FREQUENTLY ASKED QUESTIONS

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Coxib = COX-2 inhibitor; nsNSAID = non-specific non-steroidal anti-inflammatory drug

What clinical clues help distinguish between nociceptive and neuropathic pain?

Nociceptive	Neuropathic
• Usually aching or throbbing and well-localized • Usually time-limited (resolves when damaged tissue heals), but can be chronic • Generally responds to conventional analgesics	• Pain often described as tingling, shock-like, and burning – commonly associated with numbness • Almost always a chronic condition • Responds poorly to conventional analgesics

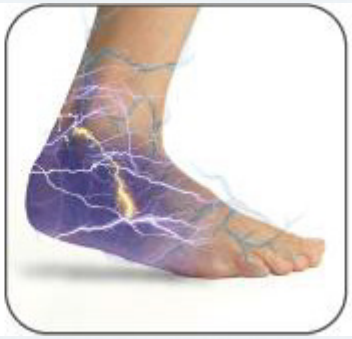
Dray A. *Br J Anaesth* 2008; 101(1):48-58; Felson DT. *Arthritis Res Ther* 2009; 11(1):203; International Association for the Study of Pain. *IASP Taxonomy.* Available at: http://www.iasp-pain.org/AM/Template.cfm?Section=Pain_Definitions. Accessed: July 15, 2013; McMahon SB, Koltzenburg M (eds). *Wall and Melzack's Textbook of Pain.* 5th ed. Elsevier; London, UK: 2006; Woolf CJ. *Pain* 2011; 152(3 Suppl):S2-15.

Common Descriptors of Neuropathic Pain

Burning

Tingling

Pins and needles



Electric shock-like

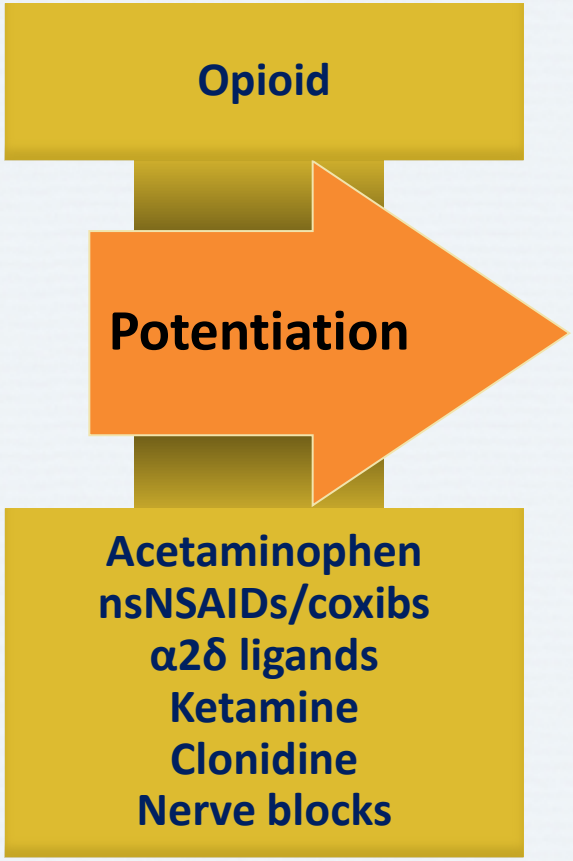
Numbness

Baron R *et al. Lancet Neurol* 2010; 9(8):807-19; Gilron I *et al. CMAJ* 2006; 175(3):265-75.

Can I combine treatments?

Gatchel RJ *et al. Psychol Bull* 2007; 133(4):581-624; Institute of Medicine. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research.*; National Academies Press; Washington, DC: 2011; Mayo Foundation for Medical Education and Research. *Comprehensive Pain Rehabilitation Center Program Guide.* Mayo Clinic; Rochester, MN: 2006.

Why should the treatment of chronic pain be multimodal?



- Improved analgesia
- ⇓ doses of each analgesic
- ⇓ severity of side effects of each drug

Coxib = COX-2 inhibitor; nsNSAID = non-specific non-steroidal anti-inflammatory drug

Kehlet H, Dahl JB. *Anesth Analg* 1993; 77(5):1048-56.

