

COMPREHENSIVE MOCK EXAM 9

Supplemental to: Pain Medicine Board Review 2026-2027

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ABA Pain Medicine Certification Exam — 200 questions, single-best-answer (3 options), domain-weighted per official blueprint

Board-Review Questions

1. Which primary afferent fiber type is thinly myelinated and responsible for the sharp, well-localized first-pain sensation immediately following an acute injury?
 - A. An A-delta fiber, thinly myelinated and fast-conducting
 - B. A C fiber, unmyelinated and slow-conducting
 - C. An A-beta fiber, carrying non-painful touch under normal conditions

2. A patient develops increased sensitivity to pain confined strictly to the immediate site of a fresh burn injury, without any spread beyond that site. Which process does this most directly reflect?
 - A. Central sensitization of dorsal horn neurons extending beyond the injury site
 - B. Peripheral sensitization of nociceptors localized to the injury site itself
 - C. A distinct, unrelated neuropathic process coincidentally arising at the same site

3. A patient presents with widespread body pain, fatigue, and non-restorative sleep persisting for over a year, without evidence of tissue injury, nerve lesion, or inflammatory disease on extensive workup. Which mechanistic category best fits?
 - A. Nociceptive, reflecting ongoing tissue injury at an identifiable site
 - B. Neuropathic, reflecting a lesion of the somatosensory nervous system
 - C. Nociplastic, reflecting altered central pain processing without clear tissue or nerve damage

4. A researcher wants to identify factors associated with a rare outcome by comparing patients who developed the outcome against similar patients who did not, working backward from the outcome. Which study design is best suited to this goal?
 - A. A prospective cohort study, following patients forward from exposure
 - B. A case-control study, comparing patients with and without the outcome retrospectively
 - C. A randomized controlled trial, assigning exposure prospectively

5. Before increasing an existing patient's opioid dose for chronic pain, which action is expected by the regulatory framework governing controlled substance prescribing in most jurisdictions?

- A.** Re-querying the state prescription drug monitoring program before the dose change
- B.** Obtaining a new signed liability waiver specific to the increased dose
- C.** Requiring a repeat formal psychiatric evaluation before any dose change

6. Which principle best reflects the professionalism obligation of informed consent when a proposed interventional procedure carries a documented risk of a rare but serious complication?

- A.** The rare serious risk must be disclosed even if its likelihood is low, since severity as well as frequency informs a genuinely informed decision
- B.** Only risks occurring in more than ten percent of cases require disclosure during consent
- C.** Disclosure of rare serious risks may be omitted if the procedure is generally considered routine

7. A toddler undergoing a painful bedside procedure is assumed by the treating team to experience minimal pain given the child's young age and inability to verbally describe it. Which principle is most relevant to this assumption?

- A.** This assumption is generally accurate, since nociceptive pathways are not yet functional at this developmental stage
- B.** This assumption reflects an outdated view; young children have functional nociceptive circuitry and deserve deliberate pain management
- C.** Pain assessment is not possible in this age group under any circumstances

8. A patient with significant hepatic impairment is started on a standard adult dose of an opioid metabolized primarily by the liver, and develops pronounced sedation. Which principle best explains this?

- A.** Reduced hepatic metabolism increases systemic exposure to the parent drug or active metabolites independent of renal function
- B.** Hepatic function has no meaningful bearing on opioid dosing for any agent
- C.** This sedation indicates an unrelated primary sleep disorder requiring separate evaluation

9. A pain medicine practice implements routine post-procedure outcome tracking using validated functional instruments and reviews aggregate results quarterly to identify practice patterns warranting change. This best reflects which principle?

- A.** Regulatory compliance specific to controlled substance prescribing only
- B.** A structured quality assurance process using outcome data to inform practice improvement
- C.** Informed consent documentation for individual procedures

10. A pain medicine physician considers the population-level impact of prescribing patterns across their practice, not only the needs of the individual patient in front of them. Which principle does this reflect?

- A.** Population-level considerations are the sole responsibility of regulatory agencies and should not inform individual practice
- B.** Individual patient care and population-level stewardship are entirely separate concerns with no meaningful overlap
- C.** The physician functions simultaneously as an individual-patient clinician and a participant in population-level public health stewardship

11. A patient reports an unchanged numeric pain intensity score across two visits, but now requires substantially less rescue analgesic medication to maintain that same reported level. Which conclusion is best supported?

- A.** The patient's pain report must be inaccurate since medication requirement should track intensity score exactly
- B.** Reduced analgesic requirement at a stable reported intensity suggests genuine improvement in an important functional domain
- C.** This pattern indicates the patient is likely underreporting pain intensity at the current visit

12. Which brief, widely used instrument asks patients to rate pain severity and its interference with general activity, mood, walking, and sleep on numeric scales?

- A.** The Fear-Avoidance Beliefs Questionnaire
- B.** The Brief Pain Inventory
- C.** The Oswestry Disability Index

- 13.** A patient reports low confidence in their own ability to manage daily activities despite ongoing chronic pain, distinct from fear of movement itself. Which construct does this most directly describe?
- A.** Fear-avoidance belief, specifically concerning movement-related injury
 - B.** Pain catastrophizing, specifically concerning magnified threat appraisal
 - C.** Low pain self-efficacy, concerning confidence in one's own management ability
- 14.** A clinician evaluating a patient who minimizes verbal pain complaints due to strong personal beliefs about stoicism initially concludes the pain is mild. Which principle should guide the assessment instead?
- A.** Anchor assessment to validated, behaviorally specific instruments rather than the patient's stated beliefs
 - B.** Accept the minimized verbal report as accurate reflection of low pain intensity
 - C.** Defer any further assessment until the patient's stoicism beliefs eventually change
- 15.** A patient's pain assessment yields highly consistent scores on repeated administration under stable conditions, but the scores correlate poorly with the patient's actual observed functional impairment. Which measurement property is deficient in this instrument for this use?
- A.** Validity, since the instrument fails to measure what it claims to measure despite showing consistency
 - B.** Reliability, since inconsistent scores across repeated administrations would explain this pattern
 - C.** The instrument cannot be evaluated for either property based on the information given
- 16.** A patient with suspected ulnar neuropathy at the elbow undergoes nerve conduction studies performed one week after symptom onset, with results reported as normal. Which principle is most relevant to interpreting this result?
- A.** A normal study performed at any time point definitively excludes ulnar neuropathy entirely
 - B.** Nerve conduction studies have no established role in evaluating suspected ulnar neuropathy
 - C.** Some changes may not yet be detectable this early, so a normal result should not exclude the diagnosis

17. A patient enrolled in a clinical trial reports increased pain after being told, inaccurately, that the inert study medication they are receiving is known to sometimes worsen symptoms. Which phenomenon does this most likely represent?

- A.** A placebo effect, a genuine neurobiological response to negative expectation
- B.** Definitive evidence the patient was secretly given the active treatment instead
- C.** An unrelated coincidental worsening of the patient's underlying condition

18. A patient presents with new back pain accompanied by unexplained weight loss over the preceding two months and a history of a prior malignancy. Which action is most appropriate given this combination of findings?

- A.** Proceed with routine conservative management and reassess in several weeks as usual
- B.** Defer any further workup until a trial of physical therapy has been completed
- C.** Pursue prompt further evaluation for possible malignant disease given this specific combination of red-flag findings

19. A patient with a history of intravenous drug use presents with new severe back pain, fever, and point tenderness over the spine. Which condition should be urgently considered given this specific combination of findings?

- A.** A routine mechanical strain requiring only symptomatic management here
- B.** A benign, self-limited process requiring no further diagnostic workup
- C.** Spinal epidural abscess, given the infection risk factors, fever, and focal tenderness

20. A patient with limited health literacy is asked to complete a standard written pain assessment questionnaire without any adaptation to their reading level. Which principle is most relevant to this scenario?

- A.** Assessment tools should be adapted to the patient's literacy level to obtain a valid result
- B.** Written questionnaires are equally valid regardless of a patient's health literacy level
- C.** Patients with limited health literacy cannot be meaningfully assessed under any circumstances

- 21.** A patient is being converted to methadone for chronic pain management. Which monitoring consideration is specifically important given this agent's unique cardiac risk profile?
- A.** Baseline pulmonary function testing before initiation
 - B.** Baseline and periodic ECG monitoring given methadone's QTc-prolongation risk
 - C.** Baseline thyroid function testing before initiation
- 22.** A patient asks how buprenorphine's partial agonist activity affects its respiratory depression risk compared to a full opioid agonist. Which principle best answers this?
- A.** Buprenorphine carries an identical respiratory depression risk profile to full agonists at any dose
 - B.** Buprenorphine has no analgesic ceiling of any kind at high doses
 - C.** Buprenorphine's partial agonist activity produces a ceiling effect on respiratory depression not seen with full agonists
- 23.** A patient on escalating opioid doses for chronic pain reports that pain has paradoxically worsened and become more diffuse since the last dose increase. Which phenomenon should be considered?
- A.** This pattern always indicates undertreated pain requiring further dose escalation
 - B.** Opioid-induced hyperalgesia, a paradoxical increase in pain sensitivity associated with opioid exposure
 - C.** This pattern is unrelated to opioid therapy and reflects unrelated disease progression only
- 24.** A pregnant patient on chronic opioid therapy is being considered for a dose taper. Which principle should guide this decision?
- A.** Abrupt discontinuation is preferred over gradual tapering during pregnancy
 - B.** Opioid therapy must be discontinued entirely regardless of gestational stage or clinical circumstances
 - C.** A gradual, carefully monitored taper is preferred, since abrupt withdrawal carries risk to the pregnancy

25. A patient on a therapeutic anticoagulant is being considered for a non-selective NSAID for acute pain. Which risk is most directly relevant to this combination?

- A.** Increased gastrointestinal bleeding risk from the combined antiplatelet and anticoagulant effects
- B.** No meaningfully increased bleeding risk exists with this specific combination
- C.** This combination is contraindicated only when the NSAID is administered topically rather than orally

26. A patient with localized knee osteoarthritis and a history of gastrointestinal bleeding is being considered for topical diclofenac. What is the primary rationale for this specific formulation choice?

- A.** Topical diclofenac provides a stronger systemic anti-inflammatory effect than oral NSAIDs
- B.** Topical application provides localized anti-inflammatory effect with substantially lower systemic absorption, reducing gastrointestinal risk
- C.** Topical diclofenac carries an identical systemic bleeding risk profile to oral formulations

27. A patient is prescribed ketorolac for acute postoperative pain. Which prescribing limitation is specifically important for this agent?

- A.** Total duration of use, oral plus parenteral combined, should not exceed five days given cumulative toxicity risk
- B.** Ketorolac has no established duration limitation and may be continued indefinitely
- C.** Ketorolac duration limitations apply only to the parenteral route, not the oral route

28. A patient with diabetic peripheral neuropathy and comorbid stress urinary incontinence is being considered for an SNRI. Which specific agent has an additional established indication relevant to this comorbidity?

- A.** Venlafaxine, which lacks a specific established indication for this comorbidity
- B.** Duloxetine, which carries an additional established indication for stress urinary incontinence
- C.** Desvenlafaxine, which lacks a specific established indication for this comorbidity

- 29.** A patient asks why pregabalin is dosed differently than gabapentin despite both being gabapentinoids. Which pharmacokinetic distinction best explains this?
- A.** Pregabalin and gabapentin have identical absorption kinetics and dosing requirements
 - B.** Pregabalin has more predictable, linear absorption at higher doses, distinct from gabapentin's saturable absorption
 - C.** Gabapentin has more predictable absorption than pregabalin at all doses
- 30.** A patient taking carbamazepine for trigeminal neuralgia is separately prescribed a hormonal contraceptive. Which interaction consideration is most relevant?
- A.** Carbamazepine's enzyme induction can reduce hormonal contraceptive efficacy, warranting alternative contraception discussion
 - B.** Carbamazepine has no established interaction with hormonal contraceptives of any kind whatsoever
 - C.** This interaction applies only to injectable contraceptives, never to oral formulations
- 31.** A patient with spasticity-related pain following a spinal cord injury is being considered for baclofen. Which mechanism explains its therapeutic effect?
- A.** Baclofen acts primarily through peripheral prostaglandin inhibition
 - B.** Baclofen acts as a GABA-B receptor agonist, reducing spasticity at the spinal cord level
 - C.** Baclofen acts primarily through peripheral opioid receptor activation
- 32.** A patient is started on tizanidine for muscle spasm-related pain. Which monitoring consideration is specifically important for this agent?
- A.** Baseline and periodic renal function testing given a specific nephrotoxicity risk
 - B.** Baseline and periodic liver function testing given a specific hepatotoxicity risk
 - C.** No specific laboratory monitoring is indicated for this agent
- 33.** A patient with refractory chronic pain is being considered for intrathecal ziconotide. Which specific warning is most directly relevant to patient selection?

- A.** Ziconotide carries a specific warning regarding psychiatric symptoms, including risk of severe mood or cognitive changes
- B.** Ziconotide carries no meaningful psychiatric risk profile of any kind
- C.** Ziconotide's primary specific warning concerns hepatotoxicity rather than psychiatric effects

34. A patient undergoing an opioid taper develops autonomic symptoms including sweating, tachycardia, and agitation. Which adjunctive agent is specifically used to manage these withdrawal-associated symptoms?

- A.** A short course of a non-selective NSAID targeting the autonomic symptoms
- B.** Clonidine, an alpha-2 agonist that reduces autonomic withdrawal symptoms
- C.** A short course of a topical lidocaine patch targeting the autonomic symptoms

35. A patient with refractory neuropathic pain is being considered for a ketamine infusion. Which mechanism underlies its proposed analgesic effect?

- A.** NMDA receptor antagonism, reducing central sensitization and windup
- B.** Selective peripheral sodium channel blockade at the injury site
- C.** Direct peripheral opioid receptor agonism at the injury site

36. A patient is receiving an intravenous lidocaine infusion for refractory pain. Which monitoring parameter is specifically important during administration?

- A.** Baseline and periodic pulmonary function testing throughout the infusion
- B.** No specific monitoring is required during a lidocaine infusion
- C.** Continuous cardiac monitoring given lidocaine's dose-dependent cardiac conduction effects

37. A patient receiving repeated epidural corticosteroid injections over a short period is being considered for an additional injection. Which principle is most relevant to this decision?

- A.** Cumulative corticosteroid exposure across repeated injections warrants consideration of systemic effects and spacing between injections

- B.** Epidural corticosteroid injections carry no established cumulative dose consideration
- C.** There is no upper limit to how frequently epidural corticosteroid injections may be repeated

38. A patient is prescribed a high-concentration capsaicin patch for localized neuropathic pain. Which application consideration is specifically important for this formulation?

- A.** The high-concentration patch is self-applied by the patient at home without any supervision
- B.** The high-concentration patch requires no monitoring during or after its application
- C.** The high-concentration patch requires application by a trained provider given the intensity of the local reaction

39. A patient is being considered for a muscle relaxant for acute low back spasm. Which comparison between methocarbamol and cyclobenzaprine is most accurate regarding sedation?

- A.** Methocarbamol is generally considered more sedating than cyclobenzaprine
- B.** Both agents carry an identical sedation profile with no meaningful difference
- C.** Cyclobenzaprine is generally considered more sedating than methocarbamol

40. A patient taking an SSRI for depression is separately prescribed tramadol for acute pain. Which risk is most directly relevant to this combination?

- A.** No meaningful pharmacologic interaction exists between these two agents
- B.** Increased serotonin syndrome risk given tramadol's serotonergic activity combined with the SSRI
- C.** This combination carries only a renal interaction risk, not a serotonergic one

41. A patient asks how tapentadol's mechanism differs from a pure mu-opioid agonist. Which principle best answers this?

- A.** Tapentadol acts exclusively through norepinephrine reuptake inhibition with no opioid receptor activity
- B.** Tapentadol combines mu-opioid receptor agonism with norepinephrine reuptake inhibition, a dual mechanism

C. Tapentadol acts exclusively through mu-opioid receptor agonism identical to morphine

42. A patient being started on chronic opioid therapy is identified as having several risk factors for opioid-related overdose. Which co-prescribing practice is now widely recommended in this setting?

- A. Co-prescribing naloxone along with patient and family education on its use
- B. No specific co-prescribing practice is recommended regardless of identified risk factors
- C. Co-prescribing a benzodiazepine to offset opioid-related anxiety

43. A patient is undergoing buprenorphine induction for opioid use disorder and develops worsened withdrawal symptoms shortly after the first dose. Which phenomenon does this most likely represent?

- A. An unrelated allergic reaction to the buprenorphine formulation itself
- B. Precipitated withdrawal, resulting from buprenorphine displacing a full agonist while providing only partial activation
- C. Expected, mild sedation with no clinical significance requiring no further consideration

44. A patient with coronary artery disease requires an NSAID for acute pain. Which principle should guide agent selection given this cardiovascular history?

- A. All NSAIDs carry an identical cardiovascular risk profile with no meaningful distinction between agents
- B. Naproxen is generally considered to carry a relatively more favorable cardiovascular risk profile among NSAIDs, though not risk-free
- C. COX-2 selective agents are preferred in this population given a superior cardiovascular safety profile compared to naproxen

45. A patient using topical lidocaine patches for localized neuropathic pain applies more patches simultaneously than the labeled maximum. Which risk is most directly relevant to this practice?

- A. This practice carries only a local skin irritation risk, with no systemic absorption concern
- B. No meaningful risk exists regardless of how many patches are applied simultaneously
- C. Increased systemic lidocaine absorption raising the risk of systemic toxicity

46. A patient with preexisting liver disease is being considered for duloxetine. Which consideration is most directly relevant to this decision?

- A.** Duloxetine carries a hepatotoxicity warning and should be used cautiously, if at all, in patients with significant hepatic impairment
- B.** Duloxetine has no established relationship to hepatic function and requires no specific consideration
- C.** Duloxetine is specifically preferred in hepatic impairment given a uniquely favorable hepatic safety profile

47. A patient with reduced renal function is being considered for gabapentin. Which principle should guide dosing?

- A.** Gabapentin dosing should be reduced in proportion to renal function, given its primarily renal elimination
- B.** Gabapentin dosing requires no adjustment regardless of renal function
- C.** Gabapentin dosing should be increased in renal impairment to compensate for reduced absorption

48. An older adult patient is being considered for a tricyclic antidepressant for neuropathic pain. Which consideration is specifically relevant given this patient's age?

- A.** Anticholinergic side effects carry no particular additional concern in older adults compared to younger patients
- B.** The anticholinergic side-effect burden of tricyclic antidepressants carries particular concern in older adults, including cognitive and fall risk
- C.** Tricyclic antidepressants are specifically preferred in older adults given a favorable side-effect profile in this population

49. A patient's treatment plan combines a gabapentinoid with a topical lidocaine patch rather than escalating the gabapentinoid alone to a higher dose. Which principle does this combination best reflect?

