Neuropathic Pain

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Chapter 23 in

2016 AAOS Workers' Compensation and Musculoskeletal Injuries

American Academy of Orthopaedic Surgeons

Keypoints

1. The concept of neuropathic pain is *nothing more than a description*. *It is not a scientifically delineated or explained phenomenon*, and *it is not a diagnosis*. *There is no objective, scientifically validated method for determining whether a pain complaint has a neuropathic etiology*.

Keypoints

2. Neuropathic pain has been *re-conceptualized over the past decade*. The purpose of this re-conceptualization is to facilitate "communication among clinicians and researchers", *so that the concept might move "from the domain of beliefs into evidence".*

Keypoints

3. A recent citation analysis revealed that *this modern re-conceptualization has been widely accepted*. Consequently, any information about neuropathic pain which is not based on this modern conceptualization is obsolete or irrelevant.

Keypoints

4. A *method* has been standardized for evaluating an individual case for consistency with the modern conceptualization of neuropathic pain.

Relevance to Workers Compensation and Other Legal Claims?

Real life example, composited from several actual cases...

(Continued...)

Relevance of this chapter on neuropathic pain to legal claims: Composited case example

- 47-year-old male sales rep rear-ends another car while driving his sales route
- Claims left lower extremity pain, attributed to stomping on the brake pedal
- No injury identified (ever)

(Continued...)

Relevance of this chapter on neuropathic pain to legal claims: Composited case example (continued)

- Pain reportedly never subsides
- Referred to pain specialist who claims complex regional pain syndrome (CRPS)
- None of the pain specialist's treatments help, so the pain specialist refers the patient to another pain specialist for spinal cord stimulation

(Continued...)

Relevance of this chapter on neuropathic pain to legal claims: Composited case example (continued)

The spinal cord stimulation doctor documents the "*Primary diagnosis*" as "*Neuropathic Pain Left Leg*"

(Continued…)

What's wrong here?

First pain specialist claims CRPS, while the second pain specialist claims a

"primary diagnosis" of "neuropathic pain"

CRPS has repeatedly been singled out in medical literature as an example of a scenario which does *NOT* involve neuropathic pain

- **Haanpaa et al. 2011 (Official Guideline)**
- **Jensen 2011 (Announcement of Definition)**

(Continued...)

What's wrong here?

First pain specialist claims CRPS, while the second pain specialist claims a

"primary diagnosis" of "neuropathic pain"

CRPS is definitionally incompatible with neuropathic pain

(details provided later in this presentation, and in your handout)

(Continued…)

Relevance of this chapter on neuropathic pain to legal claims: Composited case example (continued)

In deposition, the first pain specialist is confronted with the *FACTS* that …

1. **CRPS was actually created in a fashion that causes it to be inherently non-injury-related**
2. **He did not document any compliance with any diagnostic method for CRPS (Continued…)**

Relevance of this chapter on neuropathic pain to legal claims: Composited case example (continued)

In response to being confronted with these *FACTS*, the pain specialist testifies:

"Let's forget CRPS. He has neuropathic pain in his lower extremity.

The diagnosis is neuropathic pain.

Let's get off CRPS because it's just a waste of time."

(Continued...)

What's wrong here?

- During deposition, the first pain specialist withdraws his diagnosis of CRPS, and claims that the ***diagnosis*** is "neuropathic pain"
- The second pain specialist has claimed a "primary ***diagnosis***" of "neuropathic pain"

Neuropathic pain is specifically defined as *NOT* being a diagnosis

Reference: IASP *Classification of Chronic Pain*

Relevance of this chapter on neuropathic pain to legal claims: Composited case example (continued)

After the claimant's attorney is educated about the *FACTS* (including some that I have not yet mentioned), the case is settled, and the patient is freed from the reliably harmful health effects of being involved in a legal claim.

Bonus Information!

Workers Compensation is reliably bad for the health of the claimants

Examples of relevant referencing:

- ***Caruso, ACOEM Guidelines 3rd Edition***
- ***Barth, AAOS Chronic Pain 2016***
- ***Barth, AAOS Patient Selection 2016***

Your Handout

American Academy of Orthopaedic Surgeons

2016 Chapter on Neuropathic Pain

Created specifically for workers compensation claims

The first thing you need to know about neuropathic pain:

In 2011, the International Association for the Study of Pain (IASP) published a *NEW* definition of neuropathic pain.

In 2011, the International Association for the Study of Pain (IASP) published a *NEW* definition of neuropathic pain.

A recent citation analysis revealed that the new definition has been "widely accepted".

Finnerup et al., 2016

In 2011, the IASP published a *NEW* definition of neuropathic pain.

Why?

In 2011, the IASP published a *NEW* definition of neuropathic pain.

Why?

Published reports indicate that the reason was:

To protect the concept of neuropathic pain from being contaminated by complex regional pain syndrome, fibromyalgia, etc.

(Continued)

Reasons for a new definition of neuropathic pain

"The lack of structural abnormalities in so-called dysfunctional states (fibromyalgia, CRPS, vulvodynia, interstitial cystitis, etc.)

prevents **us from finding a relationship between structure and function,**

which is important in the study of a subjective experience such as pain."

(continued next slide)

Reasons for a new definition of neuropathic pain

"We are not doing the patients any good by giving them a diagnostic label for which there is no basis."

(continued next slide)

Reasons for a new definition of neuropathic pain

"Also, it is our hope that the new definition will raise further scientific awareness and thus be an additional step in the direction of keeping up the scientific momentum and moving us from the domain of beliefs into evidence."

(last several slides quoted from Jensen et al. 2011)

Why was it necessary to protect the concept of neuropathic pain from the concept of complex regional pain syndrome (CRPS)?

Bonus Information!: Protecting neuropathic pain from CRPS

Problematic aspects of the concept of complex regional pain syndrome

(reference: Barth, AAOS 2016 Chapter on CRPS)

AAOS
American Academy of Orthopaedic Surgeons
Your Source for Lifelong Orthopaedic Learning

17th Annual AAOS Workers' Compensation and Musculoskeletal Injuries: Improving Outcomes with Back-to-Work, Legal and Administrative Strategies

Volume 1: Friday Intro & Lecture

November 6-8, 2015
Boston, MA

J Mark Melhorn, MD
Joseph S Barr, Jr, MD
Course Directors

CRPS: A fact-based definition

Published repeatedly by the American Academy of Orthopaedic Surgeons (2014, 2015, 2016)

CRPS: A fact-based definition

4. Complex regional pain syndrome was created in a fashion that causes it to be a *pervasively non-scientific*, even *anti-scientific*, concept.

CRPS: A fact-based definition

5. A sub-concept of complex regional pain syndrome, referred to as type one, was created for the purpose of *replacing the failed concept of reflex sympathetic dystrophy* ...

CRPS: A fact-based definition

5 (continued). One example of the *failed nature* of the concept of *reflex sympathetic dystrophy* ...

5 (continued). One example of the *failed nature* of the concept of *reflex sympathetic dystrophy* ...

- **The concept of RSD was primarily based on the claim that the clinical presentation could be cured by sympathetic blocks.**
- **Scientific findings as of the early 1990's had revealed the effects of sympathetic blocks to be nothing but "an embarrassing placebo artifact".**

CRPS: A fact-based definition

6. The complex regional pain syndrome concept was deliberately created in a fashion that is *extremely ambiguous*, so that it would not be subject to the same types of scientific failures that doomed the concept of reflex sympathetic dystrophy.

CRPS: A fact-based definition

10. The concept is devoid of any pathophysiological considerations.

CRPS: A fact-based definition

11. The concept of complex regional pain syndrome *has not been reliable* from one published source of information to another, and the concept has not even been reliable over time in regard to single sources of information.

CRPS: A fact-based definition

12. A *defining* ("*distinguishing*") characteristic of complex regional pain syndrome causes it to be an *inherently non-injury-related issue*, and scientific findings have similarly highlighted its non-injury-related nature.

CRPS: A fact-based definition

13. Scientific findings have indicated that *most cases* which involve a diagnosis of complex regional pain syndrome *will be associated with a compensation claim*.

CRPS: A fact-based definition

14. Whenever this diagnosis is made, *some form of pre-existing psychopathology is usually involved* in the clinical presentation.

