Supplementary material

The Numerical Rating Scale (NRS) for Assessing Pain Intensity in Cancer Patients: A Clinically Practical Tool

The Numerical Rating Scale (NRS) is a simple and intuitive pain assessment tool widely adopted in clinical practice, with particular utility in pain management for cancer patients. Below is a detailed description of the NRS and a concise pain assessment inventory:

1. Definition of the NRS

Scoring Range: 0–10 points, with patients selecting a numerical value reflecting their perceived pain intensity:

0: No pain.

1–3: Mild pain (no interference with daily activities).

4–6: Moderate pain (activity-limiting but tolerable).

7–10: Severe pain (intolerable, significantly impairing daily function or sleep).

2. Administration Protocol

Self-Reporting: Patients are asked to self-report using a standardized prompt: "On a scale from 0 to 10, where 0 means no pain and 10 represents the worst pain imaginable, how would you rate your current pain?"

Clinician Documentation: Reliability of scores should be corroborated by observational assessment of facial expressions, mobility, sleep disturbances, and functional limitations.

Dynamic Monitoring: Serial evaluations (e.g., daily or as needed) are recommended during treatment to track pain trajectory.

3. Unique Considerations in Cancer-Related Pain Assessment

Cancer-related pain often involves chronic, complex mechanisms (e.g., neuropathic pain, bone metastasis) requiring tailored approaches:

Multidimensional Evaluation: Beyond NRS scoring, clinicians should document:

Pain characteristics (e.g., sharp, burning).

Anatomical location(s).

Temporal pattern (continuous vs. intermittent).

Exacerbating/alleviating factors.

Breakthrough Pain (BTP): Episodic severe pain flares (NRS ≥7) must be separately recorded and managed.

Psychosocial Contributors: Anxiety, depression, and inadequate social support may amplify pain perception, necessitating integrated evaluation.

4. Clinical Implications

Therapeutic Decision-Making:

Scores ≤3: Maintain current regimen with emphasis on quality-of-life optimization.

Scores ≥4: Escalate analgesia (e.g., opioid titration) or incorporate adjuvant therapies (e.g., radiotherapy, nerve blocks).

Evaluation of Treatment Efficacy: A reduction of ≥2 points or final scores ≤3 post-intervention is generally considered clinically meaningful.

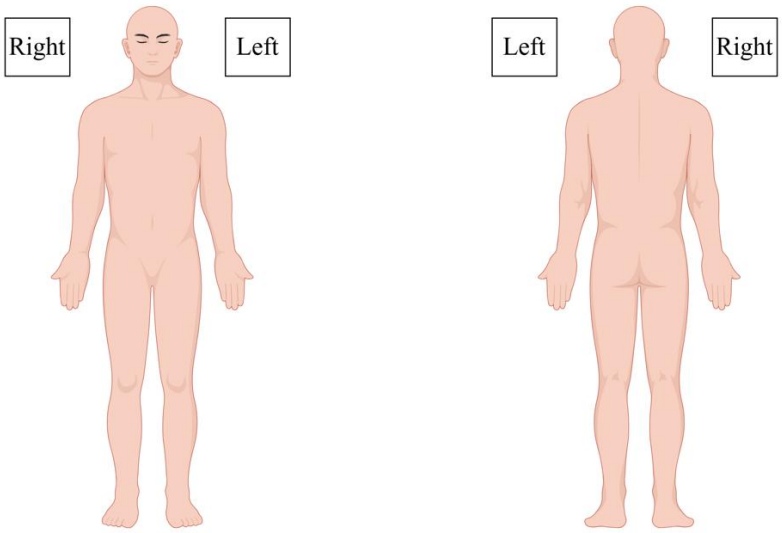
A Concise Pain Assessment Inventory

1.Most individuals experience pain during their lifetime (e.g., mild headaches, sprain-related pain, or toothache).

Apart from these common pains, are you currently experiencing any other type of pain?

(1) Yes (2) No

2.Please mark your pain locations on the diagram below, using an "X" to indicate the area of most intense pain.



3.Select one numerical value below to represent your maximum pain intensity during the past 24 hours.

(No pain) 1 2 3 4 5 6 7 8 9 10 (Most severe)

4.Select one numerical value below to represent your minimum pain intensity during the past 24 hours.

(No pain) 1 2 3 4 5 6 7 8 9 10 (Most severe)

5.Select one numerical value below to represent your average pain intensity during the past 24 hours.

(No pain) 1 2 3 4 5 6 7 8 9 10 (Most severe)

6.Select one numerical value below to represent your current pain intensity.

(No pain) 1 2 3 4 5 6 7 8 9 10 (Most severe)

7.What medications or therapies would you prefer for pain management?

8.What percentage of pain relief have you achieved through medications or therapies during the past 24 hours?

Please select one percentage value:

0% (No relief) 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% (Complete relief)