But… Patients with Chronic Pain of Just One Type of Pain Pathophysiology May be Rare

- Patients may have different pathophysiologic mechanisms contributing to their pain
  - e.g., complex regional pain syndrome has multiple potential mechanisms, including nerve injury and inflammation – “mixed pain state”

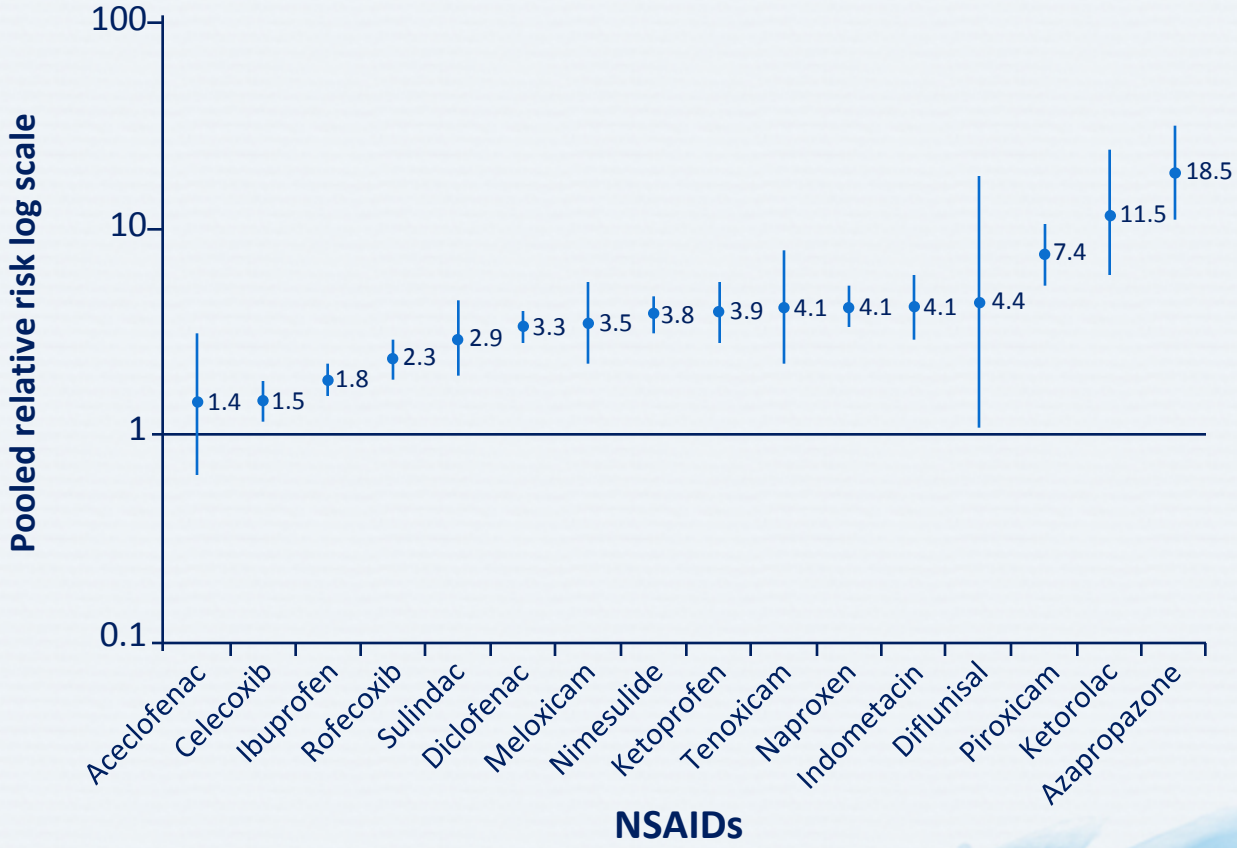
- Therapies that will work better for a particular patient are likely to depend on the mechanisms contributing to the patient’s pain

- Patients with mixed pain may benefit from combination therapy

Dowd GS *et al. J Bone Joint Surg Br* 2007; 89(3):285-90; Vellucci R. *Clin Drug Investig* 2012; 32(Suppl 1):3-10.