CRPS: A fact-based definition

15. Scientific findings have indicated that relevant clinical presentations are *often intentionally self-inflicted*.

CRPS: A fact-based definition

16. Scientific findings have indicated that all of the objectively verifiable clinical issues that have been written into various conceptualizations of complex regional pain syndrome (e.g., swelling, trophic changes) *can be created through disuse*.

CRPS: A fact-based definition

17. The concept of complex regional pain syndrome *has not been scientifically validated as actually corresponding to any health condition*.

CRPS: A fact-based definition

19. Scientific findings have indicated that the majority of people who receive such a diagnosis *will demonstrate invalid clinical presentations*, when scientifically validated objective testing is administered.

CRPS: A fact-based definition

20. A 2014 "comprehensive and critical review" concluded that: "*There are no standards which* can be applied to the diagnosis and *would fulfill definitions of evidence-based medicine*."

CRPS: A fact-based definition

21. A variety of health science publications have called for the *abandonment* of the complex regional pain syndrome concept…

CRPS: A fact-based definition

21 (continued). A variety of health science publications have called for the abandonment of the complex regional pain syndrome concept.

In addition to the concept's *ambiguity*, *unreliability*, and *lack of scientific credibility*, the reasons for such calls for abandonment of the concept include reports that the utilization of *the concept deprives patients of adequate diagnosis, and consequently, deprives patients of adequate treatment*.

CRPS: A fact-based definition

23 (continued). Issues which were almost definitional prior to the introduction of the "not otherwise specified" sub-construct included…

- **The concept has been defined by *the clinical presentation being inconsistent with any claimed cause***

(e.g., disproportionately severe in regard to any claimed cause, anatomically inconsistent with any claimed cause, no known pathology, type two not being attributable to the associated history of nerve damage, etc.). **(continued…)**

Back to our case example…

All of these FACTS (and more) about CRPS were presented, during discovery deposition, to the pain specialist who made that diagnosis.

Back to our case example...

The doctor who had diagnosed CRPS was also asked...

Please show us, in your documentation from this case, which diagnostic method for CRPS you used.

Neuropathic Pain

The modern, widely accepted definition

The 2011 IASP Definition

"Neuropathic pain: Pain caused by a lesion or disease of the somatosensory nervous system."

(Continued next slide)

Neuropathic pain: The 2011 IASP Definition (Continued)

"The term *lesion* is commonly used when diagnostic investigations (e.g. imaging, neurophysiology, biopsies, lab tests) reveal an abnormality or when there was obvious trauma."

(Continued next slide)

Neuropathic pain: The 2011 IASP Definition (Continued)

"The term *disease* is commonly used when the underlying cause of the lesion is known (e.g. stroke, vasculitis, diabetes mellitus, genetic abnormality)."

(Continued next slide)

Neuropathic pain: The 2011 IASP Definition (Continued)

"*Somatosensory* refers to information about the body per se including visceral organs, rather than information about the external world (e.g., vision, hearing, or olfaction)."

(Continued next slide)

Neuropathic pain is not a diagnosis

"The neurologic diagnosis depends on the answers to two questions:

- Where is the lesion? (Anatomy) and,
- What type of lesion? (Pathology, including pathophysiology)."

Treede RD, et al. 2008, page 1632

Back to our case example…

Questions for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you identified a relevant lesion or disease.

- Where is the lesion?
- What is the nature of the lesion?

Back to our case example…

Questions for the claimant's doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you identified involvement of the somatosensory nervous system.

Neuropathic pain: The 2011 IASP Definition (Continued)

"*Note:* Neuropathic pain is a clinical description (and not a diagnosis)…"

(Continued next slide)

Back to our case example…

- Both of the claimant's expert witnesses were claiming a "diagnosis" of neuropathic pain
- Neuropathic pain is specifically defined as ***NOT*** being a diagnosis
- The manner in which both of the plaintiff's expert witnesses were claiming something that could not possibly be true was presented to those expert witnesses, and the claimant's attorney.

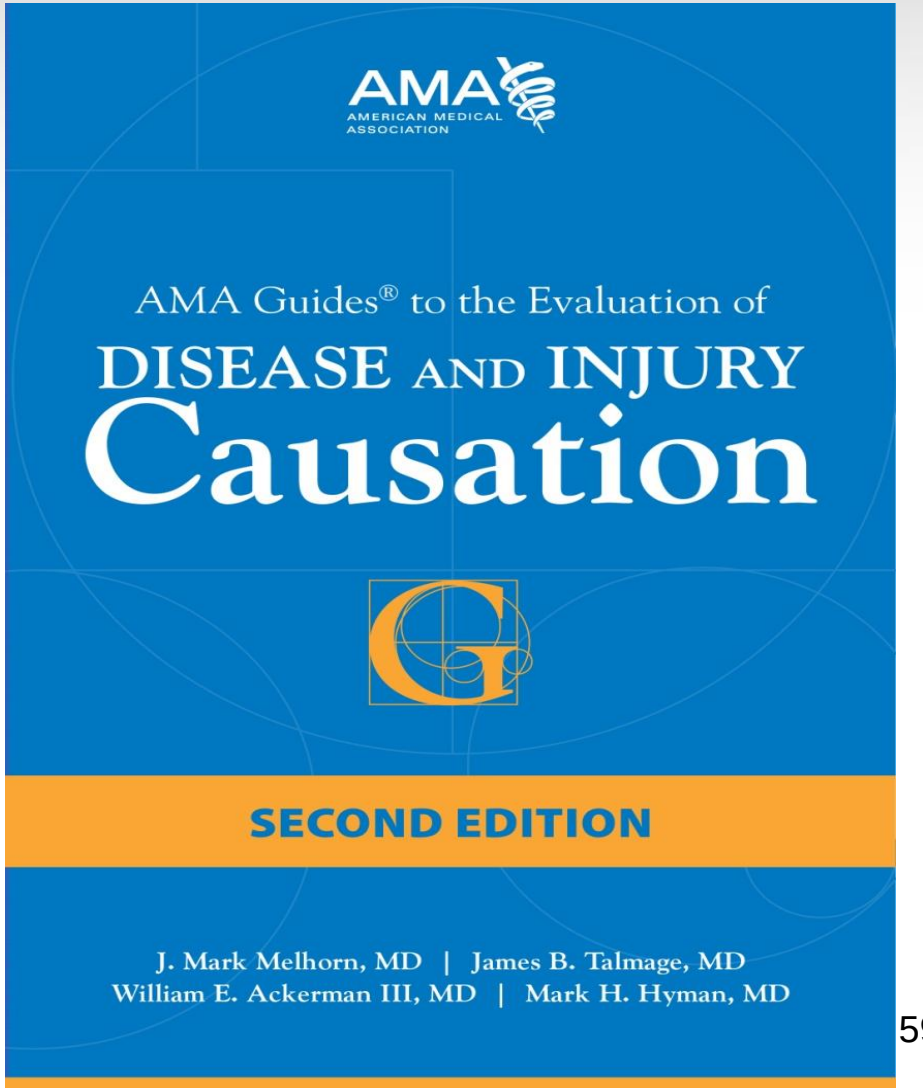
Relevance of this chapter on neuropathic pain to legal claims: Composited case example

Why does it matter that both of the claimant's expert witnesses were claiming a "diagnosis" which is not actually a diagnosis?

Because such claims prevent a claim of work-relatedness from being credible…

AMA *Guides to the Evaluation of Disease and Injury Causation*

Bonus Information!



AMA Guides™ Newsletter

Expert advice, practical information, and current trends on impairment evaluation

May/June 2012

In this issue

Upcoming Issues

Determining Injury-Relatedness, Work-Relatedness, and Claim-Relatedness

Robert J Barth, PhD

The *American Medical Association's Guides to the Evaluation of Disease and Injury Causation (Causation)*[1] is an important component of the *AMA Guides* library. This text delineates a type of evaluation that is distinctly different from a diagnostic evaluation, a treatment planning evaluation, a prognosis evaluation, or an impairment evaluation. It provides a protocol for determining whether a clinical presentation, in the context of a legal or administrative claim, may be credibly attributed to a claimed cause. In other words, it provides an answer for questions such as:

- How can an evaluator credibly determine if a claimed work-related clinical presentation is really work-related?
- How can an evaluator credibly determine if a claimed injury-related clinical presentation is really caused by the litigated events?