- A.** Combining distinct mechanisms with minimal overlapping toxicity achieves additive benefit while limiting systemic side effects

B. This combination provides no meaningful advantage over gabapentinoid dose escalation alone here

C. Topical and systemic agents should never be combined together under any circumstances

50. A patient is started on an SNRI and separately begins taking an over-the-counter St. John's Wort supplement without informing the prescriber. Which concern is most directly relevant?

A. No meaningful interaction exists between St. John's Wort and prescription serotonergic agents here

B. St. John's Wort carries serotonergic activity, and combined use raises serotonin syndrome risk

C. This combination carries only a hepatic interaction risk, without any serotonergic concern present

51. A patient undergoes a second diagnostic block using a local anesthetic of different duration than the first, specifically to reduce the risk of a false-positive result before proceeding to a permanent procedure. Which principle does this reflect?

A. Therapeutic intent, since repeating any block is inherently therapeutic in nature

B. No established rationale exists for varying local anesthetic duration between blocks

C. Comparative confirmation, using differing durations to increase confidence in the target structure

52. A patient being considered for a permanent implanted device undergoes preoperative psychological evaluation as part of candidacy assessment. Which principle best explains this step?

A. Psychological evaluation is a purely administrative formality with no bearing on outcomes

B. Psychological readiness and realistic expectations are associated with outcomes and appropriately inform candidacy for a permanent implant

C. Psychological evaluation is required only for patients under a specific age threshold

53. A proceduralist discusses a planned intervention with a patient, presenting the recommended option alongside reasonable alternatives and the option of no treatment, and incorporates the patient's stated preferences into the final plan. Which principle does this best reflect?

A. Informed consent limited strictly to disclosure of risks, without discussion of alternatives

- B.** A purely paternalistic decision-making model where the proceduralist selects treatment unilaterally
- C.** Shared decision-making, incorporating patient preferences alongside clinical recommendation and alternatives

54. A patient receives interferential current stimulation, which uses two medium-frequency currents that intersect at the target tissue. Which principle underlies the proposed mechanism of this modality?

- A.** Direct pharmacologic delivery into the target tissue via the intersecting currents used
- B.** The intersecting currents produce an interference effect at depth, engaging pain-modulating mechanisms
- C.** A systemic anti-inflammatory effect throughout the body unrelated to any local current

55. Which factor most directly distinguishes dry needling from traditional acupuncture in terms of underlying rationale?

- A.** Dry needling targets myofascial trigger points based on a Western biomedical rationale, while acupuncture is rooted in traditional meridian theory
- B.** Dry needling and acupuncture use an identical theoretical rationale with no meaningful distinction
- C.** Dry needling exclusively uses electrical stimulation, while acupuncture never incorporates electrical stimulation

56. A patient requires epidural access for a presumed diffuse, bilateral lower lumbar or sacral pain source where a specific unilateral nerve root target has not been identified. Which epidural approach is most appropriate?

- A.** Transforaminal approach, selectively targeting a single specific nerve root
- B.** Caudal approach, providing access to the lower epidural space useful for diffuse or multilevel presentations
- C.** No epidural approach is appropriate for a diffuse, non-specific presentation

57. A patient with suspected sacroiliac joint-mediated pain is being considered for an intraarticular injection. Which structure does this procedure specifically target?
- A. The sacroiliac joint space itself, distinct from nearby periarticular ligamentous structures
 - B. The lumbar facet joint capsule rather than the sacroiliac joint itself
 - C. The lumbar epidural space via an interlaminar approach instead
58. A patient with confirmed knee osteoarthritis pain refractory to conservative treatment is being considered for a genicular nerve block. Which structure does this procedure specifically target?
- A. The sensory nerves supplying the knee, distinct from an intraarticular joint approach
 - B. The intraarticular knee joint space itself, accessed directly without nerve targeting
 - C. The lumbar plexus proximal to the knee, a structure well removed from this joint
59. A patient with suspected complex regional pain syndrome affecting the upper extremity is being considered for a stellate ganglion block. Which structure does this procedure target?
- A. The cervical epidural space, via an interlaminar approach instead
 - B. The cervical sympathetic chain, specifically the stellate ganglion, for sympathetic modulation
 - C. The brachial plexus directly, for somatic rather than sympathetic blockade
60. A patient with severe pancreatic cancer-related abdominal pain is being considered for a celiac plexus block. Which principle best supports this specific intervention?
- A. The celiac plexus carries visceral sympathetic afferents from the pancreas, an appropriate target
 - B. The celiac plexus has no established relationship to pancreatic visceral pain transmission
 - C. This procedure specifically targets somatic rather than visceral pain pathways
61. A patient with pelvic visceral pain of gynecologic origin is being considered for a superior hypogastric plexus block. Which principle supports this intervention?
- A. The superior hypogastric plexus carries somatic afferents from the lower extremity, unrelated to pelvic visceral structures

- B.** The superior hypogastric plexus carries sympathetic afferents from pelvic visceral structures, making it an appropriate target for this pain source
- C.** This procedure targets the same structures as a stellate ganglion block

62. A patient with coccydynia refractory to conservative treatment is being considered for a ganglion impar block. Which structure does this procedure target?

- A.** The lumbar sympathetic chain at a level well above the coccyx itself
- B.** The ganglion impar, a terminal sympathetic structure anterior to the coccyx
- C.** The sciatic nerve directly, rather than any sympathetic structure

63. A patient with occipital neuralgia is being considered for a greater occipital nerve block. Which principle supports this intervention?

- A.** This procedure targets the trigeminal nerve directly rather than an occipital structure
- B.** This procedure has no established diagnostic or therapeutic role in headache management
- C.** The greater occipital nerve is a peripheral sensory nerve accessible for targeted blockade in occipitally-based headache and neuralgia

64. A patient develops a positional headache, worse upright and improved supine, following a lumbar epidural procedure, and conservative measures fail to provide relief after several days. Which intervention is an established next step?

- A.** Immediate surgical exploration of the epidural space itself
- B.** A repeat diagnostic block at the same level using a different agent
- C.** An epidural blood patch, sealing the dural defect and relieving low CSF pressure

65. A patient develops sudden bradycardia, hypotension, and diaphoresis during a procedure performed with the patient in an upright position. Which immediate management step is most appropriate?

- A.** Immediately administer a full therapeutic dose of local anesthetic to the target structure
- B.** Recognize this as a likely vasovagal reaction and reposition the patient supine with legs elevated while monitoring vital signs

C. Continue the procedure as planned without any positional or monitoring change

66. A patient develops perioral numbness, tinnitus, and confusion shortly after a large-volume local anesthetic injection for a peripheral nerve block. Which condition should be immediately considered?

A. Local anesthetic systemic toxicity, a recognized complication requiring immediate recognition and management

B. An unrelated primary seizure disorder with no connection to the injection

C. A routine, expected local anesthetic effect requiring no specific intervention

67. A patient undergoing a stellate ganglion block develops sudden dyspnea and decreased breath sounds on the ipsilateral side shortly after the procedure. Which complication should be considered given the proximity of this structure to the thoracic cavity?

A. This presentation is expected following any stellate ganglion block and requires no further evaluation

B. Pneumothorax, a recognized complication given the anatomic proximity of this structure to the lung apex

C. This presentation indicates a systemic allergic reaction rather than a structural complication

68. A patient with refractory peripheral neuropathic pain in a specific nerve distribution is being considered for peripheral nerve stimulation rather than spinal cord stimulation. Which principle distinguishes this approach?

A. Peripheral nerve stimulation targets the specific peripheral nerve directly, rather than the dorsal columns of the spinal cord

B. Peripheral nerve stimulation and spinal cord stimulation target an identical anatomic location

C. Peripheral nerve stimulation requires no trial period, unlike spinal cord stimulation

69. A patient with a specific, well-localized peripheral neuropathic pain distribution not adequately covered by conventional spinal cord stimulation is being considered for dorsal root ganglion stimulation. Which principle supports this specific approach?

- A.** Dorsal root ganglion stimulation can provide more focal coverage of a specific dermatomal distribution than conventional spinal cord stimulation
- B.** Dorsal root ganglion stimulation and conventional spinal cord stimulation provide identical coverage patterns
- C.** Dorsal root ganglion stimulation is never appropriate for a well-localized dermatomal presentation

70. A patient with an implanted intrathecal pump for refractory pain requires increased medication delivery. Which consideration is specifically relevant to safely increasing this therapy?

- A.** Intrathecal pump reservoirs never require refilling once implanted at all
- B.** Intrathecal dosing requires no programming beyond a standard oral adjustment
- C.** Both delivery rate and reservoir require coordinated management for correct dosing

71. A patient with an intrathecal pump reports progressively worsening pain and new neurologic symptoms at the catheter tip location over several months. Which complication should be considered?

- A.** This presentation is expected and requires no further evaluation at all
- B.** Intrathecal granuloma, presenting with progressive symptoms at the catheter tip
- C.** Simple catheter disconnection, with no mass effect on nearby structures

72. A patient with an intrathecal baclofen pump experiences an abrupt interruption in baclofen delivery due to pump malfunction. Which presentation should be recognized as a possible consequence?

- A.** This interruption carries no clinical significance and needs no urgent evaluation
- B.** This interruption produces symptoms identical to opioid withdrawal specifically
- C.** Abrupt withdrawal, producing a distinct syndrome of spasticity, fever, and altered mentation

73. A patient with a painful vertebral compression fracture refractory to conservative management is being considered for vertebral augmentation. Which principle supports this intervention?

- A.** Vertebral augmentation is indicated for any back pain regardless of fracture status

- B.** Augmentation can provide mechanical stabilization for a confirmed painful fracture
- C.** This procedure targets the intervertebral disc rather than the vertebral body

74. A patient with radicular pain attributed to a contained disc herniation refractory to conservative treatment is being considered for percutaneous disc decompression. Which principle supports this intervention?

- A.** This procedure is appropriate for any disc herniation regardless of containment
- B.** Generally considered for a contained herniation, reducing intradiscal pressure and compression
- C.** This procedure targets the facet joint rather than the intervertebral disc

75. A patient with an implanted spinal cord stimulator develops redness, warmth, and drainage at the implant site several weeks postoperatively. Which action is most appropriate?

- A.** Immediate reprogramming of the device without any infectious evaluation
- B.** Reassurance that this presentation is an expected postoperative finding requiring no further evaluation
- C.** Prompt evaluation for possible device-related infection, which may require antibiotic therapy or device explantation depending on severity

76. A patient undergoes cooled radiofrequency ablation rather than conventional radiofrequency ablation for a target nerve. Which principle distinguishes this specific technique?

- A.** Cooled radiofrequency ablation circulates coolant through the probe tip, allowing a larger, more spherical lesion than conventional technique
- B.** Cooled radiofrequency ablation produces an identical lesion size and shape to conventional radiofrequency ablation
- C.** Cooled radiofrequency ablation does not require any thermal energy delivery at all

77. A patient with a malignancy-related pain source refractory to other measures is being considered for chemical neurolysis using phenol or alcohol. Which principle distinguishes this technique from thermal ablation?

- A.** Chemical neurolysis and thermal radiofrequency ablation use an identical mechanism

- B.** A chemical rather than thermal mechanism, generally reserved for refractory cancer pain
- C.** The preferred first-line technique for all chronic non-cancer pain indications

78. A patient asks whether autologous and allogeneic regenerative tissue products carry the same regulatory and safety considerations. Which principle best answers this?

- A.** Allogeneic products carry additional processing and regulatory considerations distinct from autologous tissue
- B.** Autologous and allogeneic products carry identical regulatory considerations
- C.** Allogeneic products require no screening of any kind prior to use

79. A patient asks about the proposed mechanism of bone marrow aspirate concentrate as a regenerative technique. Which principle best describes this?

- A.** Proposed to deliver concentrated marrow-derived cells and growth factors to the target
- B.** Works through an identical mechanism to a corticosteroid injection
- C.** Contains no cellular or growth factor component of any kind

80. A diagnostic block is performed using an unusually large volume of local anesthetic, well beyond what is typically required to anesthetize the intended target structure. Which risk does this specifically raise?

- A.** No meaningful risk exists regardless of the injected volume used here
- B.** Increased false-positive risk from anesthetic spreading beyond the intended target
- C.** This practice only affects therapeutic duration, with no bearing on diagnostic accuracy

81. A patient with chronic pain begins a structured graded exposure program, gradually resuming a previously avoided activity in small increments. Which behavioral principle does this approach most directly apply?

- A.** Graded exposure targeting fear-avoidance through incremental, planned activity re-engagement
- B.** Progressive muscle relaxation targeting autonomic arousal reduction

C. Biofeedback targeting voluntary control of a physiologic parameter

82. A patient practices biofeedback-assisted relaxation, using real-time physiologic monitoring to learn voluntary control over muscle tension. Which principle underlies this technique?

- A. Cognitive restructuring of maladaptive pain-related beliefs and thought patterns
- B. Graded exposure to a previously avoided movement or specific activity
- C. Using real-time physiologic feedback to build voluntary control over a target parameter

83. A patient with chronic pain and comorbid insomnia is referred for cognitive-behavioral therapy specifically targeting the insomnia itself. Which principle supports this referral?

- A. Sleep disturbance in chronic pain patients is unrelated to overall pain outcomes and treatment priority
- B. Comorbid insomnia independently affects pain outcomes, and dedicated treatment addresses this contributing factor directly
- C. Insomnia in chronic pain patients should never be treated separately from the underlying pain condition

84. A patient begins a supervised aquatic therapy program for chronic low back pain, citing reduced joint loading as a specific rationale. Which principle explains this rationale?

- A. Buoyancy reduces axial loading on painful joints, allowing active movement with less mechanical stress than land-based exercise
- B. Aquatic therapy works exclusively through a passive relaxation mechanism with no active movement component
- C. Aquatic therapy provides no meaningful difference in joint loading compared to land-based exercise

85. A patient with chronic pain begins a structured pacing program, learning to distribute activity across a day rather than alternating between overexertion and prolonged rest. Which principle does this approach address?

- A. This approach addresses fear-avoidance exclusively, with no relationship to overexertion cycles

- B.** Structured pacing addresses the overactivity-underactivity cycle that can worsen symptoms and reduce function over time
- C.** This approach has no established relationship to functional outcomes in chronic pain

86. A patient's chronic pain treatment plan includes both active exercise therapy and a course of manual therapy, with manual therapy specifically time-limited and framed as a bridge to increased active participation. Which principle does this reflect?

- A.** Manual therapy is intended as the primary, indefinite treatment with exercise serving only a supplementary role
- B.** Passive modalities are most appropriately used as a time-limited bridge supporting eventual active engagement, not an indefinite standalone plan
- C.** Manual therapy and active exercise address entirely unrelated aspects of the presentation with no complementary relationship

87. A patient asks whether tai chi has established evidence for chronic pain specifically, or whether its benefit is purely anecdotal. Which response reflects an honest evidence characterization?

- A.** Tai chi has reasonably supportive evidence for conditions involving balance and mobility specifically
- B.** Tai chi has uniformly strong evidence across every chronic pain condition without exception
- C.** Tai chi has no meaningful evidence base for any chronic pain condition at all

88. A patient's chronic pain treatment plan positions acupuncture as a complete substitute for an otherwise effective pharmacologic regimen, discontinuing the pharmacotherapy entirely in favor of acupuncture alone. Which principle is most relevant to evaluating this change?

- A.** This substitution is appropriate given acupuncture's sufficient evidence to fully replace pharmacotherapy in every case
- B.** Acupuncture should never be included in any chronic pain treatment plan under any circumstances
- C.** Complementary techniques are generally positioned as an adjunct within a multimodal plan, and replacing an effective treatment entirely warrants careful reconsideration

89. A structured occupational rehabilitation program includes job-site analysis to identify specific physical demands of a patient's actual work role before finalizing a return-to-work plan. Which principle does this step reflect?

- A.** Job-site analysis is an optional step with no meaningful bearing on return-to-work planning accuracy
- B.** A generic return-to-work plan, without job-specific analysis, is equally effective for any occupation
- C.** Matching the rehabilitation plan to the actual physical demands of the specific job improves the accuracy and success of the return-to-work plan

90. A patient reports significant anger and perceived injustice related to a workplace injury, alongside chronic pain symptoms. Which principle is most relevant to addressing this presentation?

- A.** Perceived injustice is a recognized psychological factor associated with worse pain and disability outcomes, warranting attention within the treatment plan
- B.** Anger and perceived injustice should be addressed exclusively through legal channels, not clinical treatment
- C.** Perceived injustice has no established relationship to chronic pain outcomes and requires no specific attention

91. A patient with chronic pain and significant catastrophizing completes a course of cognitive-behavioral therapy and demonstrates reduced catastrophizing scores alongside improved function, despite unchanged pain intensity. Which principle does this outcome illustrate?

- A.** This outcome indicates the treatment failed since pain intensity itself did not change
- B.** Functional improvement and reduced catastrophizing represent a meaningful treatment outcome independent of pain intensity change
- C.** Catastrophizing scores have no established relationship to functional outcomes in chronic pain

92. A patient begins a course of therapeutic massage for chronic myofascial pain. Which principle best characterizes the current evidence base for this modality?

- A.** Massage carries modest but generally supportive evidence as a short-term adjunct for certain musculoskeletal pain presentations

B. Massage carries no established evidence base for any chronic pain presentation whatsoever

C. Massage carries evidence equivalent in strength to first-line pharmacologic therapy for chronic pain

93. A patient's psychological screening for chronic pain identifies significant depressive symptoms meeting a threshold warranting further evaluation. Which action is most appropriate given this finding?

A. Depressive symptoms identified on screening should be disregarded unless the patient specifically raises the topic unprompted

B. Depressive symptoms in chronic pain patients require no further evaluation since they are considered an expected, non-actionable finding

C. This finding warrants further clinical evaluation and, where appropriate, treatment integrated alongside pain management

94. A patient begins a structured mindfulness practice and is counseled that the goal is changing one's relationship to pain sensations rather than eliminating them. Which principle does this counseling reflect?

A. Mindfulness-based approaches aim to alter the attentional and emotional response to pain rather than necessarily eliminating the sensation itself

B. Mindfulness-based approaches are specifically intended to eliminate pain sensation through a direct peripheral analgesic mechanism

C. This counseling reflects an inaccurate description of how mindfulness-based approaches are understood to work

95. A patient beginning a structured exercise program for chronic pain is counseled to expect a temporary, mild increase in discomfort during the initial adjustment period, distinct from a concerning flare requiring program discontinuation. Which principle supports this counseling?

