

Cancer Pain and Palliative Care

The best cancer pain relief comes from combining different medicines and starting comfort care (palliative care) the moment cancer is found, not waiting until the end.

THE ONE-LINE TRUTH

Cancer pain is not just one thing — it hurts the body, the mind, the spirit, and the connections people need to feel whole.

The chain — how it unfolds

1. The tumor grows into bone, organs, or nerves, or cancer treatment damages healthy tissue — why: This is the upstream break — the trigger that starts the pain cascade. The tumor itself does not hurt; it is what the tumor does that activates pain nerves. When a tumor invades bone, it releases inflammatory chemicals (prostaglandins, cytokines like interleukin-1 and tumor tissue death (necrosis) factor-alpha) that turn on nociceptors in the periosteum (the pain-sensitive bone lining). When it squeezes or stretches an organ capsule (liver, pancreas, kidney), it activates stretch-sensitive nociceptors embedded in that capsule. When it invades or compresses a nerve, it damages the nerve fibers themselves, causing them to misfire and send pain signals even when nothing is actively hurting them. On top of that, treatments designed to kill cancer — chemotherapy and radiation — also damage fast-growing normal cells in the nerve linings, mouth and gut linings, and bone marrow, which creates additional pain signals. So pain starts because tissue is being damaged continuously, and the damage does not stop.

2. Three overlapping types of pain signals fire at once: nociceptive (body pain), neuropathic (nerve pain), and total pain (mind, heart, and spirit pain) — why: Cancer pain is not one thing — it is three kinds of pain layered together. Nociceptive pain comes from ongoing tissue damage (tumor invading bone or stretching an organ) and feels like aching, throbbing, sharp stabbing, or deep pressure. It responds well to opioids (morphine, oxycodone, fentanyl) because opioids block pain signals in the spinal cord and brain. Neuropathic pain comes from nerve injury (tumor crushing a nerve, chemotherapy poisoning nerve fibers) and feels like burning, shooting, stabbing, or electric shocks. It does not respond well to opioids alone — it needs nerve-pain medicines like gabapentin or pregabalin (which calm overexcited nerve firing), or antidepressants like duloxetine or amitriptyline (which boost the brain's own pain-dampening signals). Total pain includes the emotional, social, and spiritual suffering — fear of death, loss of independence, feeling like a burden, and existential questions like 'Why me?' and 'What is the meaning of my suffering?' This psychological and spiritual pain amplifies the physical pain, making it feel unbearable. Each type of pain needs a different treatment, which is why the WHO pain ladder (1986, updated in WHO Cancer Pain Relief 1996 and reflected in current NCCN and ASCO guidelines) emphasizes multimodal analgesia — using several different kinds of medicines and supports together.
3. The person feels constant, unrelenting pain that does not go away with rest or distraction — why: Unlike an injury that heals — where the pain alarm turns off once the danger is gone — cancer pain persists because the tumor keeps growing or the nerve damage is permanent. The pain alarm never shuts off, so the person never gets a break. Pain interrupts sleep, so exhaustion builds. Pain makes eating feel like too much effort, so weight drops. Pain steals attention and energy, so the person cannot focus on anything else. The brain is stuck in alarm mode, and the body is stuck in suffering mode.
4. Chronic uncontrolled pain triggers depression, anxiety, and hopelessness — why: The brain's pain pathways and mood pathways are wired together. Pain signals travel to the thalamus (the brain's relay station) and then split — some go to the somatosensory cortex (which maps where the pain is), and some go to the limbic system (the emotional brain, including the amygdala, anterior cingulate cortex, and hippocampus). The limbic system adds emotional meaning to pain — fear, sadness, helplessness. When pain is constant, the limbic system stays on high alert, stress hormones (cortisol) stay elevated, and mood-regulating neurotransmitters (serotonin, norepinephrine) drop. This causes clinical depression (persistent sadness, loss of interest, hopelessness) and anxiety (constant worry, sense of doom). Depression and anxiety amplify pain perception — the same physical signal feels worse when the mind is suffering. Studies show that untreated depression increases pain intensity scores by 30 to 50 percent, and treating depression improves pain control even without changing pain medicine (Rayner et al., Cochrane 2011; Li et al., Curr Pain Headache Rep 2015).