This article:

AMA Guides to the Evaluation of Disease and Injury Causation

The Method (highly summarized)

1. **Definitively establish a diagnosis.**
2. Apply relevant findings from epidemiologic science to the individual case.
3. Obtain and assess the evidence of exposure.
4. Consider other relevant factors.
5. Scrutinize the validity of the evidence.
6. Evaluate above and generate conclusions.

Back to our case example…

Questions for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, your utilization of the standard method for justifying your claim of work-relatedness.

The Method (highly summarized)

Step 1: Definitively establish a diagnosis.

If the claimed "diagnosis" ("neuropathic pain") is not actually a diagnosis, then Step 1 has not been completed in a fashion that supports a claim of work-relatedness.

Neuropathic pain: The 2011 IASP Definition (Continued)

"...which requires a demonstrable lesion or a disease that satisfies established *neurological* diagnostic criteria."

(Continued next slide)

Back to our case example…

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you determined that this case "satisfies established neurological diagnostic criteria".

Neuropathic pain: The 2011 IASP Definition (Continued)

The remaining aspects of the definition (e.g. the special cases of trigeminal neuralgia, post-herpetic neuralgia, etc.) are specified in your handout.

Examples of Health Problems that Can be Associated With Neuropathic Pain

Examples of Health Problems That Can be Associated with Neuropathic Pain

- **Peripheral nerve entrapment**
- **Intracranial tumor**
- **Multiple Sclerosis**

Haanpaa M, et al. 2011.

NeuPSIG Guidelines on Neuropathic Pain Assessment

Examples of Health Problems That Can be Associated with Neuropathic Pain

- Central post-stroke pain
- Trigeminal neuralgia
- Diabetic neuropathy
- Post-herpetic neuralgia
- Syringomyelia

Treede RD, et al. 2008, page 1633.

Examples of Health Problems That Can be Associated with Neuropathic Pain

- Stroke
- Multiple sclerosis
- Some spinal cord injuries
- Syrinx of the central canal in the brainstem or spinal cord

Jensen et al. 2011

Examples of Health Problems That Can be Associated with Neuropathic Pain

- Polyneuropathy (e.g., post-chemotherapy, diabetic, alcoholic, HIV disease)
- Radiculopathy

Haanpaa et al. 2009

Examples of Health Problems That Can be Associated with Neuropathic Pain

- **Traumatic nerve injury (preferably, identifiable separate from the pain complaint), e.g., …**
  - **Amputation**
  - **Spinal cord injury**

Finnerup et al. 2016

Examples of Health Problems That Can be Associated with Neuropathic Pain

- Channelopathies, e.g., …
  - Familial episodic pain syndrome
  - Inherited erythromelalgia

Finnerup et al. 2016

Examples of issues which do NOT involve Neuropathic Pain

Examples of issues which do NOT involve Neuropathic Pain

- **Musculoskeletal Pain**

Haanpaa M, et al. 2011.

NeuPSIG Guidelines on Neuropathic Pain Assessment

- **Vulvodynia**
- **Interstitial cystitis**

Jensen et al. 2011

Examples of issues which do NOT involve Neuropathic Pain

Fibromyalgia

- Treede RD, et al. 2008, page 1633.
- Jensen et al. 2011
- Finnerup et al. 2016

Lesions in the cerebellum or frontal cortices

Jensen et al. 2011

Examples of issues which do NOT involve Neuropathic Pain

Chronic widespread pain

Irritable bowel syndrome

Cluster headache

Migraine

Parkinson's ("at the moment not sufficient evidence")

- **Finnerup et al. 2016**

Examples of issues which do NOT involve Neuropathic Pain

Complex Regional Pain Syndrome

NOTES (continued from previous slide):

The concept of CRPS is definitionally incompatible with the concept of neuropathic pain…

- **CRPS is defined as involving pain that does NOT correspond to a specific nerve territory (**IASP Task Force on Taxonomy**)**
- **Neuropathic pain DOES correspond to a specific nerve territory (**Eisenberg 2011; Haanpää et. al. 2011; Haanpää 2014; Treede et al. 2008; Treede 2015**) .**

(continued next slide)

How to evaluate for neuropathic pain

How to evaluate for neuropathic pain

Labeling systems have been developed, e.g., …

- **Unlikely to be neuropathic**
- **Possible neuropathic pain**
- **Probable neuropathic pain**
- **Definite neuropathic pain**

Finnerup et al. 2016

Grading the level of *CLINICAL* certainty

Warning: This labeling system has little-to-no value for legal purposes, because, in reality, there is always a lack of certainty for any claim of neuropathic pain.

Labeling the level of CLINICAL certainty

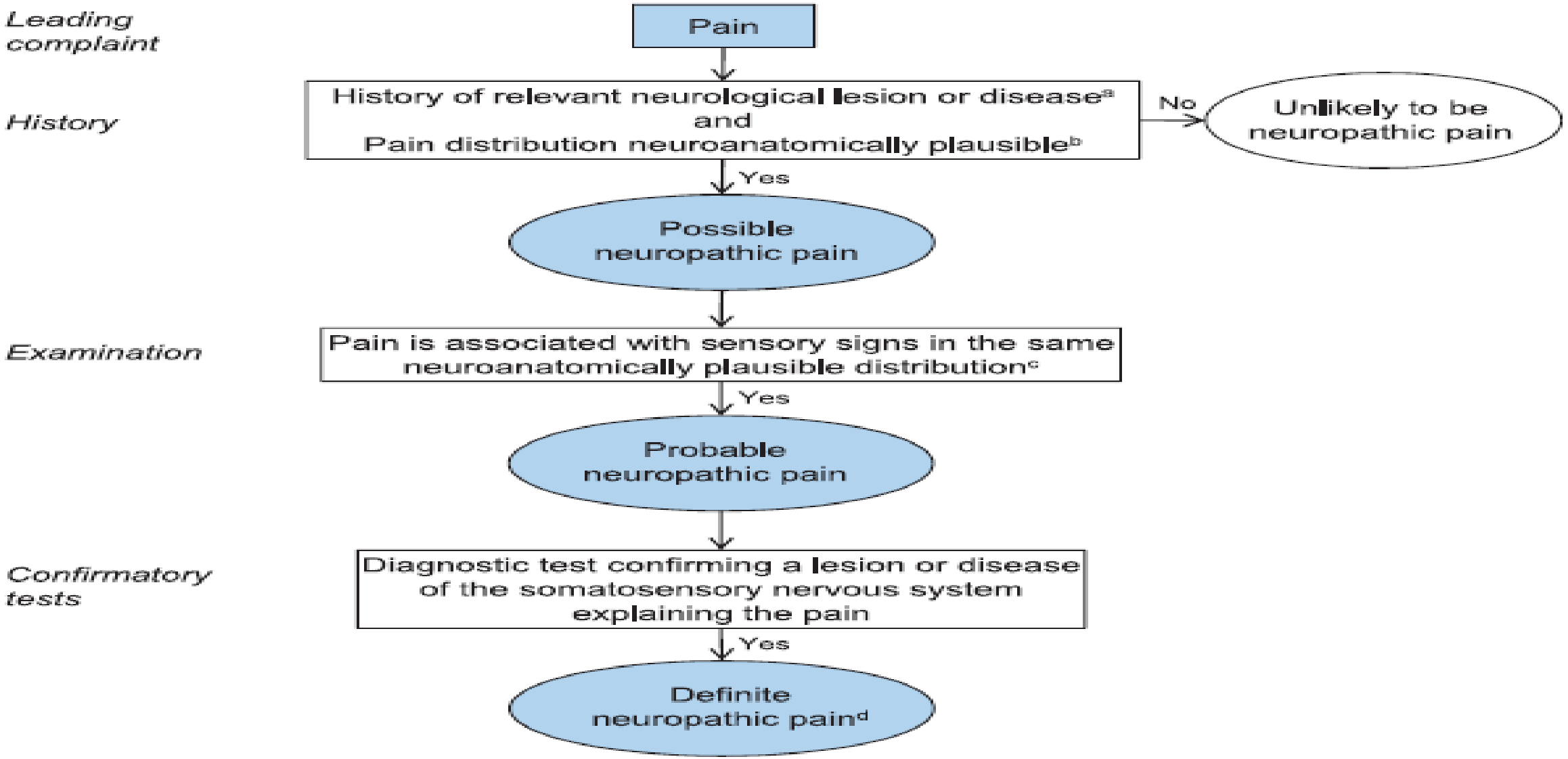
Warning:

"We present...a word of caution that even the "definite" level of neuropathic pain does not always indicate causality."