A. Any increase in discomfort during a new exercise program always indicates the program should be discontinued immediately

B. A distinction between expected initial adjustment discomfort and a genuinely concerning flare helps patients persist appropriately through a new program

C. Patients should never be counseled about expected discomfort before beginning a new exercise program

96. A patient's return-to-work plan is developed collaboratively between the treating clinician, the patient, and the employer, rather than by the clinician alone without employer input. Which principle does this collaborative approach reflect?

A. Employer input is unnecessary since return-to-work plans are purely clinical determinations

B. Collaborative development improves the plan's actual feasibility and likelihood of successful implementation in the real workplace

C. Patient input should be excluded from return-to-work planning to maintain clinical objectivity

97. A patient with chronic pain and significant sleep disturbance is offered both pharmacologic sleep support and behavioral sleep intervention, with behavioral intervention emphasized as carrying more durable long-term benefit. Which principle supports this emphasis?

A. Pharmacologic sleep support carries more durable long-term benefit than behavioral intervention in every case

B. Behavioral and pharmacologic sleep interventions carry identical durability of benefit with no meaningful distinction

C. Behavioral sleep interventions are generally associated with more durable benefit after treatment ends compared to pharmacologic approaches alone

98. A patient asks whether a specific complementary therapy under consideration is regulated similarly to a prescription medication. Which response reflects accurate information relevant to informed decision-making?

A. All complementary therapies undergo an identical regulatory approval process to prescription medications

B. Regulatory oversight varies considerably across complementary therapies, and this variation is relevant information for the patient's decision

C. Regulatory status has no bearing on appropriate patient counseling regarding complementary therapies

99. A patient's chronic pain treatment plan integrates vocational counseling alongside pain management, addressing both symptom control and the patient's broader goal of sustaining employment. Which principle does this integration reflect?

- A.** Vocational goals are outside the appropriate scope of a pain management treatment plan
- B.** Vocational counseling should only be introduced after pain management has been fully optimized in isolation
- C.** Addressing functional and vocational goals alongside symptom control reflects a comprehensive biopsychosocial approach to chronic pain

100. A patient's chronic pain treatment plan combines cognitive-behavioral therapy, active physical therapy, and pharmacotherapy simultaneously rather than trialing each in isolation before adding the next. Which principle best supports this integrated approach?

- A.** Sequential, isolated trials of each treatment component are always superior to an integrated multimodal approach
- B.** An integrated multimodal approach addressing biological, psychological, and functional domains simultaneously reflects the biopsychosocial model of chronic pain
- C.** Combining treatment components provides no additional benefit over any single component used alone

101. A patient's pain classification is being determined using the standard mechanistic framework distinguishing nociceptive, neuropathic, and nociplastic categories. Which category is defined by activation of normal, intact nociceptors by genuine tissue injury?

- A.** Nociceptive, reflecting activation of normal nociceptors by actual or threatened tissue damage
- B.** Neuropathic, reflecting a lesion of the somatosensory nervous system itself
- C.** Nociplastic, reflecting altered central processing without clear tissue or nerve damage

102. A patient's pain is present for two months following an acute injury, with objective evidence the underlying tissue injury is still actively healing. Which classification best applies?

- A.** Chronic pain, since any pain persisting beyond several weeks is classified as chronic regardless of healing status

- B.** Still within an expected acute-to-subacute healing trajectory, not yet meeting criteria for chronic pain
- C.** Nociceptive pain, since the duration alone is sufficient to establish this specific mechanistic category

103. A patient presents with widespread musculoskeletal pain affecting multiple body regions for over six months, accompanied by cognitive difficulty, unrefreshing sleep, and fatigue, without evidence of a localized inflammatory or structural cause on extensive workup. Which condition does this presentation most closely match?

- A.** A single-region myofascial pain syndrome affecting one specific muscle group
- B.** Localized osteoarthritis affecting a single major joint
- C.** Fibromyalgia, the prototypical chronic widespread pain syndrome

104. A patient with fibromyalgia asks whether opioid therapy is generally the preferred first-line pharmacologic approach for this condition. Which response is most accurate?

- A.** Opioids are generally the preferred first-line pharmacologic therapy for fibromyalgia given its widespread pain distribution
- B.** Opioids generally provide limited benefit in fibromyalgia given its nociceptive rather than nociceptive mechanism, and are not favored as first-line therapy
- C.** Opioid response in fibromyalgia is identical to their response in acute nociceptive pain conditions

105. A patient with significant preoperative pain at the surgical site is found on preoperative screening to carry a higher documented risk of severe postoperative pain than a patient without preoperative pain at that site. Which principle does this finding support?

- A.** Preoperative pain intensity itself is a recognized risk factor for postoperative pain severity, relevant to perioperative risk stratification
- B.** Preoperative pain has no established relationship to postoperative pain severity of any kind
- C.** Postoperative pain severity is determined exclusively by the surgical procedure performed, regardless of preoperative status

106. A patient's postoperative pain following hardware placement is initially well controlled, then develops new, increasing pain with fever several days later. Which action is most appropriate given this deviation from the expected trajectory?

- A.** Reassess promptly for a surgical site infection or hardware complication rather than simply escalating the original analgesic regimen
- B.** Continue the original analgesic regimen unchanged, since some fluctuation in pain is always expected postoperatively
- C.** Assume this new fever and pain pattern is unrelated to the surgical site and requires no specific evaluation

107. A patient scheduled for a thoracotomy is being considered for either a thoracic epidural or a paravertebral nerve block as the regional anesthesia component of the perioperative plan. Which principle is most relevant to this specific choice?

- A.** A thoracic epidural and a paravertebral block are functionally identical with no meaningful clinical distinction between them
- B.** Both approaches have established evidence for thoracotomy pain control, with the choice often guided by patient-specific factors such as coagulation status
- C.** Regional anesthesia has no established role in thoracotomy pain management regardless of technique chosen

108. A patient undergoing preoperative assessment for major surgery is screened for significant preoperative anxiety using a validated instrument. Which principle explains the relevance of this specific screening?

- A.** Significant preoperative anxiety is an identified risk factor for worse postoperative pain outcomes, informing individualized perioperative planning
- B.** Preoperative anxiety has no established relationship to postoperative pain outcomes of any kind
- C.** Anxiety screening is relevant only for outpatient minor procedures, never for major surgery

109. A patient's acute pain is adequately controlled pharmacologically, but the patient exhibits significant catastrophizing about the injury throughout the acute phase. Which principle is most relevant to this observation?

- A.** Catastrophizing has no established relationship to pain outcomes and requires no attention here
- B.** Only inadequately controlled pain intensity, not psychological factors, predicts chronic transition
- C.** Acute-phase catastrophizing is independently associated with chronic pain risk, even when pain is well controlled

110. A patient undergoing total knee arthroplasty receives a peripheral nerve block placed before the surgical incision, combined with scheduled multimodal pharmacotherapy. Which principle does this combination best illustrate?

- A.** Multimodal, preventively-timed analgesia combining regional and pharmacologic components achieves superior control with reduced opioid requirement
- B.** Regional anesthesia alone, without any pharmacologic component, is generally sufficient for this procedure
- C.** Opioid therapy alone, without regional or other pharmacologic components, is the preferred approach for this procedure

111. A researcher explains that the historical concept of preemptive analgesia specifically referred to a single intervention timed before incision, while the more current concept of preventive analgesia refers to a sustained, multimodal strategy extending through the perioperative period. Which principle does this distinction reflect?

- A.** Preventive analgesia is understood as a broader, more sustained strategy than the narrower historical preemptive analgesia concept
- B.** These two terms are used interchangeably in the literature with no meaningful conceptual distinction between them
- C.** Preemptive analgesia remains the currently preferred term, and preventive analgesia has no established distinct meaning

112. An older adult patient with an acute hip fracture is undergoing pain management planning. A clinician hesitates to provide adequate opioid analgesia specifically due to concern about age-related sedation risk, resulting in significantly undertreated acute pain. Which principle is most relevant to evaluating this approach?

- A.** Age has no bearing whatsoever on the appropriate opioid dosing approach for this fracture

- B.** Opioid therapy should be avoided entirely in older adults with fractures regardless of severity
- C.** Careful, monitored titration is preferred over undertreatment, since untreated pain itself risks delirium

113. A patient is discharged home following an outpatient orthopedic procedure with a clearly time-limited opioid prescription and explicit instructions on when to taper and when to follow up if pain persists beyond the expected timeline. Which principle does this discharge plan best reflect?

- A.** This plan reflects an overly restrictive approach failing to anticipate genuine ongoing need
- B.** Discharge planning specificity has no established relationship to appropriate opioid use
- C.** A time-limited plan with clear reassessment criteria reflects appropriate discharge planning

114. A trauma team applies a structured multimodal analgesic protocol, including regional blockade and non-opioid agents, specifically to reduce the total opioid exposure needed to achieve adequate acute pain control after a traumatic injury. Which principle does this protocol reflect?

- A.** Multimodal strategies are appropriate only in elective surgical settings, never in acute trauma care
- B.** Combining regional and non-opioid components with opioid therapy can reduce total opioid exposure while maintaining adequate analgesia in trauma
- C.** Opioid exposure reduction has no established relationship to any downstream risk in trauma patients

115. A young child sustains an acute fracture and is assessed using an age-appropriate observational pain scale rather than a standard adult self-report instrument. Which principle does this reflect?

- A.** A single fixed assessment tool should be applied to patients of any age following acute trauma
- B.** Observational scales are never appropriate for assessing acute traumatic pain in children
- C.** Age-appropriate tool selection, matched to the child's developmental stage, is part of accurate acute pain assessment in this population

116. A trauma center implements a protocol requiring pain assessment and initial analgesic intervention within a defined time window of patient arrival, rather than addressing pain only after all other initial evaluations are complete. Which principle does this protocol reflect?

- A.** A purely reactive approach, addressing pain only after all other evaluation is complete, is the preferred model in acute trauma care
- B.** A proactive, time-bound approach to early pain assessment and intervention improves the acute trauma care experience and may reduce downstream complications
- C.** Formal pain protocols provide no meaningful benefit over an unstructured, case-by-case approach in trauma care

117. A patient's post-cardiac surgery pain assessment includes tracking the ability to perform expected deep breathing and coughing exercises, alongside the standard numeric pain intensity score. Which principle does this combined approach reflect?

- A.** Functional assessment is irrelevant following cardiac surgery, and only intensity scoring matters
- B.** Tracking respiratory exercise participation provides an objective correlate, especially after thoracic surgery
- C.** A low pain score alone is always sufficient regardless of functional participation shown

118. A patient describes neck pain worsened by flexion and by prolonged sitting or driving, without joint-line tenderness on exam and without radiating arm symptoms. Which structure is most likely the primary pain generator?

- A.** Cervical facet joint, classically worsened by extension and rotation instead
- B.** Cervical nerve root, which would produce radiating arm symptoms instead
- C.** Cervical intervertebral disc, classically worsened by flexion and prolonged sitting

119. A patient with suspected cervical myelopathy is examined for involuntary flexion of the thumb and index finger when the examiner flicks the patient's middle finger. Which finding does this describe?

- A.** A negative Spurling's test, ruling out cervical radiculopathy
- B.** A positive straight leg raise, suggesting lumbar radiculopathy
- C.** A positive Hoffman's sign, suggesting possible cervical myelopathy

- 120.** A patient with suspected cervical myelopathy reports an electric shock-like sensation radiating down the spine when the neck is flexed. Which finding does this describe?
- A.** A positive Lhermitte's sign, suggesting possible cervical spinal cord involvement
 - B.** A positive FABER test, suggesting sacroiliac joint involvement instead
 - C.** A positive Tinel's sign, suggesting a peripheral nerve entrapment instead
- 121.** A patient presents with new mid-back pain, unexplained fever, and a history of recent intravenous drug use. Which action is most appropriate given this combination of findings?
- A.** Proceed with routine conservative management for suspected mechanical thoracic strain
 - B.** Defer any workup until a trial of physical therapy has been completed
 - C.** Pursue urgent evaluation for possible spinal infection given this specific combination of risk factors and findings
- 122.** A patient reports buttock pain radiating down the posterior thigh, worsened by prolonged sitting, without the specific dermatomal sensory and reflex changes typical of true lumbar radiculopathy, and with tenderness over the deep gluteal region. Which condition should be considered in the differential?
- A.** Piriformis syndrome, a distinct entity that can mimic radiculopathy without the same dermatomal findings
 - B.** Facet-mediated axial pain, which would not typically produce radiating leg symptoms
 - C.** Discogenic pain, which would classically worsen with flexion rather than sitting specifically
- 123.** A patient with suspected hip labral pathology undergoes flexion, adduction, and internal rotation of the hip, reproducing anterior groin pain. Which maneuver does this describe?
- A.** The FADIR test, specifically designed to assess for hip labral or femoroacetabular impingement pathology
 - B.** The FABER test, specifically designed to assess sacroiliac joint involvement instead
 - C.** The Thomas test, specifically designed to assess hip flexor contracture instead

124. A patient with suspected supraspinatus tendinopathy is examined with the arm positioned in forward flexion, internal rotation, and resisted downward pressure, as if emptying a can. Which structure does this maneuver specifically assess?

- A.** The subacromial bursa specifically, distinct from the tendon itself
- B.** The supraspinatus tendon, specifically assessed through this resisted positioning
- C.** The long head of the biceps tendon instead

125. A patient with suspected biceps tendinopathy undergoes resisted forward flexion of the shoulder with the elbow extended and forearm supinated, reproducing anterior shoulder pain. Which maneuver does this describe?

- A.** The empty can test, specifically assessing the supraspinatus tendon instead
- B.** Speed's test, specifically designed to assess the long head of the biceps tendon
- C.** The Neer impingement test, specifically assessing subacromial impingement instead

126. A patient with a suspected anterior cruciate ligament injury undergoes anterior tibial translation testing with the knee flexed to approximately 20 to 30 degrees. Which maneuver does this describe?

- A.** The Lachman test, a sensitive maneuver for anterior cruciate ligament integrity
- B.** McMurray's test, specifically assessing meniscal pathology instead
- C.** The anterior drawer test of the ankle, assessing a different joint entirely

127. A patient with suspected carpal tunnel syndrome undergoes wrist flexion held for sixty seconds, reproducing numbness and tingling in the median nerve distribution. Which maneuver does this describe?

- A.** Tinel's sign, specifically elicited through percussion over the nerve instead
- B.** Phalen's test, specifically designed to reproduce median nerve symptoms through sustained wrist flexion
- C.** Finkelstein's test, specifically designed to assess de Quervain's tenosynovitis instead

128. A patient with suspected de Quervain's tenosynovitis undergoes thumb flexion into the palm with the fingers closed over it, followed by ulnar deviation of the wrist, reproducing pain along the radial wrist. Which maneuver does this describe?

- A.** Phalen's test, specifically assessing median nerve compression instead
- B.** Tinel's sign, specifically elicited through direct percussion instead
- C.** Finkelstein's test, specifically designed to assess for de Quervain's tenosynovitis

129. A patient reports heel pain that is most severe with the first steps in the morning and improves somewhat with continued walking, localized to the plantar surface near the heel. Which condition does this presentation most closely match?

- A.** Achilles tendinopathy, which would localize to the posterior heel rather than the plantar surface
- B.** Plantar fasciitis, matching this classic first-step morning pain pattern localized to the plantar heel
- C.** A calcaneal stress fracture, which would not typically improve with continued walking

130. A patient reports burning pain and numbness localized to the web space between the third and fourth toes, worsened by tight footwear. Which condition does this presentation most closely match?

- A.** Plantar fasciitis, which would localize to the plantar heel rather than an interdigital web space
- B.** Achilles tendinopathy, which would localize to the posterior heel rather than an interdigital web space
- C.** Morton's neuroma, a localized interdigital nerve entrapment matching this specific distribution

131. A patient reports progressive shoulder stiffness and pain that has evolved over several months from an initially painful phase to a phase of significant restricted range of motion with reduced pain. Which condition does this presentation most closely match?

- A.** Acute rotator cuff tear, which would present with sudden weakness rather than this gradual staged progression
- B.** Adhesive capsulitis, matching this classic staged progression from painful freezing to stiff frozen phase
- C.** Subacromial bursitis alone, which would not typically produce this staged stiffness progression

132. A patient presents with a swollen, tender posterior knee mass, and the clinician must distinguish a Baker's cyst from a deep vein thrombosis before proceeding. Which principle is most relevant to this distinction?

- A.** Both conditions can present similarly, and appropriate imaging, such as ultrasound, is often needed to reliably distinguish them given the clinical overlap
- B.** These two conditions can never be reliably distinguished on clinical grounds alone under any circumstances
- C.** A Baker's cyst and a deep vein thrombosis are anatomically identical structures and require no distinction

133. A runner reports lateral knee pain worsened specifically by downhill running, localized over the lateral femoral condyle. Which condition does this presentation most closely match?

- A.** Medial meniscal pathology, which would localize to the medial rather than lateral knee
- B.** Patellofemoral pain syndrome, which would localize to the anterior rather than lateral knee
- C.** Iliotibial band syndrome, classically worsened by downhill running and localized to the lateral femoral condyle

134. A patient presents with reproducible chest wall tenderness on palpation over the costochondral junctions, with a normal cardiac workup. Which condition does this presentation most closely match?

- A.** Acute coronary syndrome, which would not typically produce reproducible chest wall tenderness on palpation
- B.** Costochondritis, matching this reproducible costochondral junction tenderness with a normal cardiac workup
- C.** Pulmonary embolism, which would not typically produce this specific reproducible palpation finding

135. A patient with a known history of scoliosis reports new, progressively worsening back pain distinct from their baseline pattern. Which principle is most relevant to evaluating this new symptom?

- A.** Scoliosis-related pain never changes in character over time, so any change should be disregarded as measurement error

B. Any back pain in a patient with known scoliosis should always be attributed to the scoliosis itself without further evaluation

C. A new or changed pain pattern, even in a patient with a known structural spinal condition, warrants fresh evaluation rather than automatic attribution to the known baseline diagnosis

136. A patient reports low back pain worsened specifically by extension, with imaging demonstrating anterior displacement of one vertebral body relative to the one below it. Which condition does this presentation most closely match?

A. Spondylolisthesis, matching this extension-worsened pattern with vertebral displacement on imaging

B. Simple discogenic pain, which would not typically involve vertebral displacement on imaging

C. Isolated facet joint pain without any associated structural vertebral displacement

137. A young adult patient reports chronic inflammatory-pattern low back pain with morning stiffness lasting over an hour, improving with activity, along with a family history of a similar condition. Which condition should be considered in the differential?