5. Loss of physical function and independence deepens total suffering — why: Pain and weakness make it hard or impossible to do everyday tasks — get dressed, cook a meal, walk to the bathroom, hold a grandchild. Losing independence means needing help with intimate personal care (bathing, toileting), which feels humiliating and strips away dignity. The person loses their role in the family and community — they are no longer the provider, the caregiver, the decision-maker, the friend. Identity shrinks. This loss of role and dignity creates existential and spiritual suffering — a hurt that has no physical cause but makes all other pain unbearable. It is the social and spiritual dimensions of total pain, and it cannot be treated with opioids alone. It requires counseling, peer support, chaplaincy, and practical help (social work, occupational therapy, family meetings) to restore meaning, connection, and a sense of being valued (Saunders, BMJ 1964; Puchalski et al., J Palliat Med 2009).
6. Uncontrolled pain leads to immobility, isolation, and life-threatening complications — why: When pain is severe and uncontrolled, the person cannot move. Immobility for days or weeks causes a cascade of dangerous complications. Muscles waste away (atrophy), joints stiffen (contractures), and skin over bony areas (heels, tailbone, hips) breaks down into painful open sores (pressure ulcers) that can become infected. Blood pools in the legs and clots (deep vein clot formation (thrombosis)), and clots can break off and travel to the lungs (pulmonary a traveling clot lodging in a vessel (embolism)), which is often fatal. Shallow breathing and weak cough allow mucus to collect in the lungs, leading to pneumonia. The person cannot eat or drink well, so malnutrition and dehydration set in. The body spirals downward. Pain also fuels despair — uncontrolled suffering can lead to thoughts of giving up, requests for hastened death, or even suicide. Studies show that good pain control dramatically reduces requests for euthanasia and physician-assisted suicide (Emanuel et al., Lancet 2000).

7. Early, integrated palliative care breaks the cycle by treating all dimensions of pain and suffering at the same time — why: Palliative care is specialized medical care focused on relief of suffering and improving quality of life for people with serious illness. It is not the same as hospice (end-of-life care) — it starts the day cancer is diagnosed and continues alongside curative treatment (chemotherapy, radiation, surgery). The palliative care team treats the whole person: opioids (morphine, hydromorphone, fentanyl, methadone) for nociceptive pain, nerve-pain medicines (gabapentin, pregabalin, duloxetine) for neuropathic pain, corticosteroids (dexamethasone) for inflammation and swelling, and interventions like nerve blocks or radiation for targeted pain control. At the same time, the team addresses emotional pain with antidepressants (citalopram, mirtazapine) and counseling, spiritual pain with chaplains and meaning-centered therapy, and social pain with practical support (help with bills, transportation, meals, respite for caregivers). Landmark studies show that early palliative care improves quality of life, reduces depression and anxiety, decreases emergency room visits and hospitalizations, and in some cancers (like metastatic lung cancer), even extends survival by months compared to standard oncology care alone (Temel et al., NEJM 2010; Zimmermann et al., JAMA 2014; Kavalieratos et al., JAMA 2016). The key is starting early — not waiting until curative treatment stops or the patient is actively dying. Early integration gives time to build trust, adjust the plan as needs change, and prevent crises before they happen.
8. The goal is the best possible quality of life — pain low enough to allow rest, connection, and meaning, and suffering eased enough to preserve dignity — why: Total pain relief does not always mean pain is zero. For some patients, zero pain is possible. For others, the goal is pain that is managed well enough that the person can sleep through the night, eat a meal, have a conversation with family, and do the things that matter most to them — whether that is finishing a project, mending a relationship, praying, or simply sitting in the sun. Quality of life means the person feels heard, valued, and cared for. It means they are not alone in their suffering, and they do not have to choose between pain control and alertness (although at the very end of life, comfort always comes first, and deep sedation to relieve intractable suffering is ethical and appropriate when other measures fail — this is called palliative sedation, and it is distinct from euthanasia). This outcome — dignity, comfort, and the chance to live as fully as possible for as long as possible — is what every person with cancer deserves, and it is achievable with good palliative care starting early. That is the evidence, and that is the standard of care (NCCN Guidelines for Palliative Care, 2024; WHO Definition of Palliative Care, 2020; National Consensus Project Clinical Practice Guidelines for Quality Palliative Care, 4th ed., 2018).