Finnerup et al. 2016

How to evaluate for neuropathic pain

Flow Chart from Finnerup et al. 2016



How to evaluate for neuropathic pain

from Finnerup et al. 2016

Step 1

Determining whether neuropathic pain should be evaluated for.

(continued...)

How to evaluate for neuropathic pain

Step 1 – Determining whether neuropathic pain should be evaluated for.

- **Use the neuropathic pain evaluation method when…**
  - the case involves a complaint of pain, and…
  - non-neuropathic causes of pain have been ruled out (inflammation and non-neural tissue damage are specified as examples of what needs to be ruled out).

Back to our case example...

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you ruled out inflammation and other non-neural causes of pain.

How to evaluate for neuropathic pain

Step 2

Is the examinee's description of the *quality* of pain consistent with the concept of neuropathic pain?

(continued…)

How to evaluate for neuropathic pain

Step 2 (continued)

- Is the complaint consistent with neuropathic pain?
  - "screening tools (questionnaires) have been developed to identify patients who may have neuropathic pain to alert the clinician to undertake further assessment (though they cannot be used alone to identify neuropathic pain)"
  - Finnerup et al. 2016 offers specific examples of such questionnaires

(continued…)

Back to our case example…

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you determined that the quality of the pain was consistent with neuropathic pain.

How to evaluate for neuropathic pain

Step 2 (continued)

- **Is the complaint consistent with neuropathic pain?**
  - **If not, grade as "unlikely to be neuropathic pain".**
  - **If the complaint *IS* consistent with neuropathic pain, then further investigation is warranted.**

(continued…)

How to evaluate for neuropathic pain

Step 3

Does the examinee's history justify suspecting a lesion or disease of the somatosensory nervous system?

(continued…)

How to evaluate for neuropathic pain

Step 3 (continued)

- Is there justification for suspecting a lesion or disease of the somatosensory nervous system?
  - Examples that would provide such justification include recent shingles episode, recent traumatic nerve injury (e.g. amputation)…
    - "the onset of pain is usually immediate or within a few weeks of the lesion of disease"

(continued…)

How to evaluate for neuropathic pain
Step 3 (continued)

- Is there justification for suspecting a lesion or disease of the somatosensory nervous system?
  - Stroke within the past few months
  - diabetes

(continued…)

How to evaluate for neuropathic pain

Step 3 (continued)

- **Is there justification for suspecting a lesion or disease of the somatosensory nervous system?**

➢ **If yes, continued investigation is warranted.**

➢ **If there is *NOT* justification, then grade the complaints as "unlikely to be neuropathic pain".**

(continued…)

Back to our case example…

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, the aspect of the patient's history which warranted consideration of neuropathic pain.

How to evaluate for neuropathic pain

Step 4

Is the pain distribution neuro-anatomically plausible?

Is it consistent with the suspected location of the lesion or disease in the somatosensory nervous system?

(continued...)

How to evaluate for neuropathic pain from Finnerup et al. 2016

Step 4 (continued)

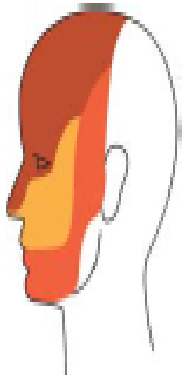
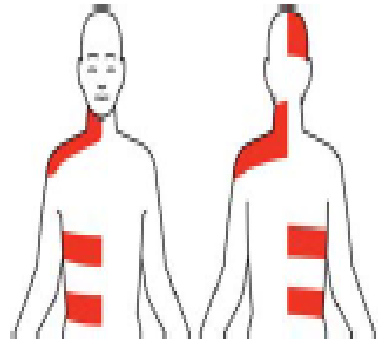
- **Is the pain distribution neuro-anatomically plausible? / Is it consistent with the suspected location of the lesion or disease in the somatosensory nervous system?**

- **IASP (Finnerup et al. 2016) provides examples…**

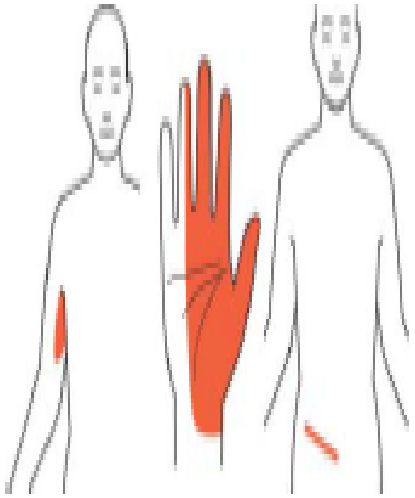
(continued…)

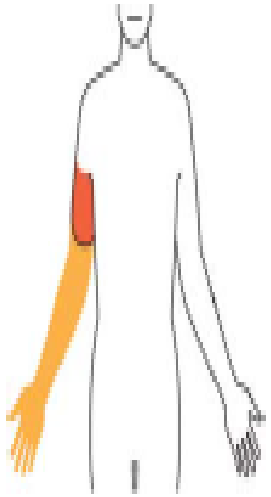
Table 1

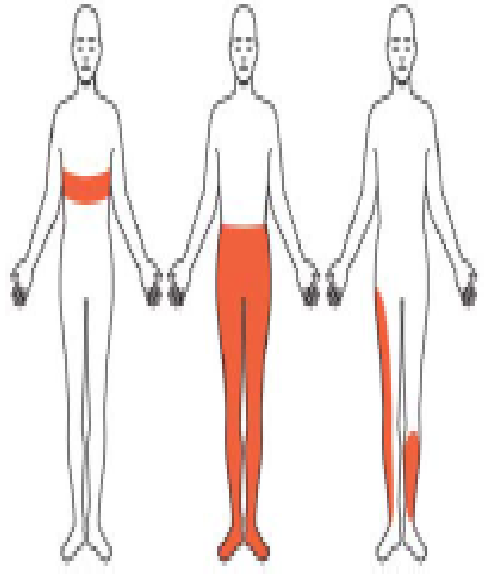
Common neuropathic pain conditions and neuroanatomically plausible distribution of pain symptoms and sensory signs.

Neuropathic pain condition	Neuroanatomically plausible distribution of pain and sensory signs	Illustration of typical distribution
Trigeminal neuralgia	Within the facial or intraoral trigeminal territory.	
Postherpetic neuralgia	Unilateral distributed in one or more spinal dermatomes or the trigeminal ophthalmic division.	

Peripheral nerve injury pain	In the innervation territory of the lesioned nerve, typically distal to a trauma, surgery, or compression.
Postamputation pain	In the missing body part and/or in the residual limb.





Painful radiculopathy	Distribution consistent with the innervation territory of the nerve root.	
Neuropathic pain associated with spinal cord injury	At and/or below the level of the spinal cord lesion.	

How to evaluate for neuropathic pain

Step 4 (continued)

- **Is the pain distribution neuro-anatomically plausible? / Is it consistent with the suspected location of the lesion or disease in the somatosensory nervous system?**

➢ **If yes, continued investigation is warranted.**

➢ **If the distribution is NOT neuro-anatomically consistent with the suspected lesion or disease, grade the presentation as "unlikely to be neuropathic pain".**

(continued…)

Back to our case example...

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you established that the pain complaint was consistent with the suspected lesion in the somatosensory nervous system.

How to evaluate for neuropathic pain

Step 5

Sensory examination, **focused primarily on determining whether *negative sensory findings* are present, and whether any such findings are *concordant with the suspected lesion* or disease of the somatosensory nervous system.**

(continued…)

How to evaluate for neuropathic pain

"***Sensory testing is the most important part*** **of this examination and includes testing of** ***touch, vibration, pinprick, cold and warmth***."

Haanpaa M, et al. 2011.
NeuPSIG Guidelines on Neuropathic Pain Assessment,
Page 18.

(continued)

How to evaluate for neuropathic pain

"Hence, surveying the borders of sensory dysfunction is mandatory."

Haanpaa M, et al. 2011. NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 17.

Why? (see next slide)

How to evaluate for neuropathic pain

"Somatosensory aberrations found in neuropathic pain conditions have some *common* denominators..."

Haanpaa M, et al. 2011. NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 17.

(continued)

How to evaluate for neuropathic pain

"...i.e., borders fitting the distribution of the affected peripheral nervous structure (nerve, plexus, root)..."

Haanpaa M, et al. 2011. NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 17.