A. Discogenic pain, which would classically worsen rather than improve with activity

B. Simple mechanical low back pain, which would not typically show this specific inflammatory pattern with prolonged morning stiffness

C. Ankylosing spondylitis, an inflammatory spondyloarthropathy matching this pattern and demographic profile

138. A patient presents with acute monoarticular joint swelling, redness, and severe pain, and synovial fluid analysis reveals negatively birefringent needle-shaped crystals. Which condition does this finding support?

A. Pseudogout, which is associated with positively birefringent rhomboid crystals instead

B. Gout, associated with negatively birefringent, needle-shaped monosodium urate crystals matching this finding

C. Septic arthritis, which would not typically show this specific crystal finding on synovial analysis

139. A patient presents with acute monoarticular joint swelling, fever, and inability to bear weight, with synovial fluid analysis showing a markedly elevated white blood cell count and positive Gram stain. Which action is most appropriate given this presentation?

- A.** Pursue urgent orthopedic evaluation for possible septic arthritis given this combination of findings
- B.** Proceed with routine conservative management for presumed gout given the acute monoarticular presentation
- C.** Defer further evaluation until a trial of oral anti-inflammatory medication has been completed

140. A patient presents with localized bone pain, fever, and an elevated inflammatory marker profile, with imaging suggestive of a destructive bony process. Which condition should be urgently considered?

- A.** Osteomyelitis, a bone infection matching this combination of localized pain, fever, and destructive imaging findings
- B.** Osteoarthritis, which would not typically present with fever and this destructive imaging pattern
- C.** A simple stress fracture, which would not typically be associated with fever and elevated inflammatory markers

141. A patient with confirmed adhesive capsulitis in the frozen phase is being considered for treatment. Which principle should guide management during this specific phase?

- A.** Aggressive, forceful range-of-motion stretching is the preferred approach during the frozen phase regardless of pain response
- B.** Gentle range-of-motion exercise combined with appropriate analgesia is generally favored, since overly aggressive stretching during this phase can exacerbate symptoms
- C.** No treatment of any kind is indicated during the frozen phase, and the condition should simply be allowed to resolve untreated

142. A patient with suspected S1 nerve root involvement is examined for motor and reflex findings. Which finding is most specifically associated with this level?

- A.** Weakness of great toe extension without a reliably diminished corresponding reflex, associated with L5 instead
- B.** Weakness of ankle plantarflexion with a diminished Achilles reflex

C. Weakness of knee extension with a diminished patellar reflex, associated with L4 instead

143. A patient with known metastatic breast cancer develops new severe back pain, progressive bilateral leg weakness, and urinary retention over several hours. Which action takes priority given this presentation?

- A. Routine outpatient imaging scheduled over the following weeks as time allows
- B. A trial of oral analgesics with reassessment in several days before further workup
- C. Emergent evaluation for possible malignant spinal cord compression, an oncologic emergency

144. A patient develops chest wall pain and altered sensation in a specific dermatomal distribution following radiation therapy to the chest, occurring months after treatment completion. Which category of cancer-related pain does this represent?

- A. Tumor-related pain from active local disease progression instead
- B. Treatment-related pain, reflecting radiation-associated tissue or nerve injury
- C. Survivorship pain, occurring independent of any specific treatment exposure

145. A patient completing curative treatment for breast cancer two years ago reports persistent chest wall and arm pain at the surgical site, without evidence of recurrence on surveillance imaging. Which category of cancer-related pain does this most likely represent?

- A. Active tumor-related pain requiring urgent oncologic reassessment instead
- B. Pain that should be dismissed as unrelated to the prior treatment entirely
- C. Survivorship pain, specifically post-mastectomy pain syndrome, a recognized persistent post-surgical pain condition

146. A patient on a stable opioid regimen for cancer pain experiences predictable pain flares specifically with movement and positional changes, distinct from occasional unpredictable flares. Which principle is most relevant to managing this specific pattern?

- A. Incident breakthrough pain tied to a predictable trigger can be managed with a rescue dose timed proactively before the anticipated activity

- B.** All breakthrough pain, regardless of trigger pattern, should be managed reactively only after the episode has already begun
- C.** Predictable, movement-related pain flares indicate the baseline regimen has completely failed and requires discontinuation

147. A patient on a stable opioid regimen develops intolerable side effects with inadequate additional analgesic benefit from further dose escalation. Which strategy is well established for this specific scenario?

- A.** Continued escalation of the same opioid remains the only appropriate strategy regardless of side effect burden
- B.** Opioid therapy should be discontinued entirely rather than adjusted in this scenario
- C.** Opioid rotation to a different agent, exploiting incomplete cross-tolerance, may improve the balance between analgesia and side effects

148. A patient with severe, refractory cancer pain poorly controlled despite optimized systemic opioid therapy is being considered for intrathecal drug delivery. Which principle supports this specific escalation?

- A.** Intrathecal delivery is never appropriate for cancer pain regardless of systemic response
- B.** Intrathecal delivery can provide effective analgesia at lower doses with fewer systemic side effects when systemic therapy is refractory
- C.** Intrathecal delivery is only appropriate for non-cancer pain, never for cancer-related pain

149. A patient with advanced cancer reports both significant fatigue and pain, and the treating team addresses both symptoms together as part of a comprehensive symptom management plan rather than treating pain in isolation. Which principle does this integrated approach reflect?

- A.** Fatigue and pain in advanced cancer are entirely unrelated symptoms requiring no coordinated management
- B.** Only pain should be addressed in symptom management, with fatigue considered outside the appropriate treatment scope
- C.** Comprehensive symptom management addressing multiple co-occurring symptoms together reflects appropriate palliative and supportive care

150. A patient with advanced cancer reports significant psychological distress related to prognosis, alongside physical pain, and the treating team incorporates psychological support alongside pharmacologic pain management. Which principle does this integrated approach reflect?

- A.** Psychological distress in the setting of serious illness can meaningfully affect pain experience, and addressing it alongside pharmacologic treatment reflects comprehensive care
- B.** Psychological distress in this setting is unrelated to the physical pain experience and requires an entirely separate, uncoordinated treatment pathway
- C.** Only pharmacologic treatment should be offered, with psychological support considered outside the appropriate scope of pain management

151. A patient and family ask whether hospice and palliative care are the same thing. Which response best clarifies this distinction?

- A.** Palliative care applies alongside disease-directed treatment; hospice applies once such treatment is no longer pursued
- B.** Hospice and palliative care are entirely identical terms with no meaningful distinction
- C.** Palliative care is only available after hospice enrollment, never before it

152. A patient's cancer pain treatment plan applies a stepwise approach, beginning with non-opioid analgesics for mild pain and escalating to opioid therapy as pain severity increases. Which established framework does this approach reflect?

- A.** This approach reflects no established framework and is simply an individualized, ad hoc treatment sequence
- B.** This approach is specific to non-cancer pain and has no established application to cancer pain management
- C.** This approach reflects the general principle of a stepwise, severity-matched analgesic ladder historically applied to cancer pain management

153. A patient with cancer experiences pain from direct tumor invasion of a peripheral nerve alongside nociceptive pain from local soft tissue involvement by the same tumor mass. Which mechanistic classification best describes this presentation?

- A.** Purely nociceptive, since the tumor mass itself is the underlying cause of both components

- B.** Mixed, combining a neuropathic component from nerve invasion with a nociceptive component from soft tissue involvement
- C.** Purely neuropathic, since nerve involvement is present alongside the soft tissue component

154. A patient with cancer pain is started on a bone-modifying agent for bone metastasis. Beyond direct pain relief, which additional benefit is specifically associated with this class of agent?

- A.** Bone-modifying agents reduce future skeletal-related events such as pathologic fracture, providing benefit beyond symptom control alone
- B.** Bone-modifying agents provide no benefit beyond direct analgesic effect in this population
- C.** Bone-modifying agents are used exclusively for chemotherapy-induced peripheral neuropathy rather than bone-related complications

155. A patient with subdiaphragmatic irritation, such as from a splenic or hepatic process, reports pain referred to the ipsilateral shoulder. Which phenomenon best explains this referral pattern?

- A.** Direct nerve injury to the shoulder from the subdiaphragmatic process itself
- B.** Viscerosomatic convergence via the phrenic nerve's shared segmental origin with the shoulder's somatic afferents
- C.** A coincidental, unrelated shoulder injury occurring at the same time

156. A patient with suspected acute appendicitis reports pain that began as poorly localized periumbilical discomfort and has since migrated to become sharply localized in the right lower quadrant. Which principle explains this evolution?

- A.** This migration pattern is atypical for appendicitis and suggests an alternative diagnosis
- B.** The periumbilical phase reflects somatic pain, the right lower quadrant phase reflects visceral pain
- C.** Early periumbilical pain reflects visceral input; later localized pain reflects somatic peritoneal irritation

157. A patient with suspected appendicitis reports right lower quadrant pain reproduced by palpation of the left lower quadrant. Which finding does this describe?

- A. A positive psoas sign, elicited through hip extension against resistance instead
- B. A positive Rovsing's sign, referred right-sided pain elicited by left-sided palpation
- C. A positive Murphy's sign, assessing gallbladder pathology instead

158. A patient with suspected appendicitis reports pain with passive hip extension while lying on the unaffected side, suggesting irritation of a muscle adjacent to the inflamed appendix. Which finding does this describe?

- A. A positive psoas sign, suggesting irritation of the iliopsoas muscle by an inflamed retrocecal appendix
- B. A positive Rovsing's sign, elicited through contralateral palpation instead
- C. A positive obturator sign, elicited through internal rotation of the flexed hip instead

159. A patient with suspected acute appendicitis undergoes examination revealing involuntary abdominal wall muscle contraction and pain upon release of palpation pressure. Which principle is most relevant to interpreting these findings?

- A. These findings indicate simple visceral colic rather than any peritoneal process here
- B. These findings have no established clinical significance in evaluating suspected appendicitis
- C. Guarding and rebound tenderness suggest peritoneal irritation, distinct from uncomplicated visceral pain

160. A patient with suspected acute appendicitis is being considered for initial imaging. Which modality is frequently the appropriate initial study for this presentation?

- A. Plain abdominal radiography, which does not reliably visualize the appendix itself
- B. No imaging is ever indicated for suspected appendicitis under any circumstances
- C. CT imaging, frequently the appropriate initial study for suspected appendicitis in an appropriate patient

161. A patient with a suspected ruptured abdominal aortic aneurysm presents with severe, tearing abdominal or back pain, hypotension, and a pulsatile abdominal mass. Which action is most appropriate?

- A.** Immediate emergent evaluation and surgical consultation given the life-threatening nature of this presentation
- B.** Routine outpatient imaging scheduled over the following days as time allows
- C.** A trial of oral analgesics with reassessment before considering further workup

162. A patient with suspected mesenteric ischemia reports severe abdominal pain markedly out of proportion to the relatively unremarkable findings on physical examination. Which principle is most relevant to this specific presentation?

- A.** Pain out of proportion to exam findings should be dismissed as an exaggerated or unreliable report
- B.** Pain markedly out of proportion to exam findings is a classic, concerning feature of mesenteric ischemia warranting urgent evaluation
- C.** This pattern indicates the pain is entirely psychogenic in origin and requires no further physical workup

163. A patient presents with severe, unilateral, periorbital headache accompanied by ipsilateral lacrimation, nasal congestion, and ptosis, occurring in clusters of attacks. Which primary headache syndrome does this most closely match?

- A.** Cluster headache, matching this periorbital pattern with ipsilateral autonomic features occurring in clusters
- B.** Migraine, which presents with pulsatile pain and photophobia/phonophobia instead
- C.** Tension-type headache, which presents with bilateral pressing pain instead

164. A patient presents with bilateral, band-like head pain of mild to moderate intensity, without significant nausea, photophobia, or autonomic features. Which primary headache syndrome does this most closely match?

- A.** Cluster headache, which presents with severe unilateral periorbital pain and autonomic features instead
- B.** Migraine, which presents with unilateral pulsatile pain and photophobia/phonophobia instead
- C.** Tension-type headache, matching this bilateral, band-like, mild-to-moderate pattern

165. A patient presents with new severe headache, fever, neck stiffness, and photophobia. Which action is most appropriate given this combination of findings?

- A.** Proceed with routine outpatient management and reassess in one week as usual
- B.** Pursue urgent evaluation for possible meningitis given this specific combination of findings
- C.** Defer any workup until a trial of oral analgesics has been completed first

166. A patient reports brief, severe, electric-shock-like facial pain episodes triggered by light touch and chewing, following a trigeminal nerve distribution, with the patient completely symptom-free between episodes. Which condition does this presentation most likely represent?

- A.** Trigeminal neuralgia, matching this paroxysmal, trigger-provoked pattern with symptom-free intervals
- B.** Cluster headache, which presents with a sustained rather than paroxysmal pain pattern instead
- C.** Tension-type headache, which presents with bilateral pressing pain rather than trigger-provoked paroxysms

167. A patient with a history of coronary artery disease requires acute migraine treatment. Which consideration is most directly relevant to selecting an appropriate agent?

- A.** Triptans are the preferred agent for this patient regardless of any cardiovascular history present
- B.** Cardiovascular disease contraindicates triptans given their vasoconstrictive mechanism, warranting alternatives
- C.** Cardiovascular disease has no bearing whatsoever on acute migraine treatment selection here

168. A patient presenting with an acute cluster headache attack is treated with high-flow supplemental oxygen. Which principle supports this specific treatment choice?

- A.** High-flow oxygen has no established role in the acute treatment of any primary headache syndrome
- B.** High-flow oxygen is an established, effective acute treatment specifically for cluster headache attacks
- C.** High-flow oxygen is specifically used for migraine rather than cluster headache treatment

- 169.** A patient reports that a normally mildly painful pinprick stimulus now produces markedly exaggerated pain in an affected area. Which sensory phenomenon does this describe?
- A.** Hyperalgesia, an exaggerated pain response to a stimulus that is already normally painful
 - B.** Allodynia, pain from a stimulus that would not normally be painful at all
 - C.** Hypoesthesia, a reduced sensation finding, the opposite of what is described
- 170.** A patient develops central neuropathic pain following a stroke affecting the right thalamus. On which side of the body would the resulting pain most likely be perceived?
- A.** The left side of the body, contralateral to the causative right-sided brain lesion
 - B.** The right side of the body, ipsilateral to the causative lesion
 - C.** Bilaterally, since central neuropathic pain following a unilateral lesion always affects both sides equally
- 171.** A patient develops sensory symptoms confined to a single specific peripheral nerve's distribution following focal nerve compression, distinct from a symmetric, length-dependent pattern. Which category of peripheral neuropathy does this represent?
- A.** A symmetric polyneuropathy, which would affect multiple nerves in a length-dependent pattern instead
 - B.** A mononeuropathy, involving a single specific peripheral nerve
 - C.** A central neuropathic process, which would not follow a specific peripheral nerve distribution
- 172.** A patient develops severe, disproportionate pain, swelling, temperature and color changes, and allodynia in a limb following a relatively minor injury, without an identifiable specific nerve lesion. Which condition should be considered?
- A.** Complex regional pain syndrome type I, occurring without a confirmed underlying nerve injury
 - B.** Complex regional pain syndrome type II, which specifically requires a confirmed underlying nerve injury
 - C.** A routine, expected inflammatory response requiring no further specific consideration

173. A patient develops the clinical features of complex regional pain syndrome following a documented, confirmed peripheral nerve injury. Which specific subtype classification applies?

- A.** Complex regional pain syndrome type I, which specifically occurs without a confirmed nerve injury
- B.** This presentation does not meet criteria for complex regional pain syndrome of any type
- C.** Complex regional pain syndrome type II, which specifically applies when a confirmed underlying nerve injury is present

174. A patient reports persistent, often burning pain perceived in a limb that has been amputated. Which principle best explains this phenomenon?

- A.** This report should be dismissed as psychologically fabricated, since the limb no longer exists
- B.** Phantom limb pain reflects genuine central and peripheral neuroplastic changes following amputation, not fabrication
- C.** This phenomenon exclusively reflects a psychiatric condition unrelated to any neurologic mechanism

175. A patient with HIV infection develops a symmetric, length-dependent painful sensory neuropathy. Which principle is most relevant to this presentation?

- A.** HIV-associated peripheral neuropathy has no established relationship to HIV infection or its treatment
- B.** HIV-associated peripheral neuropathy is a recognized complication that can arise from the infection itself or from certain antiretroviral therapies
- C.** This presentation can only ever be attributed to an entirely unrelated, coincidental diabetic neuropathy

176. A patient receiving a specific chemotherapeutic agent known for dose-dependent peripheral neuropathy risk develops progressively worsening symptoms with continued treatment. Which principle is most relevant to this scenario?

- A.** Neuropathy severity has no established relationship to cumulative drug exposure at all
- B.** This neuropathy is always irreversible regardless of any dose modification made here

C. Cumulative dose is a recognized factor here, informing dose-modification discussions with oncology

177. A patient reports burning pain in the feet along with autonomic symptoms including altered sweating, but standard nerve conduction studies and reflexes are entirely normal. Which condition should be considered?

- A. Small fiber neuropathy, which can present with normal standard electrodiagnostic testing and reflexes since large fibers are unaffected
- B. Standard nerve conduction studies definitively exclude any neuropathic process in this scenario
- C. This presentation is inconsistent with any genuine neuropathic process and reflects a purely psychogenic origin

178. A patient presents with a slowly progressive, symmetric, distal sensorimotor peripheral neuropathy along with a family history of similar findings across multiple generations. Which category of neuropathy should be considered?

- A. A purely traumatic neuropathy, which would not explain this hereditary, symmetric distribution
- B. An acute, toxin-induced neuropathy, which would not typically show this specific familial pattern
- C. A hereditary peripheral neuropathy, such as Charcot-Marie-Tooth disease, given this specific pattern and family history

179. A patient reports leg pain radiating in a specific dermatomal distribution with associated sensory changes, distinct from a presentation affecting a single specific peripheral nerve's own distribution rather than a dermatome. Which principle helps distinguish these two patterns?

- A. Dermatomal and peripheral nerve territory distributions are functionally identical with no distinction
- B. A peripheral nerve territory always overlaps completely with a single dermatome in every case
- C. Dermatomal territory reflects a nerve root; peripheral nerve territory reflects that nerve's own distribution

180. A clinician uses a validated screening questionnaire specifically designed to help distinguish neuropathic from non-neuropathic pain based on characteristic descriptive terms and examination findings. Which principle underlies the use of such an instrument?

- A.** Such instruments replace the need for any further history or examination once completed
- B.** A screening instrument helps identify neuropathic features, supporting rather than replacing clinical judgment
- C.** Neuropathic screening questionnaires have no established validity or clinical utility here

181. A patient with neuropathic pain and a documented cardiac conduction abnormality is being started on first-line pharmacotherapy. Which principle should guide agent selection?

