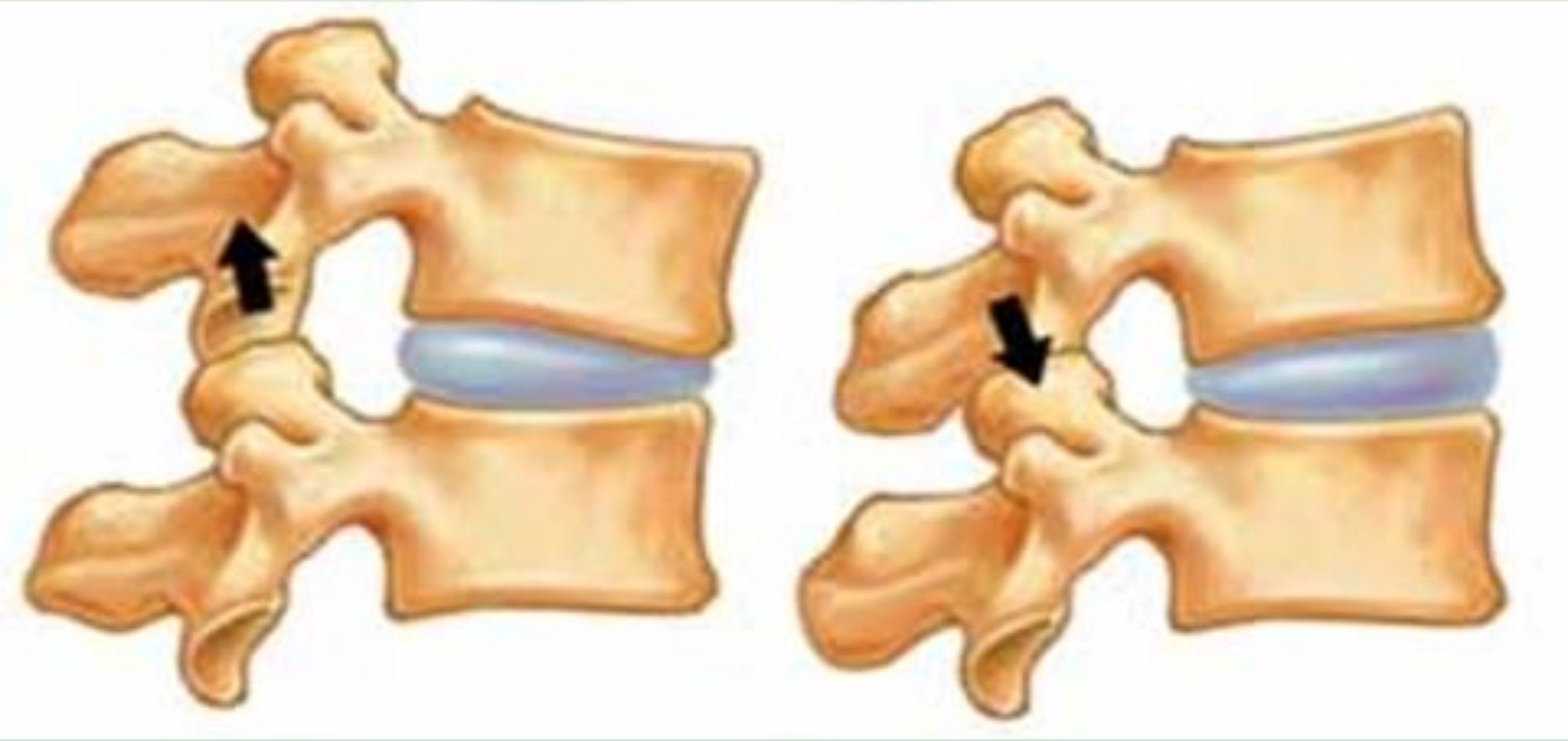
- New Paradigm
  - Access to prompt treatment
  - Safe symptom management
  - Treatment of sources of pain minimally invasively
  - Decreased costs of tx
  - Decreased loss of productivity
  - Patient satisfaction

# New Paradigm- Diagnosis/Treatment

- Axial pain- facet joints (70%), disc joint, sacroiliac joint
- Radicular pain- nerve inflammation secondary to proximity of nerve roots to these spinal joints (sciatica)
- Published interventional treatment pathways for each source of pain- National Guideline Clearinghouse

# Old Paradigm/New Paradigm

- When spinal pain persists, it can be assumed it is an intervertebral joint and/or nerve root
- 2 ways to try to reduce pain caused by inflamed intervertebral joints/nerve roots- minimally invasively or surgically
- IPM procedures- reducing nociceptive impulses from joint, reduce pain from inflamed nerves



# Old Paradigm/New Paradigm

- Spine Surgeon

- Treats sources of pain with decompressive or fusion surgery or combination
- Peri-operative complications
- Risk of failure or surgery or worsening of symptoms or new pain syndrome (FBSS)
- Accelerated degeneration adjacent segment

- IPM Physician

- Treats sources of pain minimally invasively
- Manages symptoms avoiding opioids
- Marked improved function
- Marked decrease in pain
- Durability of results