(continued)

How to evaluate for neuropathic pain

"... or the topographic representation of a body part in the central nervous system."

Haanpaa M, et al. 2011. NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 17.

(continued)

“Surveying the borders”

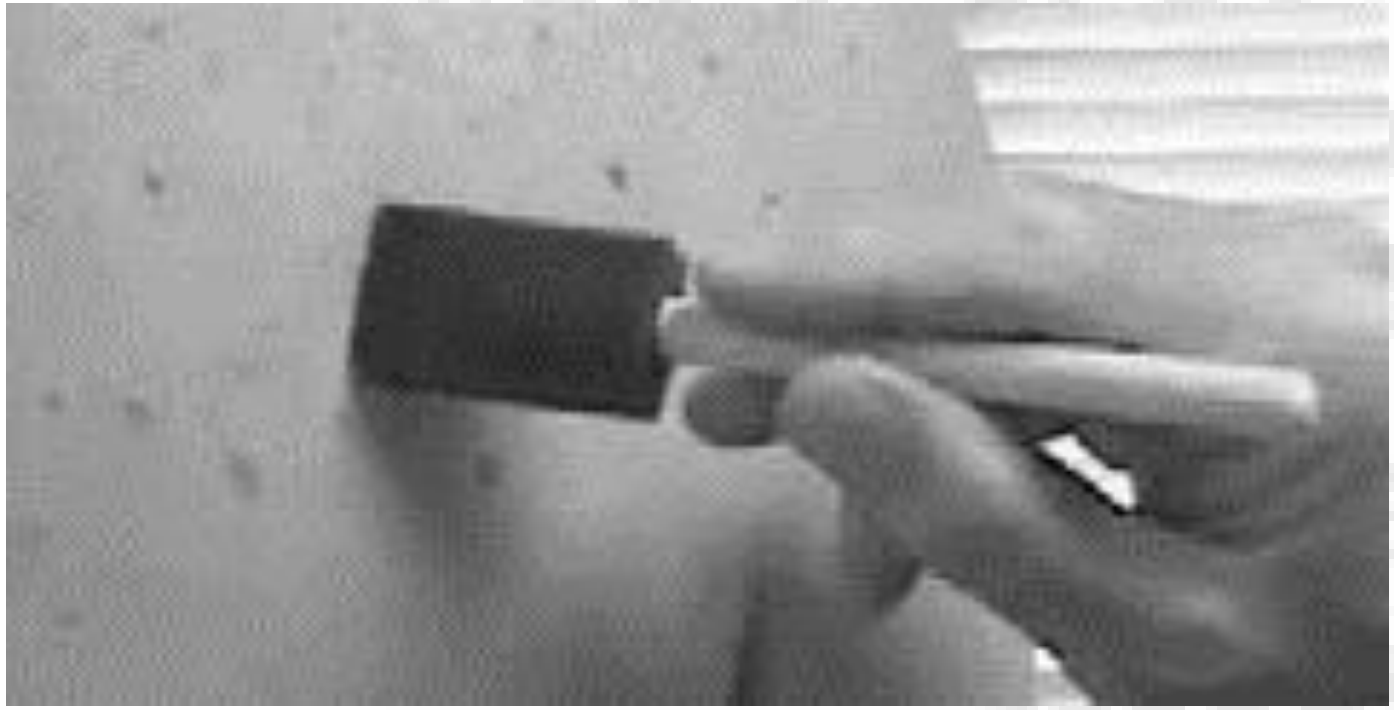
The 2012 IASP Refresher Course (Haanpaa et al. 2012) contains the most detailed instructions for “surveying the borders”

- **Take photographs of the body parts that the patient’s complaints are focused upon – print them in color**
- **Patient estimates area of spontaneous pain, numbness, etc. by marking on photo**
- **Patient estimates areas of skin that feel abnormal to touch by marking on photo**

(Continued next slide)

“Surveying the borders” (continued)

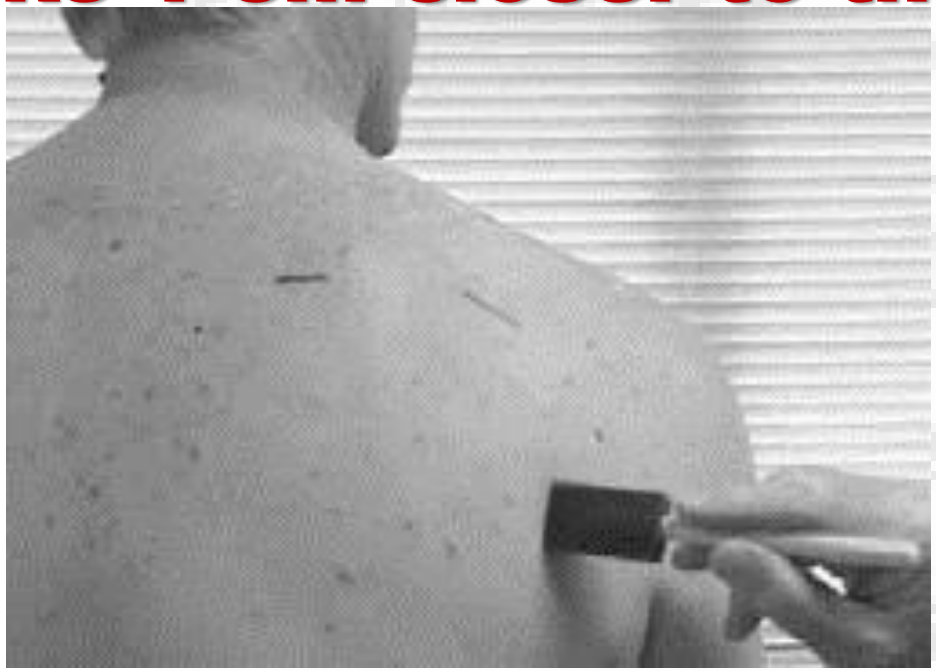
- Using the photographs as a guide…
- Use a foam brush for stroking, with the long axis of the brush parallel to the direction of stroking.
- Apply enough pressure to slightly bend the brush.



(Continued next slide)

“Surveying the borders” (continued)

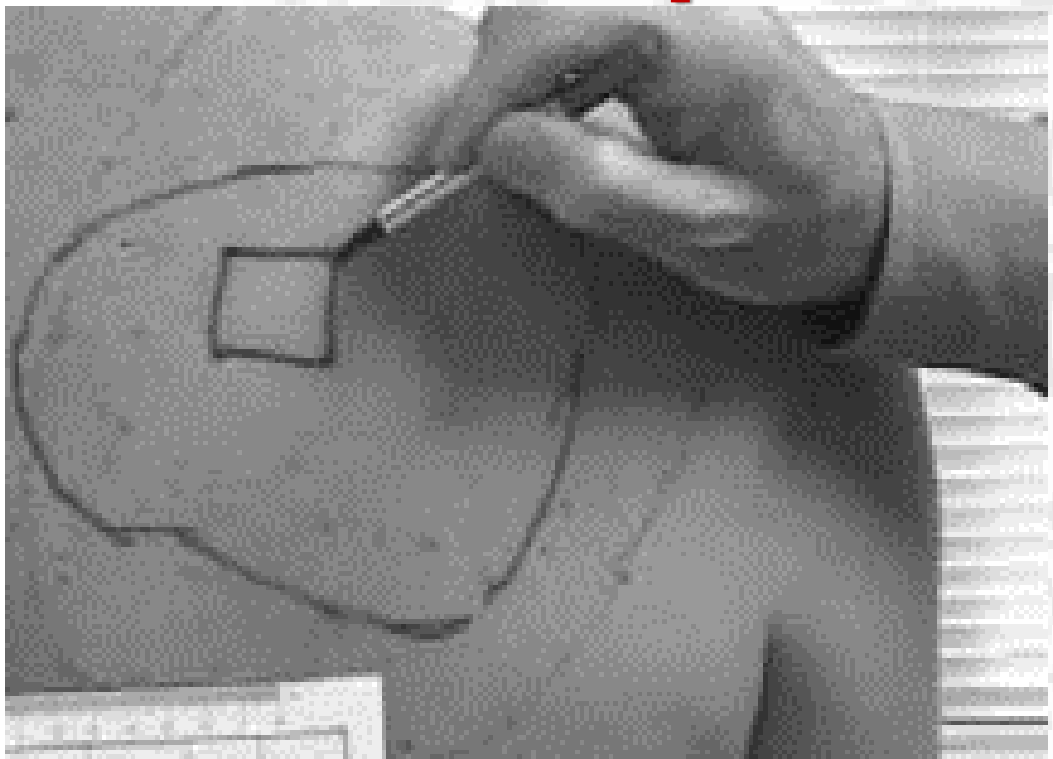
- **Start brushing *outside* of the area of pain as indicated on photos**
- **Stroke parallel to the photo-marked perimeter**
- **If the patient reports abnormal sensation, move further out**
- **If patient reports normal sensation, start next stroke 1 cm closer to the photo-marked area**