- A.** Tricyclic antidepressants are the preferred first choice in this patient given superior efficacy regardless of cardiac history
- B.** Cardiac conduction history has no established bearing on antidepressant-class agent selection
- C.** Tricyclic antidepressants should generally be avoided given cardiac conduction effects, favoring an SNRI or gabapentinoid instead

182. A patient asks why pregabalin carries controlled-substance scheduling in some jurisdictions while gabapentin generally does not. Which principle best addresses this distinction?

- A.** Pregabalin and gabapentin carry identical regulatory and scheduling status in every jurisdiction
- B.** This distinction reflects differences in perceived abuse potential and regulatory classification despite related mechanisms
- C.** This distinction reflects differences in analgesic mechanism between the two agents themselves

183. A patient with a spinal cord injury develops neuropathic pain below the level of injury. Which principle is most relevant to understanding this presentation?

- A.** Neuropathic pain following spinal cord injury is exceedingly rare and should prompt suspicion of an unrelated cause
- B.** Spinal cord injury is a recognized cause of central neuropathic pain, reflecting altered central processing following the cord lesion

C. This presentation should always be attributed exclusively to a peripheral rather than central mechanism

184. A patient with multiple sclerosis develops neuropathic pain attributed to central nervous system demyelination. Which principle is most relevant to this presentation?

- A. Multiple sclerosis has no established relationship to neuropathic pain of any kind
- B. Any pain reported by a patient with multiple sclerosis should be attributed exclusively to comorbid musculoskeletal causes
- C. Central nervous system demyelinating lesions in multiple sclerosis are a recognized cause of central neuropathic pain

185. A patient presents with chronic pelvic pain of over a year's duration, accompanied by bladder and bowel hypersensitivity, without evidence of a localized structural or inflammatory cause on extensive workup. Which mechanistic category does this presentation most likely represent?

- A. Nociceptive, reflecting ongoing tissue injury at an identifiable pelvic structure
- B. Nociplastic, reflecting altered central pain processing without clear structural or inflammatory cause
- C. Neuropathic, reflecting a lesion of the somatosensory nervous system directly

186. An adolescent patient is being assessed for postoperative pain. Which assessment approach is most appropriate given this patient's developmental stage?

- A. A behavioral observation instrument designed specifically for preverbal infants here
- B. No pain assessment is possible in this age group under any circumstances
- C. A self-report instrument matched to adolescent developmental level, similar to an adult scale

187. A non-verbal patient with autism spectrum disorder requires pain assessment following a procedure. Which approach is most appropriate given this patient's specific communication profile?

- A. Assume the patient has no pain since reliable verbal self-report is unavailable
- B. Use a structured behavioral observation approach, ideally informed by caregivers familiar with this patient's individual baseline behavior

C. Rely exclusively on a standard adult verbal self-report scale despite this patient's inability to use it reliably

188. A breastfeeding patient requires an analgesic for postpartum pain. Which principle should guide agent selection?

A. Agent selection should weigh both maternal analgesic need and the specific agent's transfer into breast milk and infant exposure risk

B. No analgesic medication of any kind may be used while breastfeeding under any circumstances

C. Breastfeeding status has no bearing whatsoever on appropriate analgesic selection

189. A patient with chronic pain and an active substance use disorder, not yet in remission, requires ongoing pain management. Which principle should guide this approach?

A. No pain treatment of any kind should be offered until remission is achieved first

B. Coordinated treatment should address both the pain condition and substance use disorder together

C. Active substance use disorder has no bearing on pain treatment planning whatsoever

190. A patient asks why current fibromyalgia diagnostic criteria emphasize a widespread pain index and symptom severity scale rather than the historical tender point count alone. Which principle best explains this evolution?

A. Tender point counting remains the only valid diagnostic approach, and this evolution reflects an unfounded departure from established practice

B. Current criteria more comprehensively capture the condition's actual symptom burden, including associated features beyond localized tenderness alone

C. This evolution reflects a complete abandonment of physical examination in the diagnostic process

191. A patient with fibromyalgia is being counseled on the relative emphasis of pharmacologic versus non-pharmacologic treatment components. Which principle should guide this counseling?

- A.** Active exercise and cognitive-behavioral approaches are generally emphasized as central components alongside pharmacotherapy, not as optional adjuncts
- B.** Pharmacologic therapy alone, without any structured exercise or behavioral component, is generally sufficient for this condition
- C.** Non-pharmacologic components have no established role in fibromyalgia management and should be omitted

192. An older adult patient with chronic pain is on multiple existing medications and is being considered for a new opioid prescription. Beyond drug interactions, which additional consideration carries particular importance in this population?

- A.** Fall risk carries no particular additional concern in older adults compared to younger patients
- B.** Fall risk from sedation or dizziness carries particular importance in older adults, warranting careful monitoring after initiation or dose changes
- C.** This consideration applies only to benzodiazepines, never to opioid therapy in older adults

193. A pediatric patient old enough to understand a proposed procedure in age-appropriate terms is asked for their own assent, in addition to parental informed consent. Which principle does this practice reflect?

- A.** Age-appropriate assent respects the child's own developing autonomy alongside the legally required parental consent
- B.** Pediatric assent is a purely symbolic gesture with no genuine bearing on the ethical conduct of pediatric care
- C.** Pediatric assent entirely replaces the need for parental consent once the child reaches a certain age

194. A patient with a documented substance use disorder history reports pain scores consistently lower than their observed functional limitation would suggest, and the treating team considers whether stigma may be leading this patient to underreport symptoms. Which principle is most relevant to this consideration?

- A.** Patients with a substance use disorder history are incapable of underreporting symptoms under any circumstances

- B.** Stigma-related underreporting is a recognized risk in this population, and clinicians should remain attentive to both over- and under-reporting patterns
- C.** This consideration is irrelevant since substance use disorder history has no established relationship to reporting patterns of any kind

195. A patient who does not speak the clinician's primary language is assessed for pain using an ad hoc, informal translation by a family member rather than a professionally validated translated instrument. Which principle is most relevant to this scenario?

- A.** Informal family translation is always an adequate substitute for a validated instrument
- B.** Language barriers have no established bearing on the validity of a pain assessment result
- C.** A validated translated instrument should be used when available, since informal translation compromises accuracy

196. A patient's pain has persisted for several months beyond the typical expected healing timeline for the original injury, with evidence of ongoing central sensitization on clinical assessment. Which classification most accurately applies at this point?

- A.** This presentation cannot be classified using the standard acute-versus-chronic framework
- B.** The pain remains classified as acute regardless of duration, since the original injury was the initiating event
- C.** Chronic pain, reflecting both the duration criterion and evidence of a distinct underlying sensitization process

197. A patient carries diagnoses of migraine, irritable bowel syndrome, and temporomandibular disorder simultaneously. Which principle best explains this specific pattern of co-occurring conditions?

- A.** These three conditions share no plausible common underlying mechanism and their co-occurrence is purely coincidental
- B.** These conditions are recognized to frequently co-occur, consistent with a shared vulnerability to central sensitization across multiple bodily systems
- C.** Each condition must reflect an entirely separate, unrelated structural process requiring fully independent workup

198. A pregnant patient asks whether all analgesic medication categories carry an identical safety profile during pregnancy. Which response is most accurate?

- A.** All analgesic medications carry an identical safety profile throughout pregnancy regardless of specific agent or trimester
- B.** Safety profiles vary considerably by specific agent, trimester, and dose, requiring individualized rather than categorical assessment
- C.** Pregnancy safety considerations apply only to opioid medications and no other analgesic category

199. A patient with chronic pain and ongoing, active substance use is offered continued engagement in pain treatment alongside harm-reduction strategies, rather than being discharged from care due to the active substance use. Which principle does this approach reflect?

- A.** Continued engagement in this scenario is never appropriate and discharge from care is always the correct response
- B.** Harm-reduction strategies have no established role in the context of chronic pain management
- C.** A harm-reduction approach that maintains engagement can reduce risk and preserve the therapeutic relationship compared to discharge from care

200. A clinician caring for a patient with severe mental illness and difficulty engaging in a standard verbal pain assessment adapts the approach using structured behavioral observation and collateral information from the care team, rather than abandoning assessment altogether. Which principle does this reflect?

- A.** This adaptive approach is only ever appropriate for pediatric patients, not for adults with other communication barriers
- B.** Structured assessment should be abandoned entirely whenever a standard verbal approach cannot be used as designed
- C.** The same proactive adaptation mindset applied across other populations with communication barriers extends appropriately to this population as well

Answers

- 1. A.** A-delta fibers are thinly myelinated, fast-conducting fibers responsible for the sharp, well-localized first-pain sensation immediately following injury. C fibers (Option B) are unmyelinated and slow-conducting, responsible for the dull, poorly-localized second-pain component instead. A-beta fibers (Option C) carry non-painful touch and proprioceptive information under normal physiologic conditions, not first-pain sensation.
- 2. B.** Peripheral sensitization, localized to the injury site itself, explains increased sensitivity confined strictly to that site, distinct from central sensitization which characteristically spreads beyond the original injury site. Central sensitization (Option A) is specifically defined by spread beyond the injury site, the opposite of what is described here. Option C incorrectly invokes an unrelated coincidental process rather than the well-established peripheral mechanism directly explaining this localized finding.
- 3. C.** Nociplastic pain, reflecting altered central pain processing without clear tissue or nerve damage, matches this widespread, chronic presentation with an extensively negative workup. Nociceptive pain (Option A) requires an identifiable site of ongoing tissue injury, absent here. Neuropathic pain (Option B) requires a demonstrable somatosensory nervous system lesion, also absent given the negative workup described.
- 4. B.** A case-control study, comparing patients with and without an outcome retrospectively, is specifically suited to identifying factors associated with a rare outcome by working backward from that outcome. A prospective cohort study (Option A) follows patients forward from exposure, an inefficient design for a rare outcome. A randomized controlled trial (Option C) requires prospective exposure assignment, not retrospective comparison as described here.
- 5. A.** Re-querying the state prescription drug monitoring program before a dose change is an increasingly universal state-level regulatory expectation for ongoing opioid therapy, not simply a one-time initiation step. A liability waiver (Option B) is not a recognized regulatory requirement for this purpose. A repeat formal psychiatric evaluation (Option C) is not a universal requirement tied specifically to routine dose adjustments.
- 6. A.** The rare serious risk must be disclosed even if its likelihood is low, since severity as well as frequency informs a genuinely informed decision, exactly the standard informed consent requires. Option B incorrectly sets an arbitrary frequency threshold below which disclosure could be omitted, contradicting the severity-inclusive standard. Option C incorrectly suggests routine procedures are exempt from disclosing their own serious risks.
- 7. B.** This assumption reflects an outdated view; young children have functional nociceptive circuitry and deserve deliberate pain management, regardless of their inability to verbally describe the experience. Option A incorrectly claims nociceptive pathways are not yet functional at this stage, contradicting established developmental physiology. Option C incorrectly claims assessment is impossible, when age-appropriate behavioral and observational tools exist for this purpose.

- 8. A.** Reduced hepatic metabolism increases systemic exposure to the parent drug or active metabolites independent of renal function, explaining pronounced sedation in a patient with hepatic impairment given standard dosing. Option B incorrectly claims hepatic function has no bearing on opioid dosing, contradicting well-established pharmacokinetic principles for hepatically-metabolized agents. Option C incorrectly attributes the sedation to an unrelated sleep disorder rather than the more directly explanatory pharmacokinetic mechanism.
- 9. B.** Routine outcome tracking using validated instruments with aggregate review to inform practice improvement is a structured quality assurance process, exactly as described. Option A incorrectly limits this activity to controlled substance regulatory compliance alone, missing the broader quality assurance scope. Option C incorrectly characterizes this aggregate, practice-level activity as individual informed consent documentation, an unrelated activity.
- 10. C.** The physician functions simultaneously as an individual-patient clinician and a participant in population-level public health stewardship, exactly the dual-role principle this scenario illustrates. Option A incorrectly assigns population-level stewardship solely to regulatory agencies, ignoring the prescriber's own role. Option B incorrectly claims no meaningful overlap exists between these two roles, contradicting the described scenario's clear integration of both.
- 11. B.** Reduced analgesic requirement at a stable reported intensity suggests genuine improvement in an important functional domain, since less medication is needed to achieve the same level of control. Option A incorrectly assumes medication requirement and intensity score must move in lockstep, ignoring genuine treatment-efficiency improvement. Option C incorrectly suggests underreporting, when reduced medication need is a positive, verifiable finding rather than a report accuracy concern.
- 12. B.** The Brief Pain Inventory specifically asks patients to rate pain severity and its interference with general activity, mood, walking, and sleep on numeric scales. The Fear-Avoidance Beliefs Questionnaire (Option A) assesses fear-avoidance beliefs specifically, not general severity and interference. The Oswestry Disability Index (Option C) assesses functional disability across ten specific domains for low back pain, a different structure than this severity-and-interference format.
- 13. C.** Low pain self-efficacy specifically concerns confidence in one's own ability to manage daily activities despite pain, distinct from fear of movement itself. Fear-avoidance belief (Option A) specifically concerns fear of movement-related injury, a related but distinct construct. Pain catastrophizing (Option B) concerns magnified threat appraisal and rumination about pain, also distinct from self-efficacy specifically.
- 14. A.** Anchoring assessment to validated, behaviorally specific instruments rather than an impression shaped by the patient's stated beliefs about expressing pain avoids underestimating genuine pain based on cultural or personal communication style. Option B incorrectly accepts a minimized report at face value without further validated assessment. Option C incorrectly recommends deferring assessment entirely, which would leave genuine pain unaddressed.

15. A. Validity, since the instrument fails to measure what it claims to measure despite showing consistency, is the deficient property here; consistent repeated scores reflect good reliability, but poor correlation with actual functional impairment reflects a validity problem, not a reliability problem. Option B incorrectly identifies reliability as deficient, when the described consistency across administrations is actually evidence of good reliability. Option C incorrectly claims neither property can be evaluated, when the information given specifically addresses both properties.

16. C. Some electrodiagnostic changes, particularly conduction block or early demyelinating findings, may not yet be detectable this early, so a normal result at one week should not exclude the diagnosis, consistent with the general electrodiagnostic timing limitation established throughout this field. Option A incorrectly claims a normal study at any time point is definitive. Option B incorrectly dismisses nerve conduction studies as having no role in this evaluation.

17. A. A placebo effect, a genuine neurobiological response to negative expectation, explains worsened symptoms following inaccurate negative information about an inert treatment. Option B incorrectly assumes secret administration of active treatment, an unsupported and implausible explanation. Option C incorrectly dismisses this as coincidental, missing the well-established placebo mechanism directly relevant here.

18. C. Pursuing prompt further evaluation for possible malignant disease is appropriate given this specific combination of red-flag findings: new back pain, unexplained weight loss, and a prior malignancy history. Option A incorrectly recommends routine conservative management despite these concerning findings. Option B incorrectly recommends deferring workup for a physical therapy trial first, delaying evaluation of a potentially serious underlying process.

19. C. Spinal epidural abscess should be urgently considered given the combination of intravenous drug use history, fever, and focal spinal tenderness, a recognized high-risk presentation. Option A incorrectly characterizes this as routine mechanical strain, missing the specific infection risk factors present. Option B incorrectly dismisses this as benign and self-limited, contradicting the urgency this specific combination of findings warrants.

20. A. Assessment tools should be adapted to the patient's health literacy level, using verbal administration or simplified formats when needed, to obtain a genuinely valid result. Option B incorrectly claims written questionnaires are equally valid regardless of health literacy, ignoring a well-recognized threat to assessment validity. Option C incorrectly claims meaningful assessment is impossible in this population, when appropriate adaptation allows valid assessment.

21. B. Baseline and periodic ECG monitoring given methadone's QTc-prolongation risk is a specifically important consideration for this agent, distinct from most other opioids. Baseline pulmonary function testing (Option A) and thyroid function testing (Option C) are not specifically indicated for methadone initiation.

22. C. Buprenorphine's partial agonist activity produces a ceiling effect on respiratory depression not seen with full agonists, an important safety distinction. Option A incorrectly claims an identical risk profile to full agonists. Option B incorrectly claims no analgesic ceiling exists, when partial agonists do exhibit a ceiling effect on their maximal activity.

23. B. Opioid-induced hyperalgesia, a paradoxical increase in pain sensitivity associated with opioid exposure, should be considered when pain worsens and becomes more diffuse despite dose escalation. Option A incorrectly assumes this pattern always indicates undertreated pain requiring further escalation, which could worsen hyperalgesia if present. Option C incorrectly dismisses any relationship to the opioid therapy itself.

24. C. A gradual, carefully monitored taper is preferred during pregnancy, since abrupt withdrawal carries risk to the pregnancy itself. Option A incorrectly recommends abrupt discontinuation, which carries specific pregnancy-related risk. Option B incorrectly claims opioid therapy must always be discontinued regardless of clinical circumstances, an overly rigid position.

25. A. Increased gastrointestinal bleeding risk from the combined antiplatelet and anticoagulant effects is the primary concern with this combination. Option B incorrectly claims no meaningfully increased risk exists. Option C incorrectly limits the concern to topical administration only, when oral NSAIDs combined with anticoagulation carry this risk as well.

26. B. Topical application provides localized anti-inflammatory effect with substantially lower systemic absorption, reducing gastrointestinal risk, exactly the rationale for this formulation choice in a patient with prior GI bleeding. Option A incorrectly claims a stronger systemic effect than oral NSAIDs, the opposite of the intended benefit. Option C incorrectly claims an identical systemic bleeding risk to oral formulations.

27. A. Total duration of use, oral plus parenteral combined, should not exceed five days given cumulative toxicity risk, a well-established prescribing limitation for ketorolac. Option B incorrectly claims no duration limitation exists. Option C incorrectly limits this restriction to the parenteral route only, when the combined duration across both routes is the relevant consideration.

28. B. Duloxetine carries an additional established indication for stress urinary incontinence, making it a particularly relevant choice given this comorbidity. Venlafaxine (Option A) and desvenlafaxine (Option C) lack this specific additional indication.

29. B. Pregabalin has more predictable, linear absorption at higher doses, distinct from gabapentin's saturable absorption, which explains their differing dosing approaches. Option A incorrectly claims identical absorption kinetics. Option C incorrectly reverses the actual pharmacokinetic distinction between the two agents.

30. A. Carbamazepine's hepatic enzyme induction can reduce hormonal contraceptive efficacy, warranting discussion of alternative or additional contraception, a well-established drug interaction.

Option B incorrectly claims no established interaction exists. Option C incorrectly limits this interaction to injectable formulations only, when it applies broadly to hormonal contraceptives metabolized through the affected pathway.