What is the gastrointestinal risk with nsNSAIDs/coxibs?

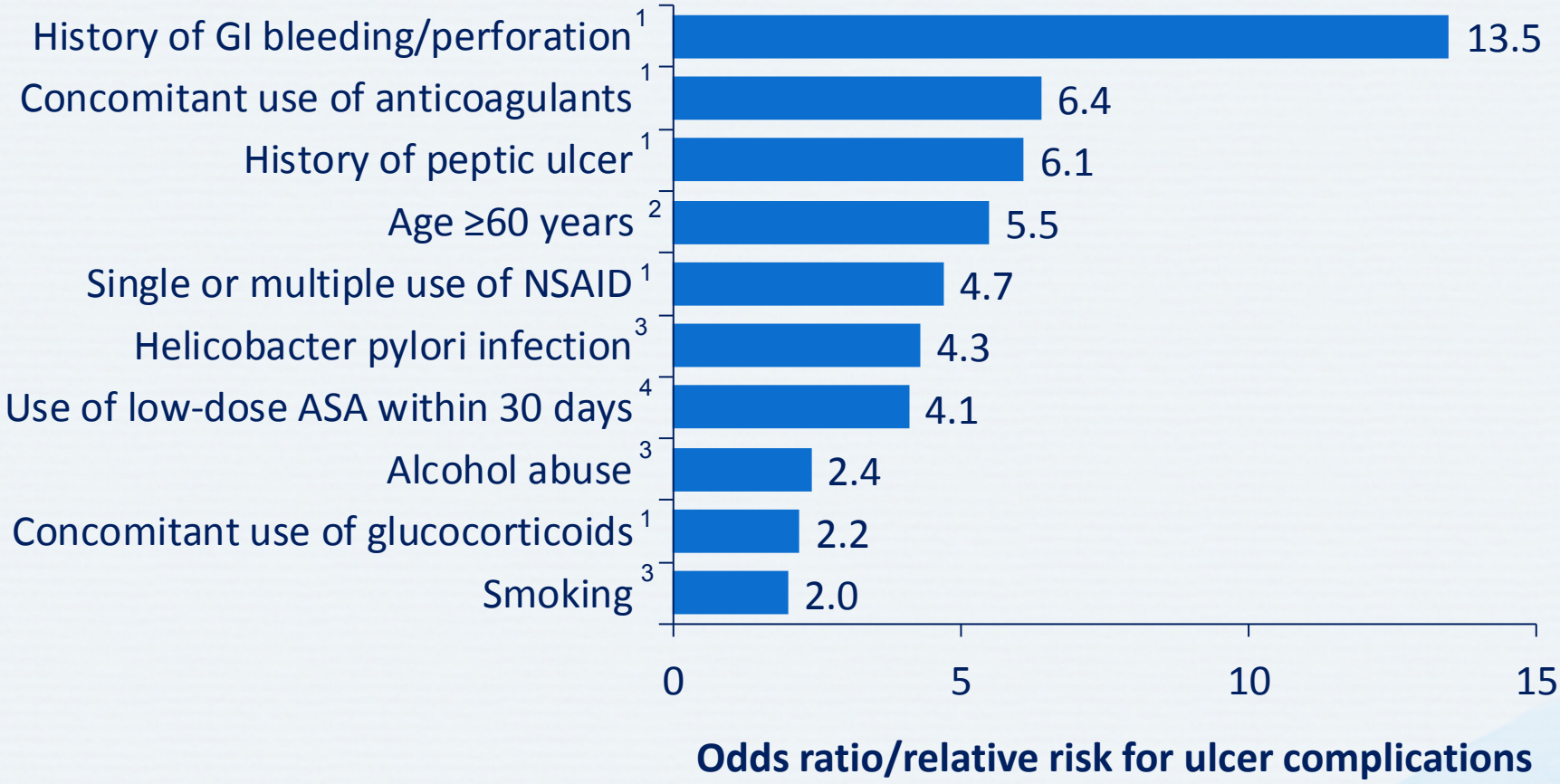
Pooled Relative Risks and 95% CIs of Upper Gastrointestinal Complications



CI = confidence interval; coxib = COX-2 inhibitor; NSAID = non-steroidal anti-inflammatory drug; nsNSAID = non-specific non-steroidal anti-inflammatory drug

Castellsague J *et al. Drug Saf* 2012; 35(12):1127-46.