(Continued next slide)

“Surveying the borders” (continued)

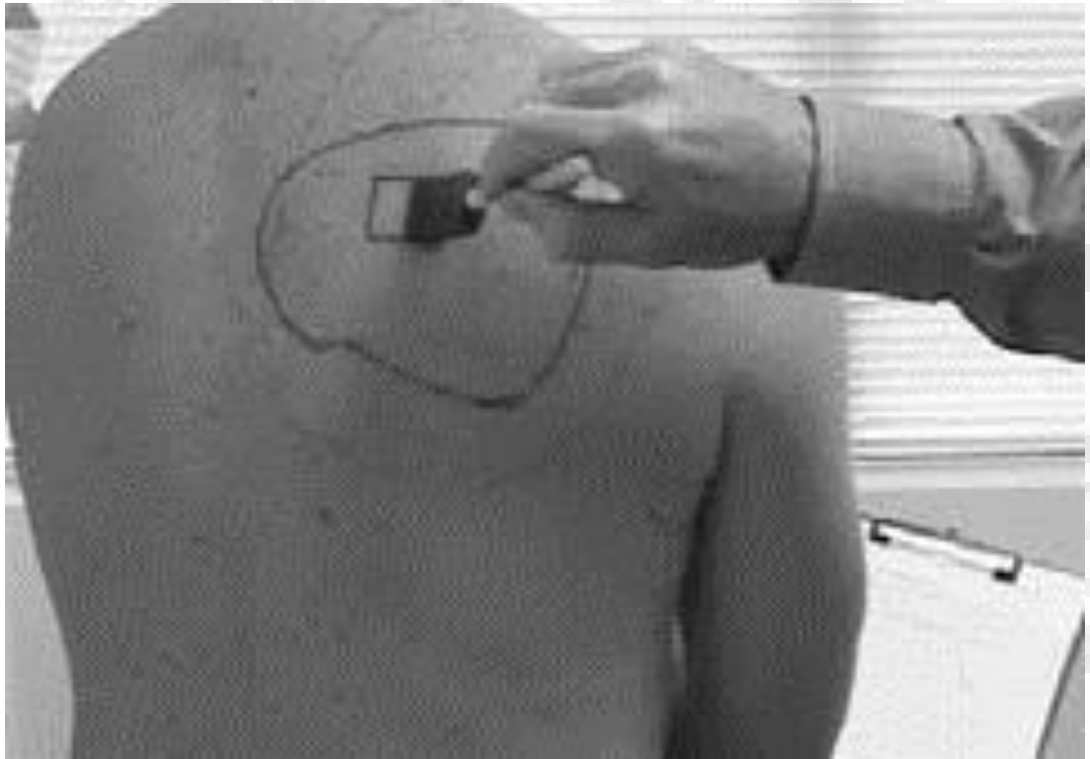
- Mark the skin at the point where the patient says the abnormal sensation begins
- Repeat the technique from all sides of the photo-marked area
- Connect the marks on all sides to indicate the perimeter of the pain



(Why the multiple lines?...)

“Surveying the borders” (continued)

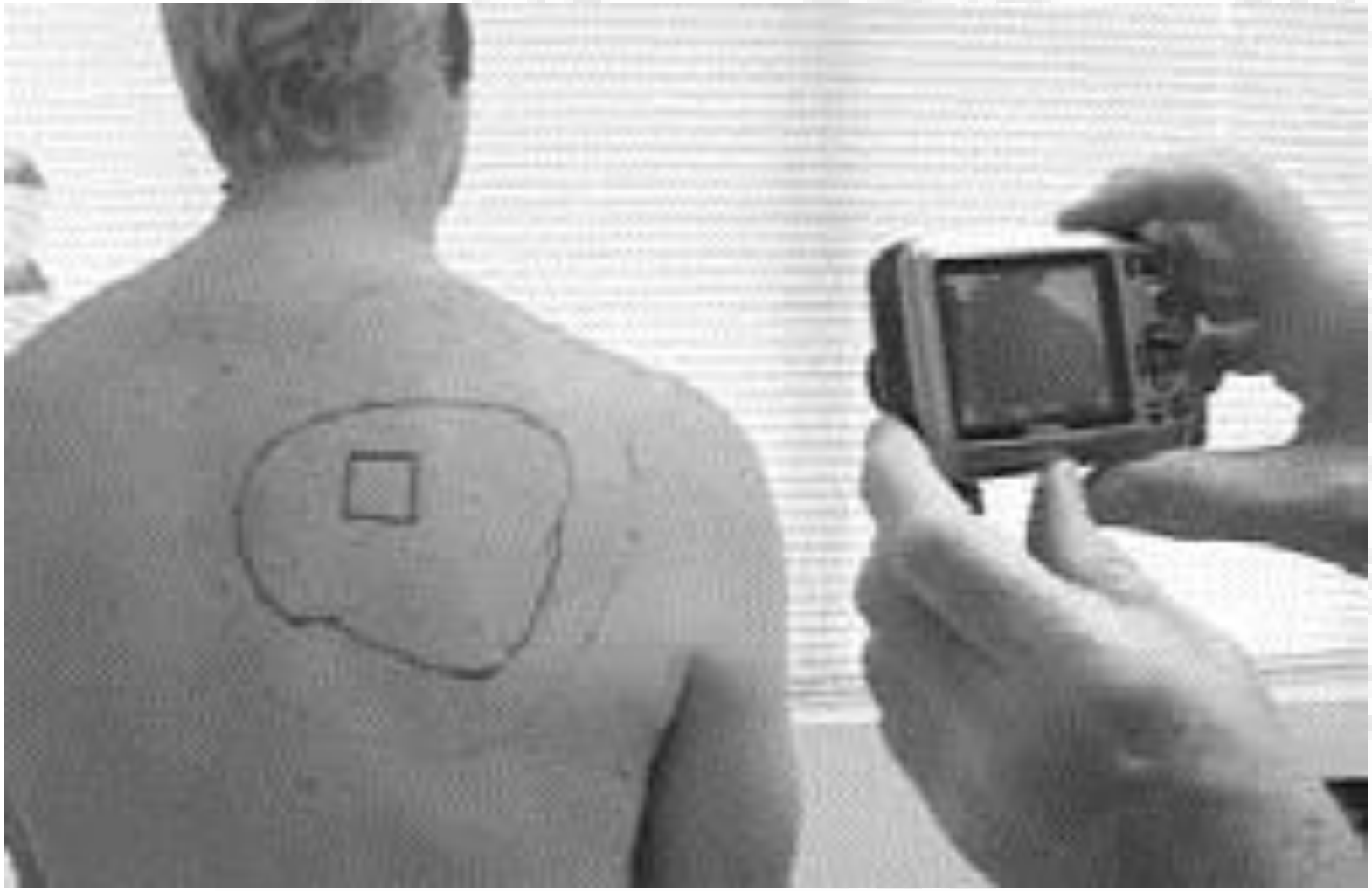
- **In this example…**
  - **The outer line is the area of spontaneous and continuous pain**
  - **The inner square is the area of allodynia**



(Continued)

“Surveying the borders” (continued)

- **Photograph the results**



(Why?...)

How to evaluate for neuropathic pain

Haanpää M. 2014 Refresher Course

"In neurological examination the findings should be consistent when tested *multiple times* in multiple ways, and they should be consistent with the pre-examination observation of behavior."

(continued)

Back to our case example...

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case,the photographs from your sensory examination.

How to evaluate for neuropathic pain

Step 5: Sensory Examination

- **If sensory loss is reliably demonstrated in the same neuro-anatomically plausible distribution as the pain complaint, grade the complaint as "probable neuropathic pain".**
- **If not, leave the grade at "possible neuropathic pain" (except for the exceptions noted in Finnerup et al. 2016)**

Back to our case example...