31. B. Baclofen acts as a GABA-B receptor agonist, reducing spasticity at the spinal cord level, exactly its established mechanism. Option A incorrectly attributes its effect to peripheral prostaglandin inhibition, an NSAID mechanism, not baclofen's. Option C incorrectly attributes its effect to peripheral opioid receptor activation, unrelated to baclofen's actual mechanism.

32. B. Baseline and periodic liver function testing given a specific hepatotoxicity risk is specifically important for tizanidine. Option A incorrectly identifies a renal rather than hepatic monitoring concern. Option C incorrectly claims no monitoring is indicated, contradicting the established hepatotoxicity risk.

33. A. Ziconotide carries a specific warning regarding psychiatric symptoms, including risk of severe mood or cognitive changes, an important patient-selection consideration. Option B incorrectly claims no meaningful psychiatric risk exists. Option C incorrectly identifies hepatotoxicity as the primary specific warning, when the psychiatric warning is the more specifically emphasized concern for this agent.

34. B. Clonidine, an alpha-2 agonist, reduces autonomic withdrawal symptoms including sweating, tachycardia, and agitation during opioid taper, exactly the described clinical use. Option A incorrectly suggests an NSAID for these specifically autonomic symptoms. Option C incorrectly suggests a topical lidocaine patch, which would not address systemic autonomic withdrawal symptoms.

35. A. NMDA receptor antagonism, reducing central sensitization and windup, is ketamine's proposed mechanism for analgesic effect in refractory pain. Option B incorrectly attributes its effect to peripheral sodium channel blockade, unrelated to ketamine's actual mechanism. Option C incorrectly attributes its effect to peripheral opioid receptor agonism, also unrelated.

36. C. Continuous cardiac monitoring given lidocaine's dose-dependent cardiac conduction effects is specifically important during an intravenous lidocaine infusion. Option A incorrectly identifies pulmonary function testing as the relevant monitoring parameter. Option B incorrectly claims no specific monitoring is required, contradicting the established cardiac risk during infusion.

37. A. Cumulative corticosteroid exposure across repeated injections warrants consideration of systemic effects and spacing between injections, a well-established principle for repeated epidural corticosteroid use. Option B incorrectly claims no cumulative dose consideration exists. Option C incorrectly claims no upper limit to injection frequency exists.

38. C. The high-concentration patch requires application by a trained provider in a monitored clinical setting given the intensity of the local reaction, distinct from lower-concentration over-the-counter capsaicin products. Option A incorrectly describes this as a self-administered home treatment. Option B incorrectly claims no monitoring is required.

39. C. Cyclobenzaprine is generally considered more sedating than methocarbamol, a relevant distinction when selecting between these two muscle relaxants. Option A incorrectly reverses this comparison. Option B incorrectly claims no meaningful difference exists between the two agents' sedation profiles.

40. B. Increased serotonin syndrome risk given tramadol's serotonergic activity combined with the SSRI is the primary concern with this combination. Option A incorrectly claims no meaningful interaction exists. Option C incorrectly limits the concern to a renal interaction, missing the more directly relevant serotonergic mechanism.

41. B. Tapentadol combines mu-opioid receptor agonism with norepinephrine reuptake inhibition, a dual mechanism distinguishing it from a pure mu-opioid agonist. Option A incorrectly claims tapentadol has no opioid receptor activity at all. Option C incorrectly claims tapentadol acts exclusively through mu-opioid agonism identical to morphine, missing its distinguishing norepinephrine component.

42. A. Co-prescribing naloxone along with patient and family education on its use is now widely recommended for patients with identified overdose risk factors starting chronic opioid therapy. Option B incorrectly claims no specific co-prescribing practice is recommended. Option C incorrectly suggests co-prescribing a benzodiazepine, which would increase rather than mitigate overdose risk.

43. B. Precipitated withdrawal, resulting from buprenorphine displacing a full agonist while providing only partial activation, explains worsened withdrawal symptoms shortly after buprenorphine induction. Option A incorrectly attributes this to an unrelated allergic reaction. Option C incorrectly characterizes this as expected, clinically insignificant sedation, missing the actual precipitated withdrawal mechanism.

44. B. Naproxen is generally considered to carry a relatively more favorable cardiovascular risk profile among NSAIDs, though not risk-free, relevant to agent selection in a patient with coronary artery disease. Option A incorrectly claims an identical cardiovascular risk profile across all NSAIDs. Option C incorrectly claims COX-2 selective agents are preferred for cardiovascular safety, when these agents generally carry a comparatively less favorable cardiovascular profile.

45. C. Increased systemic lidocaine absorption raising the risk of systemic toxicity is the primary concern when more patches than labeled are applied simultaneously. Option A incorrectly limits the concern to local skin irritation, missing the more clinically significant systemic absorption risk. Option B incorrectly claims no meaningful risk exists regardless of patch number.

46. A. Duloxetine carries a hepatotoxicity warning and should be used cautiously, if at all, in patients with significant hepatic impairment, a directly relevant consideration for this patient. Option B incorrectly claims no established relationship to hepatic function exists. Option C incorrectly claims duloxetine is specifically preferred in hepatic impairment, the opposite of its actual warning.

47. A. Gabapentin dosing should be reduced in proportion to renal function, given its primarily renal elimination, a well-established dosing principle. Option B incorrectly claims no adjustment is needed

regardless of renal function. Option C incorrectly recommends increasing rather than reducing the dose in renal impairment.

48. B. The anticholinergic side-effect burden of tricyclic antidepressants carries particular concern in older adults, including cognitive and fall risk, a well-established geriatric prescribing consideration. Option A incorrectly claims no particular additional concern exists in this population. Option C incorrectly claims tricyclic antidepressants are specifically preferred in older adults, the opposite of the established caution.

49. A. Combining agents with distinct mechanisms and minimal overlapping systemic toxicity can achieve additive benefit while limiting dose-dependent systemic side effects, exactly the rational combination principle this scenario illustrates. Option B incorrectly claims no meaningful advantage exists over dose escalation alone. Option C incorrectly claims topical and systemic agents should never be combined, an overly rigid and inaccurate position.

50. B. St. John's Wort carries serotonergic activity and combined use raises serotonin syndrome risk, underscoring the importance of a complete medication and supplement history, including over-the-counter products. Option A incorrectly claims no meaningful interaction exists. Option C incorrectly limits the concern to a hepatic interaction, missing the more directly relevant serotonergic mechanism.

51. C. Comparative diagnostic confirmation, using differing durations to increase confidence the response reflects the target structure rather than placebo, is the established rationale for this technique. Option A incorrectly claims inherent therapeutic intent for any repeated block. Option B incorrectly claims no established rationale exists for this well-recognized confirmatory approach.

52. B. Psychological readiness and realistic expectations are associated with outcomes and appropriately inform candidacy for a permanent implant, exactly the rationale for preoperative psychological evaluation. Option A incorrectly dismisses this as a purely administrative formality. Option C incorrectly limits this requirement to a specific age threshold, when it applies based on clinical and psychological factors rather than age alone.

53. C. Shared decision-making, incorporating patient preferences alongside clinical recommendation and alternatives, exactly describes this described approach. Option A incorrectly limits informed consent to risk disclosure alone, omitting alternatives and patient preference. Option B incorrectly describes a purely paternalistic model, the opposite of the collaborative approach described.

54. B. The intersecting currents produce a lower-frequency interference effect at depth, engaging pain-modulating mechanisms similarly to other electrical stimulation modalities, exactly the proposed mechanism for interferential current stimulation. Option A incorrectly describes a pharmacologic delivery mechanism, unrelated to how this electrical modality works. Option C incorrectly attributes the effect to a systemic anti-inflammatory mechanism rather than the local electrical effect.

55. A. Dry needling targets myofascial trigger points based on a Western biomedical rationale, while acupuncture is rooted in traditional meridian theory, exactly the distinguishing rationale between these two techniques. Option B incorrectly claims an identical theoretical rationale. Option C incorrectly claims dry needling exclusively uses electrical stimulation and acupuncture never does, when electrical stimulation can be incorporated into either technique.

56. B. The caudal approach provides access to the lower epidural space, useful for diffuse or multilevel presentations without a single specific unilateral target, exactly matching this scenario. The transforaminal approach (Option A) selectively targets a single specific nerve root, not appropriate for a diffuse, non-specific presentation. Option C incorrectly claims no epidural approach is appropriate at all.

57. A. The sacroiliac joint injection specifically targets the joint space directly, distinguishing it from the periarticular ligamentous structures nearby. Option B incorrectly identifies the lumbar facet joint capsule as the target, an entirely different structure. Option C incorrectly identifies the lumbar epidural space, also unrelated to this specific procedure's target.

58. A. Genicular nerve block targets the sensory nerves supplying the knee joint, distinct from an intraarticular approach that would directly access the joint space itself. Option B incorrectly describes an intraarticular approach, a different procedure entirely. Option C incorrectly identifies the lumbar plexus, an anatomically unrelated structure to this peripheral nerve target.

59. B. The stellate ganglion block targets the cervical sympathetic chain, specifically the stellate ganglion, to modulate sympathetically maintained pain, exactly the established rationale for this procedure in suspected complex regional pain syndrome. Option A incorrectly describes a cervical epidural approach, a different procedure. Option C incorrectly describes a brachial plexus somatic block, targeting a different pathway than the intended sympathetic modulation.

60. A. The celiac plexus carries visceral sympathetic afferents from the pancreas, making it a specifically appropriate target for this visceral pain source, exactly the established rationale for celiac plexus block in pancreatic cancer pain. Option B incorrectly claims no established anatomic relationship exists. Option C incorrectly claims this procedure targets somatic rather than visceral pathways, the opposite of its actual mechanism.

61. B. The superior hypogastric plexus carries sympathetic afferents from pelvic visceral structures, making it an appropriate target for gynecologic visceral pain, exactly the established rationale. Option A incorrectly claims this structure carries somatic lower extremity afferents, unrelated to its actual visceral role. Option C incorrectly conflates this with a stellate ganglion block, an anatomically distinct procedure.

62. B. The ganglion impar is a terminal sympathetic structure anterior to the coccyx associated with perineal and coccygeal pain, exactly the target for this procedure in coccydynia. Option A incorrectly identifies a lumbar sympathetic chain level well above the coccyx, not the specific terminal structure targeted here. Option C incorrectly identifies the sciatic nerve, an unrelated somatic structure.

- 63. C.** The greater occipital nerve is a peripheral sensory nerve accessible for targeted blockade in occipitally-based headache and neuralgia, exactly the established rationale for this procedure. Option A incorrectly identifies the trigeminal nerve as the target, a different structure. Option B incorrectly claims no established role exists, contradicting this procedure's recognized diagnostic and therapeutic use.
- 64. C.** An epidural blood patch, using autologous blood to seal the dural defect and relieve the resulting low cerebrospinal fluid pressure, is an established next step for a persistent post-dural-puncture headache after conservative measures fail. Option A incorrectly recommends immediate surgical exploration, an overly invasive step not indicated at this stage. Option B incorrectly recommends a repeat diagnostic block, which does not address the actual dural defect causing this specific headache.
- 65. B.** Recognizing this as a likely vasovagal reaction and repositioning the patient supine with legs elevated while monitoring vital signs is the appropriate immediate management for this presentation. Option A incorrectly recommends administering a full local anesthetic dose, an inappropriate response to this hemodynamic event. Option C incorrectly recommends continuing the procedure without addressing the patient's hemodynamic status.
- 66. A.** Local anesthetic systemic toxicity, a recognized complication requiring immediate recognition and management, should be considered given this symptom combination following a large-volume injection. Option B incorrectly attributes this to an unrelated primary seizure disorder rather than the temporally and mechanistically related local anesthetic toxicity. Option C incorrectly characterizes this as a routine, expected effect requiring no intervention.
- 67. B.** Pneumothorax, a recognized complication given the anatomic proximity of the stellate ganglion to the lung apex, should be considered given this presentation. Option A incorrectly characterizes this as an expected, non-concerning finding. Option C incorrectly attributes this to a systemic allergic reaction rather than the anatomically explained structural complication.
- 68. A.** Peripheral nerve stimulation targets the specific peripheral nerve directly, rather than the dorsal columns of the spinal cord, exactly the distinguishing principle between these two approaches. Option B incorrectly claims an identical anatomic target. Option C incorrectly claims peripheral nerve stimulation requires no trial period, when a trial period is also standard practice for this modality.
- 69. A.** Dorsal root ganglion stimulation can provide more focal coverage of a specific dermatomal distribution than conventional spinal cord stimulation, exactly the rationale for selecting this approach for a well-localized presentation. Option B incorrectly claims identical coverage patterns between the two techniques. Option C incorrectly claims this technique is never appropriate for a well-localized presentation, the opposite of its established advantage.
- 70. C.** Both the pump's programmed delivery rate and its medication reservoir require coordinated management to ensure adequate supply and correct dosing when increasing intrathecal therapy. Option A incorrectly claims reservoirs never require refilling, contradicting standard intrathecal pump

management. Option B incorrectly equates this to a standard oral medication adjustment, ignoring the device-specific programming and reservoir considerations.

71. B. Intrathecal granuloma, a recognized complication presenting with progressive symptoms at the catheter tip, warrants prompt evaluation given this presentation. Option A incorrectly characterizes this as expected, requiring no evaluation. Option C incorrectly attributes this to simple catheter disconnection without mass effect, which would not typically produce this progressive symptom pattern.

72. C. Abrupt baclofen withdrawal can produce a distinct, potentially severe syndrome including rebound spasticity, fever, and altered mental status, a recognized consequence of interrupted intrathecal baclofen delivery. Option A incorrectly claims no clinical significance, when this is a recognized, potentially serious syndrome. Option B incorrectly equates this to opioid withdrawal specifically, when baclofen withdrawal has its own distinct syndrome.

73. B. Vertebral augmentation, including vertebroplasty or kyphoplasty, can provide mechanical stabilization and pain relief for a confirmed painful compression fracture, exactly the established indication. Option A incorrectly claims this is indicated for any back pain regardless of fracture confirmation, an inappropriately broad indication. Option C incorrectly identifies the intervertebral disc rather than the vertebral body as the target.

74. B. Percutaneous disc decompression is generally considered for a contained herniation, removing disc material to reduce intradiscal pressure and nerve root compression, exactly the established indication and rationale. Option A incorrectly claims appropriateness regardless of containment status, when containment is a key selection criterion. Option C incorrectly identifies the facet joint rather than the intervertebral disc as the target.

75. C. Prompt evaluation for possible device-related infection, which may require antibiotic therapy or device explantation depending on severity, is the appropriate response to this presentation. Option A incorrectly recommends immediate reprogramming without addressing the possible infectious process. Option B incorrectly characterizes this as an expected postoperative finding requiring no evaluation.

76. A. Cooled radiofrequency ablation circulates coolant through the probe tip, allowing a larger, more spherical lesion than conventional technique, exactly the distinguishing mechanism of this specific approach. Option B incorrectly claims an identical lesion size and shape to conventional technique. Option C incorrectly claims no thermal energy delivery occurs, when cooled radiofrequency still relies on thermal lesioning, just with coolant-modified lesion geometry.

77. B. Chemical neurolysis produces nerve destruction through a chemical rather than thermal mechanism, generally reserved for specific indications such as refractory cancer pain, exactly the distinguishing principle from thermal ablation. Option A incorrectly claims an identical destructive mechanism to thermal radiofrequency ablation. Option C incorrectly recommends this as first-line for all chronic non-cancer pain, when it is generally reserved for more specific, often cancer-related indications.

78. A. Allogeneic, donor-derived products carry additional processing, screening, and regulatory considerations distinct from a patient's own autologous tissue, an important distinction for patient counseling. Option B incorrectly claims identical considerations for both product types. Option C incorrectly claims allogeneic products require no screening at all, contradicting established regulatory requirements for donor-derived tissue.

79. A. Bone marrow aspirate concentrate is proposed to deliver a concentrated population of the patient's own marrow-derived cells and growth factors to the target tissue, exactly its proposed regenerative mechanism. Option B incorrectly equates this mechanism to a corticosteroid injection, an entirely different class of treatment. Option C incorrectly claims no cellular or growth factor component exists, contradicting the fundamental premise of this technique.

80. B. Increased risk of a false-positive result from local anesthetic spreading beyond the intended target to anesthetize adjacent structures is the specific risk of using an unusually large injection volume during a diagnostic block. Option A incorrectly claims no meaningful risk exists regardless of volume. Option C incorrectly limits the consequence to therapeutic duration alone, missing the more directly relevant diagnostic accuracy concern.

81. A. Graded exposure targeting fear-avoidance through incremental, planned activity re-engagement exactly describes this described program. Progressive muscle relaxation (Option B) targets autonomic arousal reduction through a different mechanism entirely. Biofeedback (Option C) targets voluntary physiologic control, not activity re-engagement.

82. C. Using real-time physiologic feedback to build voluntary control over a target parameter such as muscle tension exactly describes the biofeedback mechanism. Cognitive restructuring (Option A) targets maladaptive beliefs through a cognitive rather than physiologic-feedback mechanism. Graded exposure (Option B) targets avoided activities, not physiologic self-regulation.

83. B. Comorbid insomnia independently affects pain outcomes, and dedicated treatment addresses this contributing factor directly, supporting this specific referral. Option A incorrectly claims sleep disturbance is unrelated to pain outcomes, contradicting established evidence. Option C incorrectly claims insomnia should never be treated separately, when dedicated insomnia-focused treatment is well supported.

84. A. Buoyancy reduces axial loading on painful joints, allowing active movement with less mechanical stress than land-based exercise, exactly the established rationale for aquatic therapy. Option B incorrectly describes aquatic therapy as purely passive, when it typically involves active movement. Option C incorrectly claims no meaningful loading difference exists compared to land-based exercise.

85. B. Structured pacing addresses the overactivity-underactivity cycle that can worsen symptoms and reduce function over time, exactly the principle behind this approach. Option A incorrectly limits this to fear-avoidance alone, missing the overactivity-underactivity cycle this technique specifically addresses. Option C incorrectly claims no established relationship to functional outcomes exists.

86. B. Passive modalities are most appropriately used as a time-limited bridge supporting eventual active engagement, not an indefinite standalone plan, exactly the principle this scenario illustrates. Option A incorrectly frames manual therapy as the primary, indefinite treatment, the opposite of the time-limited bridging role described. Option C incorrectly claims no complementary relationship exists between the two components.

87. A. Tai chi has reasonably supportive evidence for conditions involving balance and mobility specifically, reflecting honest, technique-specific evidence characterization. Option B overstates the evidence as uniformly strong across every condition without exception. Option C understates the evidence uniformly, when reasonably supportive evidence exists for specific conditions.