Risk Factors for Gastrointestinal Complications Associated with nsNSAIDs/Coxibs



ASA = acetylsalicylic acid; coxib = COX-2-specific inhibitor; GI = gastrointestinal; NSAID = non-steroidal anti-inflammatory drug; nsNSAID = non-specific non-steroidal anti-inflammatory drug; SSRI = selective serotonin reuptake inhibitor

1. Garcia Rodriguez LA, Jick H. *Lancet* 1994; 343(8900):769-72; 2. Gabriel SE *et al*. *Ann Intern Med* 1991; 115(10):787-96;
3. Bardou M. Barkun AN. *Joint Bone Spine* 2010; 77(1):6-12; 4. Garcia Rodríguez LA, Hernández-Díaz S. *Arthritis Res* 2001; 3(2):98-101.

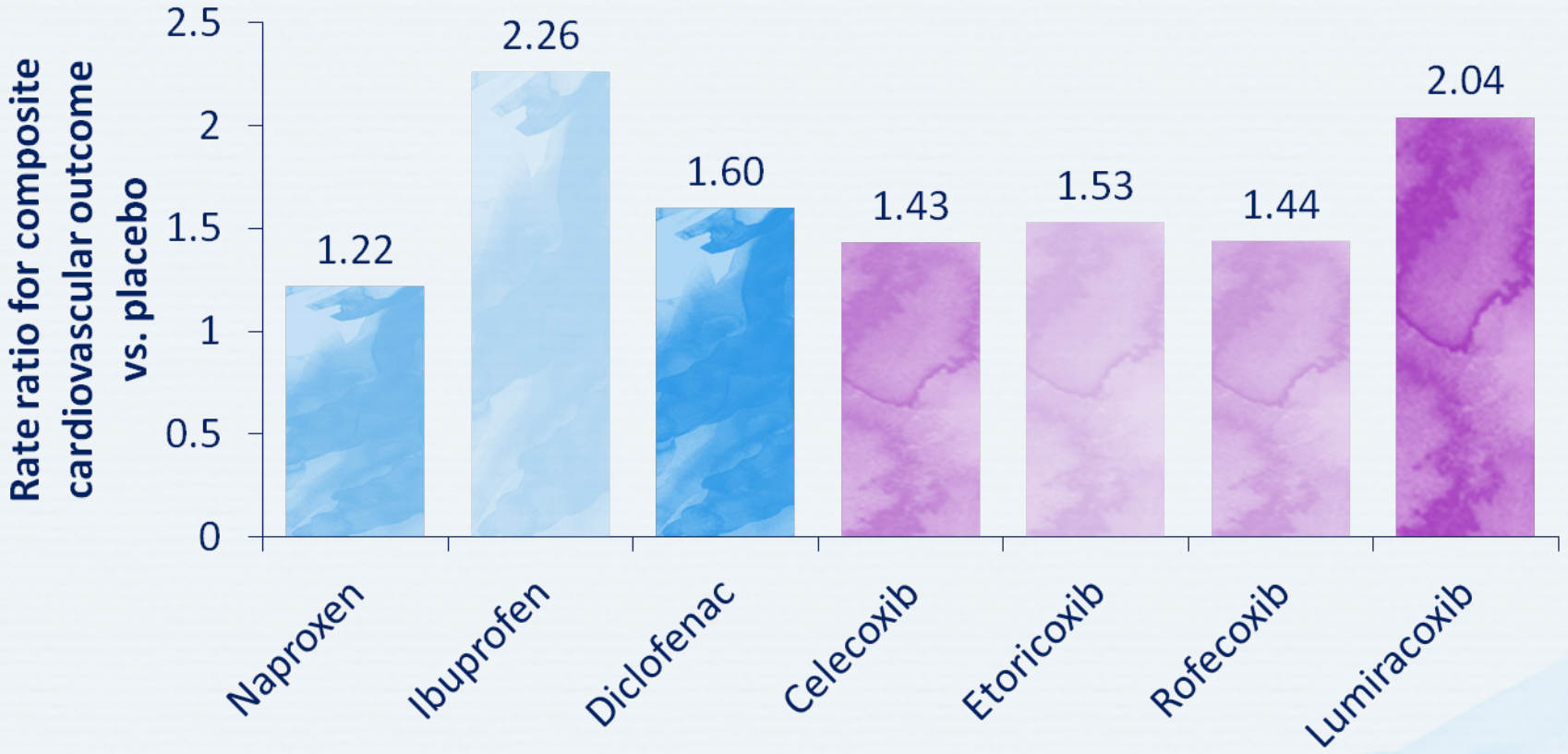
Guidelines for nsNSAIDs/Coxibs Use Based on Gastrointestinal Risk and ASA Use