# Radicular Pain- New Paradigm

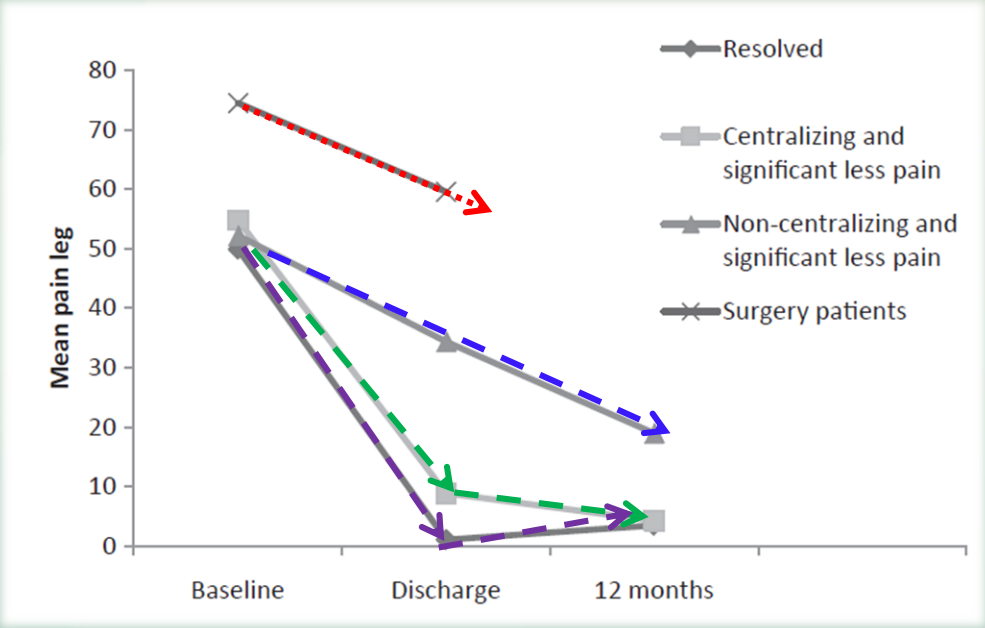
**69** consecutive patients with HNP and radiculopathy, deemed to be surgical were given **TF ESI *followed by* *MDT* Therapy** for **12 months**

**11: Complete resolution**

32: Marked improvement, 90% satisfaction and centralization

11: Improved but no centralization

15: Needed surgery




Van Helvoirt H et al. Transforaminal epidural steroid injections followed by mechanical diagnosis and therapy to prevent surgery for lumbar disc herniation. Pain Med 2014; 15:1100-8

# Axial Pain- New Paradigm

- Unpublished data from our practice
- Over 50% of subacute pain patients discharged after intra-articular facet injections +/- medial branch blocks
- Significantly less than 1% end up having surgery
- If/when pain recurs, patients return to us

# New Paradigm for Subacute Pain

1. Education/behavioral modification to maximize function, prevent recurrences
2. Appropriately/safely managed symptoms
3. Identification/treatment of sources of spinal pain with minimally invasive procedures performed algorithmically

# New Paradigm in Action

- This goal is accomplished through early recognition, timely pathway guided interventions, accessibility, and responsiveness to exacerbations or lack of improvement
- Subacute care providers providing counseling for patients with physician extenders and seeing patient in 1-2 days for acute exacerbations

# New Paradigm- Diagnosis/Treatment

- Well trained IPM doctor serves as cardiologist of spine
- Knowledge of lack of sensitivity and specificity of imaging, physical exam
- Diagnosis and treatment of the causes of spinal pain minimally invasively

# Regenerative Medicine

- Future additional step in algorithm- regenerative medicine
- Placing stem cells in joints for pain relief
- Not only reduction in painful symptoms but evidence of improvement in joint architecture and function

# New Paradigm- Overview

- Spinal pain, like cardiovascular disease, is managed with lifestyle adjustment, behavioral modification, medication management, while utilizing minimally invasive procedures to treat the sources of pain to improve quality of life and maintain function
- IPM physicians are uniquely qualified to manage care of spinal pain

# New Paradigm- Education

- Patient needs to be educated regarding the causes of their pain and their diagnostic findings to reduce fear/avoidance behavior
- Education regarding MRI findings
- Over 90% of 50 yr olds have bulging or herniated discs, 10-14% have pain

# New Paradigm in Action

- We see dozens of new patients per week injured in recent days/weeks/months
- Minimal opioids, accessibility of care, open communications, respond to concerns, education, access to timely algorithmic interventional treatment

# Recap- Current Paradigm

- Drivers of excessive costs can be identified: fractured, delayed, redundant, ineffective care and excessive surgery
- Ignorance of specific causes and minimally invasive treatment options
- Promiscuous treatment with opioids with drastic unintended consequences

# Recap- New Paradigm

- A new paradigm led by well trained, board certified, motivated, and accessible Interventional Pain Management physicians can reduce costs and improve outcomes
- This is achieved via taking responsibility for the continuum of conservative and minimally invasive care and symptom management and providing access

# Please feel free to contact me at any time


- Scott E. Glaser, MD, DABIPP
- sglaser@painchicago.com
- Mobile: 630 788-1355


- Publications available at
- www.painchicago.com