88. C. Complementary techniques are generally positioned as an adjunct within a multimodal plan, and replacing an effective treatment entirely warrants careful reconsideration, exactly the principle relevant to this scenario. Option A incorrectly endorses full substitution as appropriate given sufficient evidence, overstating acupuncture's established role. Option B overcorrects by excluding acupuncture from any treatment plan entirely.

89. C. Matching the rehabilitation plan to the actual physical demands of the specific job improves the accuracy and success of the return-to-work plan, exactly the rationale for job-site analysis. Option A incorrectly claims this step has no meaningful bearing on planning accuracy. Option B incorrectly claims a generic plan is equally effective regardless of job-specific analysis.

90. A. Perceived injustice is a recognized psychological factor associated with worse pain and disability outcomes, warranting attention within the treatment plan, exactly the established principle. Option B incorrectly limits this to legal channels alone, excluding it from appropriate clinical attention. Option C incorrectly claims no relationship exists to pain outcomes.

91. B. Functional improvement and reduced catastrophizing represent a meaningful treatment outcome independent of pain intensity change, exactly the principle this scenario illustrates. Option A incorrectly characterizes this outcome as treatment failure based on intensity alone, ignoring the meaningful functional and psychological gains achieved. Option C incorrectly claims no established relationship exists between catastrophizing and functional outcomes.

92. A. Massage carries modest but generally supportive evidence as a short-term adjunct for certain musculoskeletal pain presentations, an honest characterization of its current evidence base. Option B understates this evidence as entirely absent. Option C overstates massage's evidence as equivalent to first-line pharmacologic therapy, an inaccurate comparison.

93. C. This finding warrants further clinical evaluation and, where appropriate, treatment integrated alongside pain management, exactly the appropriate response to a positive depression screen. Option A incorrectly recommends disregarding the finding unless the patient raises it unprompted, contradicting appropriate screening follow-up. Option B incorrectly characterizes depressive symptoms as an expected, non-actionable finding requiring no further evaluation.

94. A. Mindfulness-based approaches aim to alter the attentional and emotional response to pain rather than necessarily eliminating the sensation itself, exactly the principle this counseling reflects. Option B incorrectly claims a direct peripheral analgesic mechanism, which is not how mindfulness-based approaches are understood to work. Option C incorrectly characterizes this counseling as inaccurate, when it reflects the established mechanism.

95. B. A distinction between expected initial adjustment discomfort and a genuinely concerning flare helps patients persist appropriately through a new program, exactly the rationale for this counseling. Option A incorrectly recommends discontinuation for any discomfort increase, which would prevent patients from progressing through an appropriately graded program. Option C incorrectly recommends withholding this useful counseling entirely.

96. B. Collaborative development improves the plan's actual feasibility and likelihood of successful implementation in the real workplace, exactly the rationale for this collaborative approach. Option A incorrectly claims employer input is unnecessary, contradicting the value of workplace-specific feasibility. Option C incorrectly recommends excluding patient input, undermining the collaborative model's actual value.

97. C. Behavioral sleep interventions are generally associated with more durable benefit after treatment ends compared to pharmacologic approaches alone, supporting this specific emphasis. Option A incorrectly claims pharmacologic support is more durable in every case, the opposite of the generally established pattern. Option B incorrectly claims identical durability between the two approaches.

98. B. Regulatory oversight varies considerably across complementary therapies, and this variation is relevant information for the patient's decision, an honest and clinically useful response. Option A incorrectly claims an identical regulatory process to prescription medications across all complementary therapies. Option C incorrectly claims regulatory status has no bearing on appropriate counseling, when this information supports informed decision-making.

99. C. Addressing functional and vocational goals alongside symptom control reflects a comprehensive biopsychosocial approach to chronic pain, exactly the principle this integration illustrates. Option A incorrectly places vocational goals outside the appropriate scope of pain management. Option B incorrectly recommends sequential rather than integrated introduction, contradicting the concurrent biopsychosocial approach described.

100. B. An integrated multimodal approach addressing biological, psychological, and functional domains simultaneously reflects the biopsychosocial model of chronic pain, exactly the principle supporting this integrated treatment plan. Option A incorrectly claims sequential, isolated trials are always superior, contradicting the established value of integrated concurrent treatment. Option C incorrectly claims combining components provides no additional benefit.

101. A. Nociceptive pain reflects activation of normal nociceptors by actual or threatened tissue damage, exactly the defining feature of this category. Neuropathic pain (Option B) requires a lesion of the

somatosensory nervous system, a distinct mechanism. Nociplastic pain (Option C) reflects altered central processing without clear tissue or nerve damage, also distinct from the normal-nociceptor-activation mechanism defining nociceptive pain.

102. B. Pain still within an expected acute-to-subacute healing trajectory, with objective evidence of ongoing active healing, has not yet met criteria for chronic pain classification. Option A incorrectly applies a rigid duration-only threshold without regard to the underlying healing status. Option C incorrectly applies a nociplastic classification based on duration alone, ignoring the mechanistic considerations that actually define this category.

103. C. Fibromyalgia, the prototypical chronic widespread pain syndrome, matches this widespread, multi-region presentation with associated fatigue, sleep disturbance, and cognitive difficulty, without a localized structural cause. A single-region myofascial pain syndrome (Option A) would present with localized findings in one muscle group, not this widespread, multi-region pattern. Localized osteoarthritis (Option B) would present with single-joint findings, also inconsistent with this widespread presentation.

104. B. Opioids generally provide limited benefit in fibromyalgia given its nociplastic rather than nociceptive mechanism, and are not favored as first-line therapy, an accurate and important treatment principle. Option A incorrectly endorses opioids as preferred first-line therapy, contradicting this established treatment principle. Option C incorrectly claims an identical opioid response to acute nociceptive pain, ignoring the fundamentally different underlying mechanism.

105. A. Preoperative pain intensity itself is a recognized risk factor for postoperative pain severity, relevant to perioperative risk stratification, exactly the principle this finding supports. Option B incorrectly claims no established relationship exists. Option C incorrectly claims postoperative severity depends exclusively on the procedure itself, ignoring the patient-specific preoperative pain contribution.

106. A. Reassessing promptly for a surgical site infection or hardware complication rather than simply escalating the original analgesic regimen is the appropriate response to this trajectory deviation. Option B incorrectly recommends continuing the regimen unchanged despite concerning new findings. Option C incorrectly dismisses this presentation as unrelated to the surgical site.

107. B. Both approaches have established evidence for thoracotomy pain control, with the choice often guided by patient-specific factors such as coagulation status, exactly the nuanced clinical decision this scenario reflects. Option A incorrectly claims these techniques are functionally identical with no meaningful distinction. Option C incorrectly claims regional anesthesia has no established role in thoracotomy pain management at all.

108. A. Significant preoperative anxiety is an identified risk factor for worse postoperative pain outcomes, informing individualized perioperative planning, exactly the rationale for this screening. Option B incorrectly claims no established relationship exists. Option C incorrectly limits this screening's relevance to outpatient minor procedures alone.

109. C. Acute-phase psychological factors such as catastrophizing are independently associated with chronic pain development risk, even when pain is otherwise adequately controlled, exactly the principle this observation illustrates. Option A incorrectly claims no established relationship exists. Option B incorrectly limits chronic pain risk prediction to pain intensity control alone, missing this independent psychological risk factor.

110. A. Multimodal, preventively-timed analgesia combining regional and pharmacologic components achieves superior control with reduced opioid requirement, exactly the principle this combination illustrates. Option B incorrectly claims regional anesthesia alone is generally sufficient without pharmacologic components. Option C incorrectly recommends opioid therapy alone, contradicting the established value of the multimodal approach described.

111. A. Preventive analgesia is understood as a broader, more sustained strategy than the narrower historical preemptive analgesia concept, exactly the conceptual evolution this distinction reflects. Option B incorrectly claims these terms are interchangeable with no meaningful distinction. Option C incorrectly claims preemptive analgesia remains the preferred term, reversing the actual terminology evolution.

112. C. Age-related dosing caution should inform careful, monitored titration rather than result in substantially undertreated acute pain, since undertreated pain itself carries its own risks in this population, including delirium, exactly the balanced principle relevant here. Option A incorrectly claims age has no bearing whatsoever on dosing approach. Option B incorrectly recommends avoiding opioid therapy entirely regardless of pain severity, an overly restrictive extreme.

113. C. A time-limited plan with explicit reassessment criteria reflects appropriate discharge planning that supports safe tapering while allowing follow-up if genuinely needed, exactly the principle this discharge plan illustrates. Option A incorrectly characterizes this appropriate plan as inappropriately restrictive. Option B incorrectly claims discharge planning specificity has no established relationship to appropriate opioid use.

114. B. Combining regional and non-opioid components with opioid therapy can reduce total opioid exposure while maintaining adequate analgesia in trauma, exactly the principle this multimodal protocol reflects. Option A incorrectly limits multimodal strategies to elective settings only, when they are equally applicable in acute trauma care. Option C incorrectly claims opioid exposure reduction has no established relationship to downstream risk, when reduced exposure is a recognized goal given known dose-dependent risks.

115. C. Age-appropriate tool selection, matched to the child's developmental stage, is part of accurate acute pain assessment in this population, exactly the principle this scenario illustrates. Option A incorrectly recommends a single fixed tool regardless of age. Option B incorrectly claims observational scales are never appropriate in children, contradicting their established, age-appropriate use.

116. B. A proactive, time-bound approach to early pain assessment and intervention improves the acute trauma care experience and may reduce downstream complications, exactly the principle this protocol reflects. Option A incorrectly endorses a purely reactive approach as preferred. Option C incorrectly claims formal protocols provide no meaningful benefit over an unstructured approach.

117. B. Functional assessment, such as tracking respiratory exercise participation, provides an objective correlate to the pain intensity score particularly relevant after thoracic or cardiac procedures, exactly the principle this combined approach reflects. Option A incorrectly claims functional assessment is irrelevant after cardiac surgery. Option C incorrectly claims a low pain score alone is always sufficient regardless of functional participation.

118. C. Cervical intervertebral disc pain is classically worsened by flexion and prolonged sitting, exactly matching this presentation without joint-line tenderness or radiating symptoms. The cervical facet joint (Option A) is classically worsened by extension and rotation with joint-line tenderness, the opposite pattern described here. A cervical nerve root source (Option B) would produce radiating arm symptoms, absent in this presentation.

119. C. A positive Hoffman's sign, involuntary flexion of the thumb and index finger when the middle finger is flicked, suggests possible cervical myelopathy, an upper motor neuron finding. A negative Spurling's test (Option A) would not be assessed this way, and a negative result does not rule out radiculopathy definitively regardless. A positive straight leg raise (Option B) assesses lumbar, not cervical, pathology.

120. A. A positive Lhermitte's sign, an electric shock-like sensation with neck flexion, suggests possible cervical spinal cord involvement. The FABER test (Option B) assesses the sacroiliac joint, an unrelated structure. Tinel's sign (Option C) assesses peripheral nerve entrapment through percussion, a different maneuver and mechanism entirely.

121. C. Pursuing urgent evaluation for possible spinal infection given intravenous drug use history, fever, and new back pain is the appropriate response to this red-flag combination. Option A incorrectly recommends routine conservative management despite these concerning findings. Option B incorrectly recommends deferring evaluation for a physical therapy trial first.

122. A. Piriformis syndrome is a distinct entity that can mimic radiculopathy without the same dermatomal sensory and reflex findings, exactly matching this presentation. Facet-mediated axial pain (Option B) would not typically produce radiating leg symptoms. Discogenic pain (Option C) classically worsens with flexion, not specifically with sitting as the primary descriptor here.

123. A. The FADIR test, using hip flexion, adduction, and internal rotation, is specifically designed to assess for hip labral or femoroacetabular impingement pathology. The FABER test (Option B) assesses sacroiliac joint involvement using a different positioning entirely. The Thomas test (Option C) assesses hip flexor contracture, an unrelated finding.

124. B. The empty can test, using forward flexion, internal rotation, and resisted downward pressure, specifically assesses the supraspinatus tendon. The subacromial bursa (Option A) is not the specific structure this maneuver isolates. The long head of the biceps tendon (Option C) is assessed by a different maneuver, Speed's test.

125. B. Speed's test, using resisted forward flexion with the elbow extended and forearm supinated, is specifically designed to assess the long head of the biceps tendon. The empty can test (Option A) assesses the supraspinatus tendon using different positioning. The Neer impingement test (Option C) assesses subacromial impingement, a different structure and maneuver.

126. A. The Lachman test, using anterior tibial translation with the knee flexed to approximately 20 to 30 degrees, is a sensitive maneuver for anterior cruciate ligament integrity. McMurray's test (Option B) assesses meniscal pathology using a different maneuver. The anterior drawer test of the ankle (Option C) assesses an entirely different joint.

127. B. Phalen's test, using sustained wrist flexion, is specifically designed to reproduce median nerve symptoms in suspected carpal tunnel syndrome. Tinel's sign (Option A) is elicited through percussion over the nerve, a different maneuver. Finkelstein's test (Option C) assesses de Quervain's tenosynovitis, an unrelated condition and maneuver.

128. C. Finkelstein's test, using thumb flexion into the palm followed by ulnar deviation, is specifically designed to assess for de Quervain's tenosynovitis. Phalen's test (Option A) assesses median nerve compression using a different maneuver. Tinel's sign (Option B) is elicited through direct percussion, a different technique entirely.

129. B. Plantar fasciitis matches this classic first-step morning pain pattern localized to the plantar heel, improving somewhat with continued walking. Achilles tendinopathy (Option A) would localize to the posterior rather than plantar heel. A calcaneal stress fracture (Option C) would not typically improve with continued walking as described here.

130. C. Morton's neuroma, a localized interdigital nerve entrapment, matches this specific burning pain and numbness distribution in the web space between toes, worsened by tight footwear. Plantar fasciitis (Option A) would localize to the plantar heel rather than an interdigital web space. Achilles tendinopathy (Option B) would localize to the posterior heel, also a different location.

131. B. Adhesive capsulitis matches this classic staged progression from an initially painful freezing phase to a subsequent stiff frozen phase with reduced pain. An acute rotator cuff tear (Option A) would present with sudden weakness rather than this gradual staged progression. Subacromial bursitis alone (Option C) would not typically produce this specific staged stiffness progression.

132. A. Both conditions can present similarly, and appropriate imaging, such as ultrasound, is often needed to reliably distinguish them given the clinical overlap, exactly the appropriate approach to this diagnostic challenge. Option B incorrectly claims these conditions can never be distinguished under any

circumstances, overstating the diagnostic difficulty. Option C incorrectly claims these are anatomically identical structures, which is inaccurate.

133. C. Iliotibial band syndrome is classically worsened by downhill running and localized to the lateral femoral condyle, exactly matching this presentation. Medial meniscal pathology (Option A) would localize to the medial rather than lateral knee. Patellofemoral pain syndrome (Option B) would localize to the anterior rather than lateral knee.

134. B. Costochondritis matches this reproducible costochondral junction tenderness with a normal cardiac workup, a benign musculoskeletal chest wall condition. Acute coronary syndrome (Option A) would not typically produce reproducible chest wall tenderness on palpation as the primary finding. Pulmonary embolism (Option C) would also not typically produce this specific reproducible palpation finding.

135. C. A new or changed pain pattern, even in a patient with a known structural spinal condition, warrants fresh evaluation rather than automatic attribution to the known baseline diagnosis, exactly the appropriate approach to this scenario. Option A incorrectly claims scoliosis-related pain never changes, an inaccurate absolute claim. Option B incorrectly recommends automatic attribution without further evaluation.

136. A. Spondylolisthesis matches this extension-worsened pattern with anterior vertebral displacement demonstrated on imaging. Simple discogenic pain (Option B) would not typically involve vertebral displacement on imaging. Isolated facet joint pain (Option C) would not typically be associated with this specific structural displacement finding.

137. C. Ankylosing spondylitis, an inflammatory spondyloarthropathy, matches this pattern of prolonged morning stiffness improving with activity in a young adult with a relevant family history. Discogenic pain (Option A) classically worsens rather than improves with activity, the opposite pattern. Simple mechanical low back pain (Option B) would not typically show this specific inflammatory pattern with prolonged morning stiffness.

138. B. Gout is associated with negatively birefringent, needle-shaped monosodium urate crystals, exactly matching this synovial fluid finding. Pseudogout (Option A) is associated with positively birefringent rhomboid crystals instead, a different finding. Septic arthritis (Option C) would not typically show this specific crystal finding on synovial analysis.

139. A. Pursuing urgent orthopedic evaluation for possible septic arthritis given this combination of fever, inability to bear weight, elevated white blood cell count, and positive Gram stain is the appropriate response to this presentation. Option B incorrectly recommends routine conservative management for presumed gout, missing the infectious findings present. Option C incorrectly recommends deferring evaluation for an anti-inflammatory trial first.

140. A. Osteomyelitis, a bone infection, matches this combination of localized pain, fever, elevated inflammatory markers, and destructive imaging findings, warranting urgent consideration. Osteoarthritis (Option B) would not typically present with fever and this destructive imaging pattern. A simple stress fracture (Option C) would not typically be associated with fever and elevated inflammatory markers.

141. B. Gentle range-of-motion exercise combined with appropriate analgesia is generally favored during the frozen phase of adhesive capsulitis, since overly aggressive stretching during this phase can exacerbate symptoms. Option A incorrectly recommends aggressive, forceful stretching regardless of pain response. Option C incorrectly recommends no treatment at all during this phase.

142. B. Weakness of ankle plantarflexion with a diminished Achilles reflex is specifically associated with the S1 level, exactly matching this presentation. Weakness of great toe extension (Option A) is associated with L5, a different level. Weakness of knee extension with a diminished patellar reflex (Option C) is associated with L4, also a different level.

143. C. Emergent evaluation for possible malignant spinal cord compression, an oncologic emergency, is the appropriate priority given new severe back pain, progressive bilateral leg weakness, and urinary retention in a patient with known metastatic disease. Option A incorrectly recommends routine outpatient imaging over the following weeks, an inappropriate delay for this emergency presentation. Option B incorrectly recommends a trial of oral analgesics with delayed reassessment, also inappropriate given the urgency.

144. B. Treatment-related pain, reflecting radiation-associated tissue or nerve injury, matches this presentation occurring months after radiation therapy completion. Tumor-related pain from active disease progression (Option A) is not established here without further evidence. Survivorship pain (Option C) is described as occurring independent of a specific treatment exposure, contradicted by the clear radiation-associated timing and distribution here.

145. C. Survivorship pain, specifically post-mastectomy pain syndrome, a recognized persistent post-surgical pain condition, matches this presentation of persistent surgical-site pain without evidence of recurrence. Option A incorrectly characterizes this as active tumor-related pain requiring urgent reassessment, contradicted by the negative surveillance imaging. Option B incorrectly recommends dismissing the pain as unrelated to prior treatment, when post-mastectomy pain syndrome is a recognized, genuine consequence of the treatment itself.