	Gastrointestinal risk	
	Not elevated	**Elevated**
Not on ASA	nsNSAID alone	Coxib nsNSAID + PPI
On ASA	Coxib + PPI nsNSAID + PPI	Coxib + PPI nsNSAID + PPI

ASA = acetylsalicylic acid; coxib = COX-2-specific inhibitor;
nsNSAID = non-selective non-steroidal anti-inflammatory drug; PPI = proton pump inhibitor

Tannenbaum H *et al*. *J Rheumatol* 2006; 33(1):140-57.

What is the cardiovascular risk with nsNSAIDs/coxibs?



Composite includes non-fatal myocardial infarction, non-fatal stroke, or cardiovascular death compared with placebo; chart based on network meta-analysis involving 30 trials and over 100,000 patients.
Coxib = COX-2 inhibitor; nsNSAID = non-specific non-steroidal anti-inflammatory drug

Trelle S *et al. BMJ* 2011; 342:c7086.

Do nsNSAIDs/coxibs interfere with bone healing?

- Some animal and *in vitro* studies suggest nsNSAIDs may delay bone healing, though results are contradictory
- However, clinical experience and most *in vivo* studies do not substantiate this
- Balance of evidence suggests short-duration nsNSAID/coxib use is safe and effective for post-fracture pain control

Coxib = COX-2 inhibitor; nsNSAID = non-specific non-steroidal anti-inflammatory drug

Kurmis AP *et al. J Bone Joint Surg Am* 2012; 94(9):815-23; Pountos I *et al. ScientificWorldJournal* 2012; 2012:606404.

What is the risk of addiction with opioids?

- One review of 24 studies (involving 2507 chronic pain patients) indicated there is a 3.3% risk of developing addiction to prescription opioids

Fishbain DA *et al. Pain Med* 2008; 9(4):444-59.