Spot it — what you see, and why

- Constant, aching pain that does not go away: Cancer cells push into and destroy nearby healthy tissue, crush nerves, or block hollow spaces (like the gut or airways) so pressure builds up and hurts all the time.
- Sharp, shooting, or burning pain along a path on the skin: A tumor presses on or grows into a nerve, sending alarm signals down that nerve's pathway even though nothing is actually cutting or burning the skin.
- Pain that gets worse at night or when lying down: When you lie flat, fluid and swelling shift inside the body and press harder on a tumor or sore spot; also, without daytime distractions the brain's thalamus (the relay station for pain signals) sends more alarm signals up to your awareness.
- Deep, throbbing bone pain: Cancer spreads to bone (called metastasis) and releases enzymes that dissolve the hard bone tissue, which is packed with nerve endings; the weakened bone swells and the nerves fire constantly, sending strong pain signals.
- Pain in a new place that was not there before: Cancer can spread through blood or lymph fluid to other organs or tissues, so new pain often means the disease has moved to a fresh spot in the body.
- Feeling very sad, hopeless, or anxious every day: Ongoing pain wears down the mind; levels of serotonin and dopamine (brain messengers that steady mood and motivation) drop, and constant worry about the future builds up, leading to depression and anxiety.

Red flags — act now

- New, severe pain that suddenly starts or gets much worse over hours or days
- Numbness, tingling, or weakness in the arms or legs, or loss of bowel or bladder control (may mean the spinal cord is being squeezed by tumor or collapsed bone)
- Trouble breathing, chest pain, or coughing up blood (may mean a clot in the lung or cancer spread to the lungs)
- Confusion, severe headache, or sudden trouble speaking or moving one side of the body (may mean cancer has spread to the brain or bleeding inside the skull)
- Fever above 100.4°F (38°C) with chills, especially if the person is on chemotherapy (the immune system may be too weak to fight infection, risking sepsis)

Treat it — in this order

1. Assess pain type, location, and severity using a standardized tool (numeric scale 0–10, PAINAD for non-verbal patients, or ESAS); separate nociceptive (bone/organ) pain from neuropathic (nerve) pain from psychosocial/existential suffering → Measuring pain with a number and asking where it hurts and how it feels — aching vs. burning vs. crushing — tells you which pain pathway is firing. Nociceptive pain (from tissue damage) responds to NSAIDs and opioids. Neuropathic pain (from nerve damage) needs gabapentin or pregabalin (medicines that calm overactive nerves) or duloxetine (an SNRI antidepressant that raises serotonin and norepinephrine in the spinal cord, turning down the volume on nerve pain). Psychosocial pain (fear, loss, facing death) needs counseling, antidepressants, and chaplaincy. Without assessment, you pick the wrong medicine and the patient keeps suffering. This is the foundation — every other decision depends on knowing what type of pain you are treating.
2. Start non-opioid analgesia: acetaminophen 650–1,000 mg every 6 hours (max 3 g/day if liver is healthy, max 2 g/day if liver disease or alcohol use) for mild pain, or NSAID (ibuprofen 400–600 mg every 6–8 hours, naproxen 250–500 mg twice daily) for bone pain if kidneys and stomach are healthy → Acetaminophen blocks pain signals in the brain and reduces fever. NSAIDs like ibuprofen and naproxen block cyclooxygenase (COX) enzymes that make prostaglandins — chemicals that cause inflammation and sensitize bone pain nerves. Bone metastases (cancer spread to bone) release prostaglandins, so NSAIDs directly quiet the bone pain signal. These medicines have fewer side effects than opioids — no constipation, no sedation, no risk of addiction — and work well for mild to moderate pain. They also lower the total opioid dose needed, which reduces opioid side effects.
3. Add adjuvant medicine for neuropathic pain: gabapentin starting 100–300 mg at bedtime, titrate up every 3–7 days to 300–600 mg three times daily (max 3,600 mg/day); or duloxetine 30 mg daily, increase to 60 mg after one week; add dexamethasone 2–4 mg daily if nerve compression from tumor swelling → Gabapentin and pregabalin calm overactive nerve signals by blocking calcium channels on damaged nerves, stopping the burning, shooting, and electric sensations. Duloxetine (an SNRI antidepressant) raises serotonin and norepinephrine in the spinal cord, which turns down the volume on nerve pain signals. It also treats depression, so it helps both physical and emotional pain. Dexamethasone (a corticosteroid) shrinks swelling around nerves being squeezed by tumor, relieving pressure and stopping the pain signal at its source. Opioids alone do not fix nerve pain well — you must add these medicines.