146. A. Incident breakthrough pain tied to a predictable trigger can be managed with a rescue dose timed proactively before the anticipated activity, exactly the appropriate management for this predictable, movement-related pattern. Option B incorrectly recommends only reactive management regardless of trigger predictability, missing the opportunity for proactive dosing. Option C incorrectly characterizes this predictable pattern as complete baseline regimen failure requiring discontinuation.

147. C. Opioid rotation to a different agent, exploiting incomplete cross-tolerance, may improve the balance between analgesia and side effects, a well-established strategy for this scenario. Option A

incorrectly recommends continued escalation of the same opioid regardless of side effect burden. Option B incorrectly recommends discontinuing opioid therapy entirely rather than considering rotation as an intermediate strategy.

148. B. Intrathecal delivery can provide effective analgesia at substantially lower doses with reduced systemic side effects for pain refractory to optimized systemic therapy, exactly the established rationale for this escalation. Option A incorrectly claims intrathecal delivery is never appropriate for cancer pain. Option C incorrectly limits this technique to non-cancer pain only, when it has an established role in refractory cancer pain specifically.

149. C. Comprehensive symptom management addressing multiple co-occurring symptoms together reflects appropriate palliative and supportive care, exactly the principle this integrated approach illustrates. Option A incorrectly claims fatigue and pain are entirely unrelated requiring no coordinated management. Option B incorrectly restricts symptom management to pain alone, excluding fatigue from the appropriate treatment scope.

150. A. Psychological distress in the setting of serious illness can meaningfully affect pain experience, and addressing it alongside pharmacologic treatment reflects comprehensive care, exactly the principle this integrated approach illustrates. Option B incorrectly claims psychological distress is unrelated to physical pain experience, requiring separate, uncoordinated treatment. Option C incorrectly restricts treatment to pharmacologic measures alone, excluding psychological support from the appropriate scope.

151. A. Palliative care can be provided at any point alongside disease-directed treatment, while hospice specifically applies when disease-directed treatment is no longer being pursued and prognosis is limited, exactly the accurate distinction between these two related but different services. Option B incorrectly claims these terms are entirely identical. Option C incorrectly claims palliative care is only available after hospice enrollment, reversing the actual relationship between these services.

152. C. This approach reflects the general principle of a stepwise, severity-matched analgesic ladder historically applied to cancer pain management, exactly the established framework this scenario illustrates. Option A incorrectly claims no established framework applies, when this stepwise approach reflects a well-recognized historical model. Option B incorrectly claims this approach is specific to non-cancer pain, when it has particular historical association with cancer pain management specifically.

153. B. Mixed, combining a neuropathic component from nerve invasion with a nociceptive component from soft tissue involvement, exactly matches this presentation of simultaneous nerve invasion and soft tissue involvement by the same tumor. Option A incorrectly labels this as purely nociceptive, ignoring the described nerve invasion component. Option C incorrectly labels this as purely neuropathic, ignoring the described nociceptive soft tissue component.

154. A. Bone-modifying agents reduce future skeletal-related events such as pathologic fracture, providing benefit beyond symptom control alone, exactly the established additional benefit of this agent

class. Option B incorrectly claims no benefit beyond direct analgesic effect exists. Option C incorrectly limits this agent class to chemotherapy-induced peripheral neuropathy, when its established role is specifically in bone-related complications.

155. B. Viscerosomatic convergence via the phrenic nerve's shared segmental origin with the shoulder's somatic afferents explains referred shoulder pain from subdiaphragmatic irritation, a classic referral pattern. Option A incorrectly attributes this to direct nerve injury to the shoulder. Option C incorrectly dismisses the connection as coincidental, missing the well-established referral mechanism.

156. C. The initial poorly localized periumbilical pain reflects visceral afferent input, while the later localized pain reflects somatic peritoneal irritation as the process progresses, exactly the established explanation for this classic migration pattern. Option A incorrectly characterizes this well-established pattern as atypical. Option B incorrectly reverses the visceral and somatic phase assignments.

157. B. A positive Rovsing's sign, referred right-sided pain elicited by left-sided palpation, is exactly the finding described. A positive psoas sign (Option A) is elicited through hip extension against resistance, a different maneuver. A positive Murphy's sign (Option C) assesses gallbladder pathology, an unrelated structure and maneuver.

158. A. A positive psoas sign, suggesting irritation of the iliopsoas muscle by an inflamed retrocecal appendix, is exactly the finding described through this passive hip extension maneuver. A positive Rovsing's sign (Option B) is elicited through contralateral palpation, a different maneuver entirely. A positive obturator sign (Option C) is elicited through internal rotation of the flexed hip, also a different maneuver.

159. C. Involuntary guarding and rebound tenderness suggest peritoneal irritation, a finding with different urgency implications than uncomplicated early visceral pain, exactly the correct interpretation of these findings. Option A incorrectly characterizes these as simple visceral colic findings rather than peritoneal signs. Option B incorrectly claims no established clinical significance exists for these well-recognized findings.

160. C. CT imaging is frequently the appropriate initial study for suspected appendicitis in an appropriate patient, exactly the established imaging approach. Plain abdominal radiography (Option A) does not reliably visualize the appendix itself, limiting its usefulness for this specific diagnosis. Option B incorrectly claims no imaging is ever indicated, contradicting the established role of CT imaging for this presentation.

161. A. Immediate emergent evaluation and surgical consultation given the life-threatening nature of this presentation is the appropriate response to suspected ruptured abdominal aortic aneurysm. Option B incorrectly recommends routine outpatient imaging over following days, an inappropriate delay for this life-threatening emergency. Option C incorrectly recommends a trial of oral analgesics before further workup, also inappropriate given the urgency.

162. B. Pain markedly out of proportion to exam findings is a classic, concerning feature of mesenteric ischemia warranting urgent evaluation, exactly the established clinical teaching for this presentation. Option A incorrectly recommends dismissing this pattern as an exaggerated report, missing its established diagnostic significance. Option C incorrectly attributes this pattern to a psychogenic cause rather than the recognized organic explanation.

163. A. Cluster headache matches this periorbital pattern with ipsilateral autonomic features occurring in clusters, exactly the classic presentation. Migraine (Option B) presents with pulsatile pain and photophobia/phonophobia, not this specific periorbital autonomic pattern. Tension-type headache (Option C) presents with bilateral pressing pain, not this severe unilateral periorbital pattern.

164. C. Tension-type headache matches this bilateral, band-like, mild-to-moderate pattern without significant nausea, photophobia, or autonomic features. Cluster headache (Option A) presents with severe unilateral periorbital pain and autonomic features, an entirely different pattern. Migraine (Option B) presents with unilateral pulsatile pain and prominent photophobia/phonophobia, also different from this bilateral pattern.

165. B. Pursuing urgent evaluation for possible meningitis given fever, neck stiffness, and photophobia alongside severe headache is the appropriate response to this red-flag combination. Option A incorrectly recommends routine outpatient management despite these concerning findings. Option C incorrectly recommends deferring workup for an analgesic trial first, an inappropriate delay given the urgency.

166. A. Trigeminal neuralgia matches this paroxysmal, trigger-provoked pattern with symptom-free intervals between episodes, exactly the classic presentation. Cluster headache (Option B) presents with a more sustained pain pattern during attacks, not this brief paroxysmal quality. Tension-type headache (Option C) presents with bilateral pressing pain, not trigger-provoked paroxysms.

167. B. Cardiovascular disease is an important contraindication to triptans given their vasoconstrictive mechanism, warranting consideration of alternatives, exactly the relevant safety consideration here. Option A incorrectly recommends triptans regardless of cardiovascular history. Option C incorrectly claims cardiovascular disease has no bearing on treatment selection, contradicting this established contraindication.

168. B. High-flow oxygen is an established, effective acute treatment specifically for cluster headache attacks, exactly the principle supporting this treatment choice. Option A incorrectly claims no established role exists for this treatment in any primary headache syndrome. Option C incorrectly attributes this treatment to migraine rather than cluster headache specifically.

169. A. Hyperalgesia, an exaggerated pain response to a stimulus that is already normally painful, exactly matches this scenario of exaggerated response to a normally mildly painful pinprick. Allodynia (Option B) describes pain from a stimulus that would not normally be painful at all, a different phenomenon. Hypoesthesia (Option C) describes reduced sensation, the opposite of the exaggerated response described.

170. A. The left side of the body, contralateral to the causative right-sided brain lesion, is where pain would most likely be perceived, reflecting the crossed nature of central somatosensory pathways. Option B incorrectly claims ipsilateral perception, the opposite of the actual crossed pathway anatomy. Option C incorrectly claims bilateral involvement is always expected from a unilateral lesion.

171. B. A mononeuropathy, involving a single specific peripheral nerve, exactly matches this presentation of sensory symptoms confined to one nerve's distribution following focal compression. A symmetric polyneuropathy (Option A) would affect multiple nerves in a length-dependent pattern, not this single-nerve distribution. A central neuropathic process (Option C) would not follow a specific peripheral nerve distribution as described here.

172. A. Complex regional pain syndrome type I, occurring without a confirmed underlying nerve injury, matches this presentation following a minor injury without an identifiable specific nerve lesion. Complex regional pain syndrome type II (Option B) specifically requires a confirmed underlying nerve injury, absent here. Option C incorrectly characterizes this disproportionate presentation as a routine, expected inflammatory response.

173. C. Complex regional pain syndrome type II specifically applies when a confirmed underlying nerve injury is present, exactly matching this scenario following a documented, confirmed peripheral nerve injury. Complex regional pain syndrome type I (Option A) specifically occurs without a confirmed nerve injury, the opposite of this scenario. Option B incorrectly claims this presentation does not meet criteria for either subtype.

174. B. Phantom limb pain reflects genuine central and peripheral neuroplastic changes following amputation, not fabrication, exactly the accurate understanding of this phenomenon. Option A incorrectly dismisses this genuine, well-documented phenomenon as psychologically fabricated. Option C incorrectly attributes this exclusively to a psychiatric condition, ignoring the established neuroplastic mechanism.

175. B. HIV-associated peripheral neuropathy is a recognized complication that can arise from the infection itself or from certain antiretroviral therapies, exactly the accurate understanding of this presentation. Option A incorrectly claims no established relationship exists to HIV infection or its treatment. Option C incorrectly restricts the explanation exclusively to an unrelated diabetic neuropathy, ignoring the well-established HIV-specific etiology.

176. C. Cumulative dose is a recognized factor in chemotherapy-induced peripheral neuropathy severity, informing dose-modification discussions with the treating oncology team, exactly the relevant clinical principle. Option A incorrectly claims no established relationship exists between cumulative exposure and severity. Option B incorrectly claims this neuropathy is always irreversible regardless of dose modification, an overly absolute claim.

177. A. Small fiber neuropathy can present with normal standard electrodiagnostic testing and reflexes since large fibers are unaffected, exactly explaining this presentation. Option B incorrectly claims

standard nerve conduction studies definitively exclude any neuropathic process, ignoring this specific small-fiber limitation. Option C incorrectly dismisses this presentation as purely psychogenic, ignoring the recognized small fiber neuropathy explanation.

178. C. A hereditary peripheral neuropathy, such as Charcot-Marie-Tooth disease, should be considered given this specific slowly progressive, symmetric, distal pattern with a relevant multigenerational family history. A purely traumatic neuropathy (Option A) would not explain this hereditary, symmetric distribution. An acute, toxin-induced neuropathy (Option B) would not typically show this specific familial pattern.

179. C. Dermatomal distribution reflects a specific nerve root's territory, while a peripheral nerve territory reflects that specific nerve's own distinct distribution, and distinguishing them aids localization, exactly the accurate anatomic principle. Option A incorrectly claims these distributions are functionally identical. Option B incorrectly claims complete overlap always exists, when these are distinct anatomic territories that can differ meaningfully.

180. B. A validated screening instrument can help systematically identify features suggestive of a neuropathic mechanism, supporting rather than replacing clinical judgment, exactly the appropriate role of such tools. Option A incorrectly claims such instruments replace the need for further history or examination. Option C incorrectly claims no established validity or clinical utility exists for these recognized screening tools.

181. C. Tricyclic antidepressants should generally be avoided given cardiac conduction effects, favoring an SNRI or gabapentinoid instead, exactly the established principle for a patient with cardiac conduction abnormality. Option A incorrectly recommends tricyclic antidepressants as preferred despite this cardiac history. Option B incorrectly claims cardiac conduction history has no bearing on agent selection.

182. B. This scheduling distinction reflects differences in perceived abuse potential and regulatory classification between the two agents, despite their related mechanisms, exactly the accurate explanation for this regulatory difference. Option A incorrectly claims identical scheduling status across every jurisdiction. Option C incorrectly attributes this distinction to differences in analgesic mechanism rather than the actual regulatory and abuse-potential basis.

183. B. Spinal cord injury is a recognized cause of central neuropathic pain, reflecting altered central processing following the cord lesion, exactly the accurate understanding of this presentation. Option A incorrectly claims this presentation is exceedingly rare, when it is a well-recognized consequence of spinal cord injury. Option C incorrectly attributes this exclusively to a peripheral rather than central mechanism, contradicting the established central pathophysiology.

184. C. Central nervous system demyelinating lesions in multiple sclerosis are a recognized cause of central neuropathic pain, exactly the accurate understanding of this presentation. Option A incorrectly claims no established relationship exists between multiple sclerosis and neuropathic pain. Option B

incorrectly attributes all pain in this population exclusively to comorbid musculoskeletal causes, ignoring the established central neuropathic mechanism.

185. B. Nociplastic, reflecting altered central pain processing without clear structural or inflammatory cause, matches this chronic, multi-system hypersensitivity presentation with an extensively negative workup. Nociceptive pain (Option A) requires an identifiable structural cause, absent here. Neuropathic pain (Option C) requires a demonstrable somatosensory nervous system lesion, also absent given the negative workup.

186. C. A self-report instrument appropriate to adolescent developmental level, similar in principle to an adult self-report scale, is the appropriate approach given this patient's developmental stage. A preverbal-infant behavioral instrument (Option A) is not matched to an adolescent's developmental capabilities. Option B incorrectly claims no assessment is possible in this age group.

187. B. Using a structured behavioral observation approach, ideally informed by caregivers familiar with this patient's individual baseline behavior, is the appropriate approach for a non-verbal patient with autism spectrum disorder. Option A incorrectly assumes absence of pain simply because verbal self-report is unavailable. Option C incorrectly recommends relying on a tool this patient cannot use reliably.

188. A. Agent selection should weigh both maternal analgesic need and the specific agent's transfer into breast milk and infant exposure risk, exactly the appropriate individualized approach. Option B incorrectly claims no analgesic medication may ever be used while breastfeeding, an overly restrictive absolute. Option C incorrectly claims breastfeeding status has no bearing on selection at all.

189. B. Coordinated treatment should address both the pain condition and substance use disorder together, rather than an all-or-nothing approach to either, exactly the appropriate integrated principle. Option A incorrectly recommends withholding all pain treatment until remission, an overly restrictive extreme. Option C incorrectly claims this history has no bearing on planning at all.

190. B. Current criteria more comprehensively capture the condition's actual symptom burden, including associated features beyond localized tenderness alone, exactly the rationale for this diagnostic evolution. Option A incorrectly claims tender point counting remains the only valid approach, contradicting the established evolution in diagnostic criteria. Option C incorrectly characterizes this evolution as abandoning physical examination entirely.

191. A. Active exercise and cognitive-behavioral approaches are generally emphasized as central components alongside pharmacotherapy, not as optional adjuncts, exactly the established treatment emphasis for fibromyalgia. Option B incorrectly claims pharmacologic therapy alone is generally sufficient. Option C incorrectly claims non-pharmacologic components have no established role, contradicting their central emphasis in fibromyalgia management.

192. B. Fall risk from sedation or dizziness carries particular importance in older adults, warranting careful monitoring after initiation or dose changes, exactly the relevant additional consideration in this

scenario. Option A incorrectly claims no particular additional concern exists in this population. Option C incorrectly limits this consideration to benzodiazepines alone, when opioid-related sedation also carries fall risk in this population.

193. A. Age-appropriate assent respects the child's own developing autonomy alongside the legally required parental consent, exactly the principle this practice reflects. Option B incorrectly dismisses assent as purely symbolic with no genuine ethical bearing. Option C incorrectly claims assent replaces parental consent entirely, when both remain part of the appropriate process.

194. B. Stigma-related underreporting is a recognized risk in this population, and clinicians should remain attentive to both over- and under-reporting patterns, exactly the balanced principle relevant here. Option A incorrectly claims patients with this history are incapable of underreporting, an inaccurate absolute claim. Option C incorrectly claims no established relationship exists between this history and reporting patterns.

195. C. A professionally validated translated instrument should be used when available, since informal translation can compromise assessment accuracy and confidentiality, exactly the appropriate principle here. Option A incorrectly claims informal family translation is always adequate in every circumstance. Option B incorrectly claims language barriers have no bearing on assessment validity.

196. C. Chronic pain, reflecting both the duration criterion and evidence of a distinct underlying sensitization process, is the accurate classification given both the extended duration and the demonstrated central sensitization. Option A incorrectly claims this presentation cannot be classified using the standard framework at all. Option B incorrectly maintains an acute classification regardless of duration and evidence of a distinct ongoing process.

197. B. These conditions are recognized to frequently co-occur, consistent with a shared vulnerability to central sensitization across multiple bodily systems, exactly the established explanation for this pattern. Option A incorrectly claims no plausible shared mechanism exists. Option C incorrectly demands entirely separate, independent workup for each condition, ignoring their recognized shared underlying vulnerability.

198. B. Safety profiles vary considerably by specific agent, trimester, and dose, requiring individualized rather than categorical assessment, exactly the accurate response to this question. Option A incorrectly claims an identical safety profile across all analgesics and throughout pregnancy. Option C incorrectly limits pregnancy safety considerations to opioids alone, when other analgesic categories also carry pregnancy-specific considerations.

199. C. A harm-reduction approach that maintains engagement can reduce risk and preserve the therapeutic relationship compared to discharge from care, exactly the principle this approach reflects. Option A incorrectly claims discharge is always the correct response in this scenario. Option B incorrectly claims harm-reduction strategies have no established role in chronic pain management.

200. C. The same proactive adaptation mindset applied across other populations with communication barriers extends appropriately to this population as well, exactly the principle this scenario illustrates. Option A incorrectly limits this adaptive approach to pediatric patients alone. Option B incorrectly recommends abandoning structured assessment entirely rather than adapting it, contradicting the appropriate approach demonstrated here.