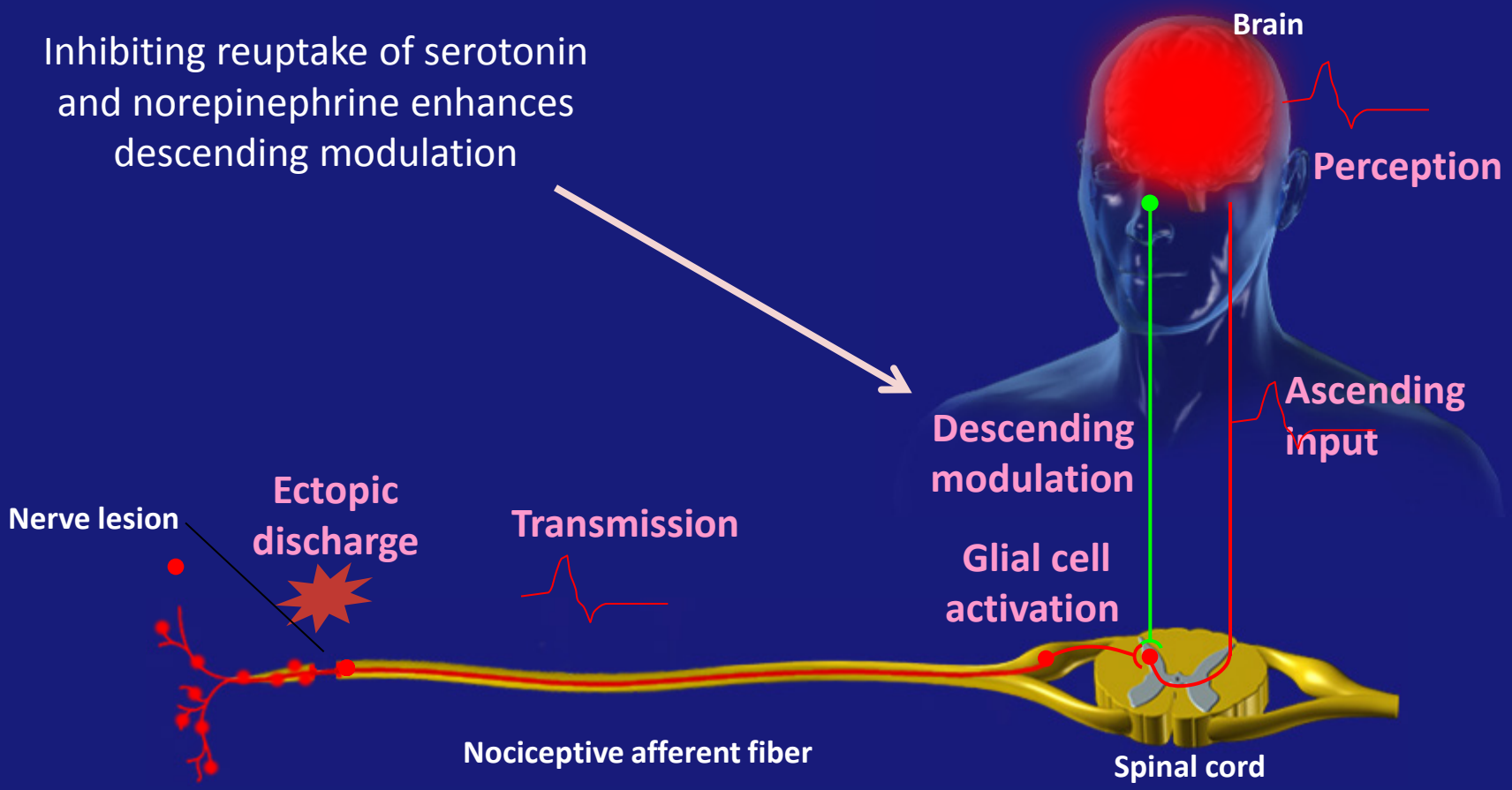
What are the side effects to be expected with opioids?

System	Adverse effects
Gastrointestinal	Nausea, vomiting, constipation
CNS	Cognitive impairment, sedation, lightheadedness, dizziness
Respiratory	Respiratory depression
Cardiovascular	Orthostatic hypotension, fainting
Other	Urticaria, miosis, sweating, urinary retention

CNS = central nervous system

Moreland LW, St Clair EW. *Rheum Dis Clin North Am* 1999; 25(1):153-91; Yaksh TL, Wallace MS. In: Brunton L *et al* (eds). *Goodman and Gilman's The Pharmacological Basis of Therapeutics*. 12th ed. (online version). McGraw-Hill; New York, NY: 2010.

Why should antidepressants be used to treat pain?



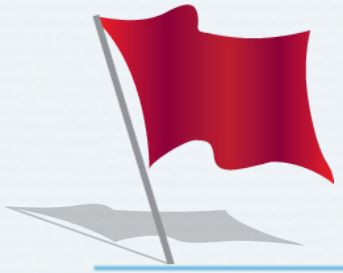
Verdu B *et al. Drugs* 2008; 68(18):2611-2632.

When should I refer patients to a specialist or pain clinic?

Evaluate for patients presenting with pain the presence of **red flags**!

Initiate appropriate investigations/ management or refer to specialist

Littlejohn GO. *J R Coll Physicians Edinb* 2005; 35(4):340-4.