Questions for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, your utilization of the sensory examination method that is necessary in order to justify a claim of neuropathic pain.

Back to our case example...

Questions for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you identified reliable negative sensory findings which were limited to a neuro-pathologically plausible distribution.

How to evaluate for neuropathic pain from Finnerup et al. 2016

Step 6

Attempting to objectively confirm a lesion or disease in the somatosensory nervous system

(continued…)

How to evaluate for neuropathic pain

Step 6: Objectively confirming the lesion or disease

"The final level of certainty requires that *an objective diagnostic test confirms* the lesion or disease of the somatosensory nervous system."

(continued…)

How to evaluate for neuropathic pain

Step 6: Objectively confirming the lesion or disease

"Examples of such diagnostic tests include computed tomography, magnetic resonance imaging, or other imaging techniques to confirm the presence of stroke, multiple sclerosis, spinal cord injury, or nerve lesion…"

(continued in your handout)

Back to our case example...

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, the objective verification of a lesion in the somatosensory nervous system.

How to evaluate for neuropathic pain from Finnerup et al. 2016

Step 6: Objectively confirming the lesion or disease

If a lesion or disease of the somatosensory nervous system is *NOT* objectively confirmed, the grading should remain "possible neuropathic pain" (assuming that the case is consistent with "possible neuropathic pain").

(continued…)

How to evaluate for neuropathic pain from Finnerup et al. 2016

Step 6: Objectively confirming the lesion or disease

If a lesion or disease of the somatosensory nervous system is confirmed, and the clinical presentation had already been graded as "possible neuropathic pain", the presentation can be re-graded as "definite neuropathic pain". *BUT*…

(continued…)

How to evaluate for neuropathic pain from Finnerup et al. 2016

Step 6: Objectively confirming the lesion or disease

A grade of "definite neuropathic pain" does *NOT* mean that the presentation definitely involves neuropathic pain.

(continued…)

A grade of "definite neuropathic pain" does *NOT* mean that the presentation definitely involves neuropathic pain.

IASP Quote (Finnerup et al. 2016):

"…despite fulfilling all (requirements for a grade of definite neuropathic pain), the pain may still not be neuropathic."

(continued…)

A grade of "definite neuropathic pain" does *NOT* mean that the presentation definitely involves neuropathic pain.

Finnerup et al. 2016:

"Such grading is naturally based on clinical *judgment*."

I.e., the grading system and associated evaluation method is NOT objective

(continued…)

IASP Clinical Updates

(Haanpää and Treede 2010)

"In addition, assessment of psychosocial aspects is *necessary* for an individually tailored management strategy."

(Why?...)

Why is the assessment of psychosocial aspects *necessary*?

NeuPSIG Guidelines on Neuropathic Pain Assessment, Haanpää M, et al. 2011

"A longstanding literature documents the influence of *psychological factors* on the *severity* and *impact* of neuropathic pain."

(continued)

Why is the assessment of psychosocial aspects *necessary*?

"A newer literature demonstrates the predictive utility of *psychological factors* in identifying patients at risk for *chronicity* of neuropathic pain..."

Haanpaa M, et al. 2011.
NeuPSIG Guidelines on Neuropathic Pain Assessment

Bonus Information!

Risk factors for chronic pain (neuropathic or otherwise)

AMA Guides™ Newsletter

Expert advice, practical information, and current trends on impairment evaluation

January/February 2013

In this Issue

Upcoming Issues

Chronic Pain: Fundamental Scientific Considerations, Specifically for Legal Claims

Robert J. Barth, PhD

Introduction

Chronic pain is common, affecting almost half of adults in the United States per a 2011 Gallup poll (Brown). More specifically, the survey revealed:

- 31% of US adults have chronic neck or back pain
- 26% have chronic knee or leg pain
- 18% have some other chronic pain
- 47% have at least 1 of these chronic pain problems

Chronic Pain Claims: Fundamental Scientific Considerations

- Reviewed (***extensively***) and published by AMA
- Reviewed and published ***five times*** by the American Academy of Orthopaedic Surgeons
- Reviewed and incorporated into the formal continuing education programs of several medical academies and governments
- Presented to nearly 2000 doctors so far

Nobody has called any scientifically validated principle to our attention as having been left out of this discussion

Chronic Pain Claims: Fundamental Scientific Considerations

Scientifically validated risk factors include:

NOTE: Chronic pain is common, even normal

- **Litigation/compensation**
- **Personality Disorders**
- **Opioid Medication**
- **Malingering**

Chronic Pain Claims: Fundamental Scientific Considerations

Scientifically validated risk factors include:

- **Other pain complaints / other physical complaints**
- **Other forms of mental illness (other than personality disorders)**
- **A learned phenomenon, which can be unlearned**

Chronic Pain Claims: Fundamental Scientific Considerations

Scientifically validated risk factors include:

- **Smoking**
- **Obesity**
- **Abuse / neglect during childhood**
- **Excessive health care**
- **Being away from work**

Back to our case example...

Question for the doctors who are claiming neuropathic pain:

Please show us, in your documentation from this case, how you evaluated for all of these scientifically validated risk factors for chronic pain.

Back to our case example…

My report

A record review (no direct evaluation) revealed all of the following non-work-related risk factors for chronic pain to be relevant to the claimant…

Back to our case example…

A record review (no direct evaluation) revealed all of the following non-work-related risk factors for chronic pain to be relevant to the claimant…

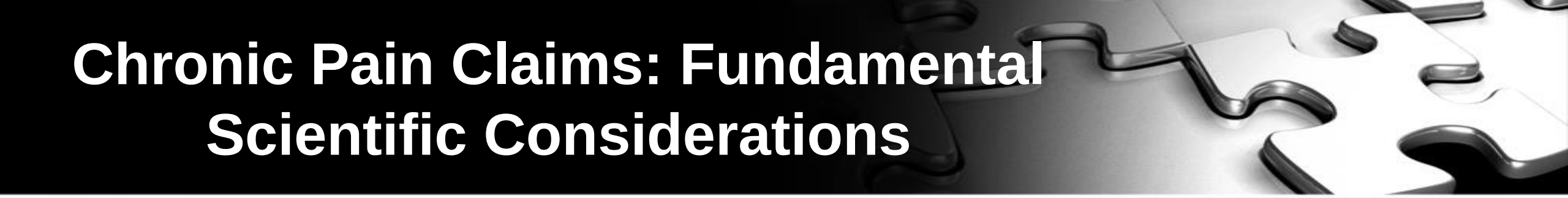
- **Compensation**
- **Opioid medication**
- **A history of mental illness (anti-depression and anti-anxiety medications)**
- **Other pain complaints**
- **Smoking**
- **Being away from work**

Back to our case example...

A record review (no direct evaluation) revealed all of the following non-work-related risk factors for chronic pain to be relevant to the claimant...

According to the fourth step of the standard method for evaluating a claim of work-relatedness, all of these non-work-related risk factors for chronic pain prevent a claim of work-relatedness from being credible.

Chronic Pain Claims: Fundamental Scientific Considerations



"But Dr. Barth, what about "obvious" medical causes of chronic pain, like arthritis?"

Chronic Pain

Arthritis as a CAUSE of chronic pain?

- "even at advanced stages of osteoarthritis, about half of those affected have no complaints of joint pain"

Giamberardino MA. ***Pain Comorbidities***. International Association for the Study of Pain, 2012.

Chronic Pain

Arthritis as a CAUSE of chronic pain?

- No relationship between imaging findings for osteoarthritic knees, and measures of pain, stiffness, and function

Link TM, et al. Osteoarthritis: MR imaging findings in different stages of disease and correlation with clinical findings. Radiology. 2003 Feb;226(2):373-81.

Bonus Information!

How can it be that medical issues do not predict chronic pain, and social and psychological issues do?

How can it be that medical issues do not predict chronic pain, and social and psychological issues do?

Just look at the definitions of pain…

- International Association for the Study of Pain
  - "a psychological state"
- American Medical Association
  - An "emotional experience"

Medical issues do not predict chronic pain, and social and psychological issues do

From the AMA Impairment Guides 5th Edition

- "a variety of nonbiological factors strongly influence" presentations of pain
  - "beliefs, expectations, rewards, attention, and training"
  - "social and environmental factors"
  - "spouse solicitousness"

(continued)

Medical issues do not predict chronic pain, and social and psychological issues do

From the AMA Impairment Guides 5th Edition

- "a variety of nonbiological factors strongly influence" presentations of pain
  - "job dissatisfaction, lack of support at work, stress and perceived inadequacy of income"
  - "financial compensation, receipt of work-related sickness benefits, and compensation-related litigation"
  - "poor education, language problems, and low income"
  - "tendencies to be preoccupied with one's body and symptoms"
  - "depression and daily hassles at work".