4. Titrate opioids using the WHO analgesic ladder: start with weak opioid (tramadol 50 mg every 6 hours or codeine 15–60 mg every 4 hours) for moderate pain; escalate to strong opioid (morphine, oxycodone, hydromorphone, or fentanyl patch) for severe pain, using long-acting formulation for baseline pain plus short-acting for breakthrough pain; titrate dose every 24–48 hours based on pain scores and side effects → Opioids bind to mu-opioid receptors in the brain and spinal cord, blocking the pain signal before it reaches consciousness. Long-acting forms (MS Contin, OxyContin, fentanyl patch) release medicine slowly, keeping a steady level in the blood and controlling continuous pain. Short-acting forms (immediate-release morphine or oxycodone) peak in 30 to 60 minutes and handle sudden pain spikes (breakthrough pain). Titrating means increasing the dose until pain is controlled (score < 4/10) or side effects appear. This is the cornerstone of severe cancer pain control.
5. Start bowel regimen prophylactically before opioid-induced constipation begins: senna (stimulant laxative) 2 tablets (17.2 mg) at bedtime plus docusate (stool softener) 100 mg twice daily, or polyethylene glycol (PEG 3350) 17 g daily; titrate laxatives up as opioid dose increases; add methylnaltrexone 12 mg subcutaneous every other day or naloxegol 25 mg daily if refractory → Opioids bind to mu-opioid receptors in the gut wall and paralyze the smooth muscle that pushes stool forward — this is called opioid-induced constipation. Stool becomes hard, dry, and stuck. Senna stimulates the gut muscle to contract and push stool out. Docusate pulls water into the stool to soften it. PEG (polyethylene glycol) holds water in the colon, keeping stool soft. Starting laxatives early prevents fecal impaction (a rock-hard stool ball that causes severe belly pain, nausea, and blocks the bowel). Methylnaltrexone and naloxegol block opioid receptors in the gut without blocking pain relief in the brain, breaking through severe constipation.

Your top priorities at the bedside

1. Assess pain every 2 to 4 hours using a numeric scale (0–10) or PAINAD tool if the patient cannot speak, and document the score in the chart. — why: Pain is the fifth vital sign; frequent reassessment catches breakthrough pain (sudden flares of pain between scheduled doses) early and tells us if our treatment plan is working or needs adjustment.
2. Give prescribed opioid analgesics on time, not waiting until pain is severe—administer long-acting opioids (morphine ER, oxycodone ER, fentanyl patch) every 8 to 12 hours and keep short-acting rescue doses (immediate-release morphine or oxycodone) available every 1 to 2 hours as needed. — why: Cancer pain is constant and predictable, so scheduled around-the-clock dosing keeps a steady level of medicine in the blood and prevents the pain cycle from restarting; rescue doses treat breakthrough pain spikes without delay.

3. Monitor for opioid side effects: check bowel movements daily and start a bowel regimen (docusate 100 mg plus senna 2 tablets at bedtime) on day one of opioid therapy; assess for nausea and give ondansetron 4 to 8 mg every 8 hours if needed; watch for sedation (sleepiness) and respiratory rate below 8 breaths per minute. — why: Opioids slow the gut, causing constipation (hard stools) in almost every patient—this is preventable but not tolerance (the body does not adapt), so laxatives (stool softeners and stimulants) must continue as long as opioids do; nausea happens in 25 percent of patients but usually resolves in 3 to 5 days; severe sedation or slow breathing means opioid overdose and requires naloxone (opioid reversal drug) and dose reduction.