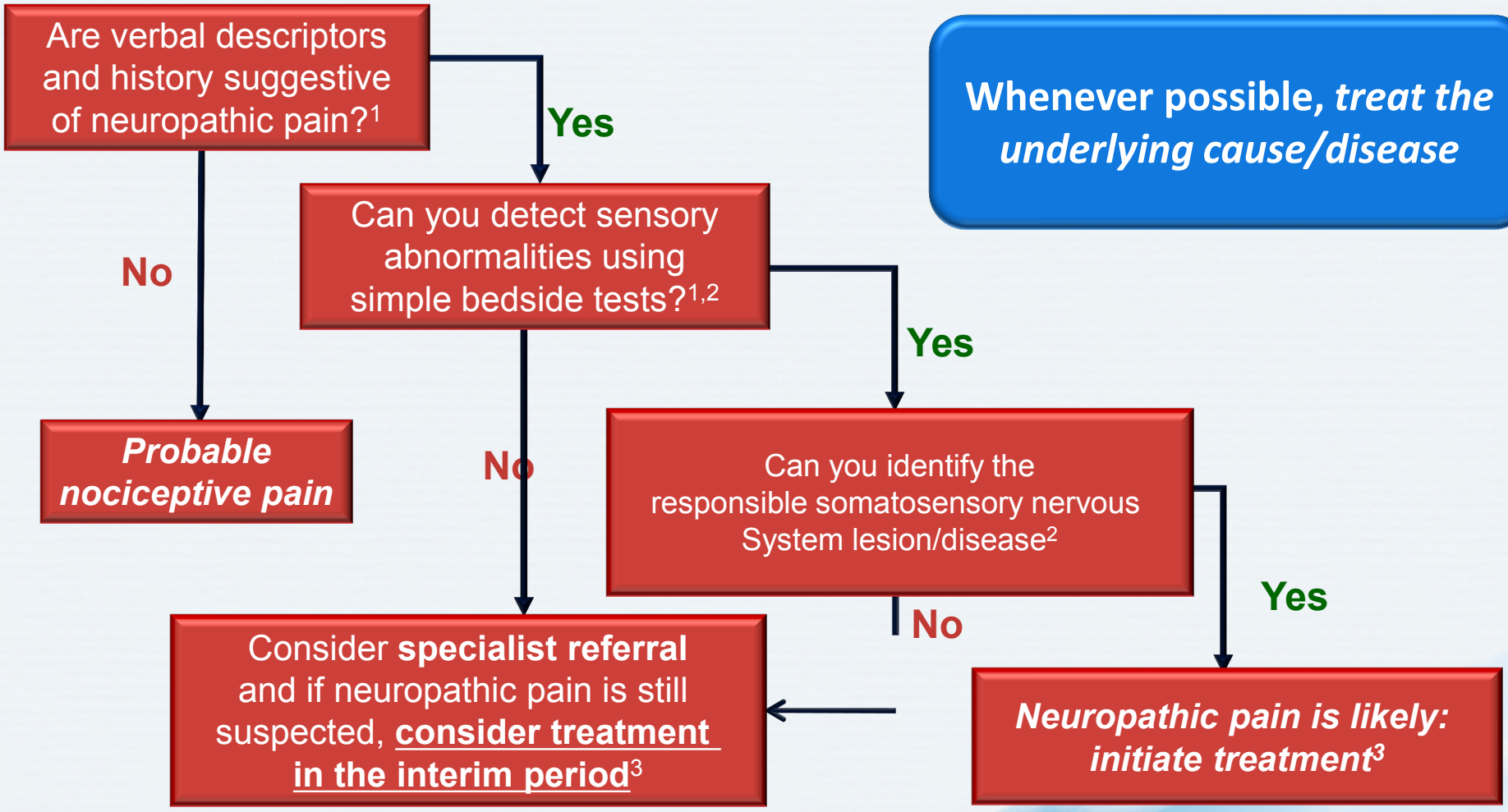


Look for Red Flags for Musculoskeletal Pain

- Older age with new symptom onset
- Night pain
- Fever
- Sweating
- Neurological features
- Previous history of malignancy

Littlejohn GO. *R Coll Physicians Edinb* 2005; 35(4):340-4.

Clinical Approach to Suspected Neuropathic Pain



1. Freynhagen R, Bennett MI. *BMJ* 2009; 339:b3002; 2. Haanpää ML *et al. Am J Med* 2009; 122(10 Suppl):S13-21;
3. Treede RD *et al. Neurology* 2008; 70(18):1630-5.