Neuropathic Pain

Additional Considerations Of Relevance to Legal Claims

Additional Considerations Of Relevance to Legal Claims

A claim of neuropathic pain cannot be proven

(Continued next page)

Warning from the IASP

"It is important to emphasize that

the clinical examination *can never prove*
any pain to be of neuropathic origin,

it can *only* provide supporting evidence for altered function of the nervous system."

- **Haanpää M, et al. 2011.**

NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 17.

- **Repeated page 206 Haanpää M. 2014 Refresher Course**

(Continued next page)

A claim of neuropathic pain cannot be proven

"...according to a carefully performed prospective study, only 5% of patients who had a peripheral nerve lesion verified by intraoperative ENG developed neuropathic pain."

Haanpaa M, et al. 2011.
NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 24.

Additional Considerations Of Relevance to Legal Claims

A determination of "definite neuropathic pain" is meaningless for legal claims

A determination of "definite neuropathic pain" is meaningless for legal claims

"Note that this grading system is for communication among clinicians and researchers, not for medico-legal purposes."

Treede RD, et al. 2008. Page 1634

A determination of "definite neuropathic pain" is meaningless for legal claims

"...the grading system is not intended for medico-legal purposes"

Finnerup, et al. 2016. Page 1602

Why? Because, in reality, a claim of neuropathic pain can never be proven (as was previously discussed and referenced).

Additional Considerations Of Relevance to Legal Claims

Has this concept, and its evaluation method, been scientifically validated?

Well…

"The sensitivity of clinical examination *has not been systematically studied* in neuropathic pain patients, e.g. how accurate the (determination) achieved by pure bedside examination is compared with information retrieved from additional tests."

Haanpaa M, et al. 2011.
NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 25.

Well…

"…it will be important to perform field testing of this system, in particular, to assess it's test-retest reliability and inter-rater reliability."

Finnerup, et al. 2016. Page 1602

i.e., reliability for the evaluation method has not been established – it has not even been researched yet.

Well…

“…there is no validated approach to defining relevant pain distribution and history.”

Finnerup, et al. 2016. Page 1602

i.e., there is no validation for the method that was discussed above

Additional Considerations Of Relevance to Legal Claims

Causation considerations in regard to

- **severity,**
- **chronicity, and**
- **impact on the patient's life (e.g. disability)…**

Causation considerations in regard to severity, chronicity, and impact on the patient's life (e.g. disability)…

"A longstanding literature documents the influence of *psychological factors* on the *severity and impact* of neuropathic pain."

(continued)

Causation considerations in regard to severity, chronicity, and impact on the patient's life (e.g. disability)…

"A newer literature demonstrates the predictive utility of *psychological factors* in identifying patients at risk for *chronicity* of neuropathic pain…"

Haanpaa M, et al. 2011.
NeuPSIG Guidelines on Neuropathic Pain Assessment, Page 19.

Bonus Information!

What is credible treatment for pain? (alternatives to opioids)

What is credible treatment for NEW pain?

Centers for Disease Control, 2016 (non-surgical)

- Exercise
- Non-opioid medications (such as NSAIDs, acetaminophen) when benefits outweigh risks.
- If opioids are prescribed, "Three days or less will often be sufficient; more than 7days will rarely be needed."

What is credible treatment for NEW pain?

Centers for Disease Control, 2016

- For post-surgery pain, the CDC refers to the Washington State Guideline ("2015 Interagency Guideline on Prescribing Opioids for Pain")
- "Do not discharge the patient with more than a two week supply of opioids, and many surgeries may require less."

What is credible treatment for NEW pain?

National Safety Council

Evidence for the Efficacy of Pain Medications (2014)

- "The **opioid medications** are often referred to as "powerful painkillers." In fact, the evidence shows that they are mild to moderate painkillers and **less effective than over-the-counter ibuprofen**."
- **For post-surgery pain, a combination of Ibuprofen and acetaminophen "provided the best pain relief of all" when compared to opioids and other options.**

What is credible treatment for CHRONIC pain?

Centers for Disease Control, 2016

- Exercise
- Cognitive Behavioral Psychotherapy
- Non-opioid medications (such as NSAIDs, acetaminophen) when benefits outweigh risks

What is credible treatment for CHRONIC pain?

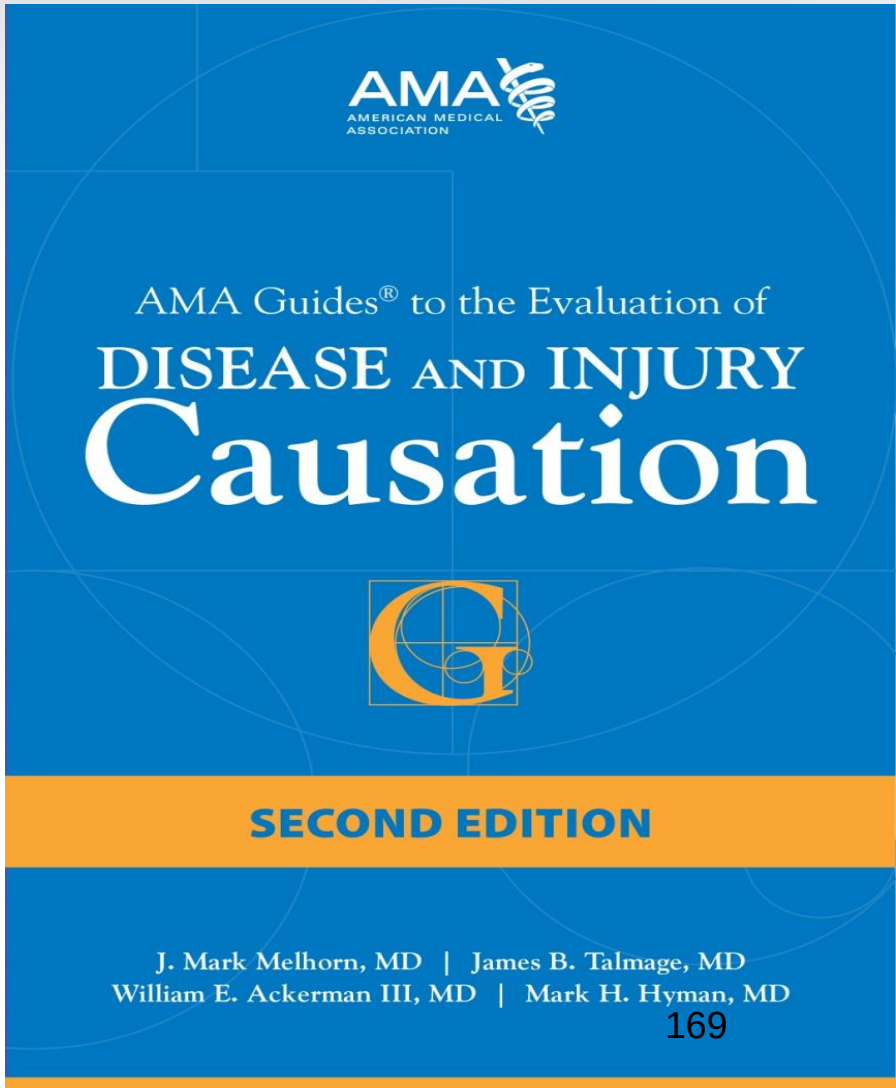
Psychological evaluation for the risk factors for chronic pain, and treatment,

***outside of workers compensation*, for any findings.**

AMA *Guides to the Evaluation of Disease and Injury Causation*

Bonus Information!

There is no credible scientific support for a claim that civilian adult life experience is a cause of mental illness or any of the other risk factors for chronic pain.



Back to our case example...

A credible treatment plan for chronic pain was developed specifically for the claimant, and presented to him.

He rejected it (but it helped to prompt him to settle his claim).

Back to our case example...

I asked for a chance to review all billing and business office records from the doctors who were promoting the claim.

Fraudulent pre-authorization paperwork was discovered for the spinal cord stimulation.

ALWAYS ask for billing/business office records (and scrutinize them).