

Providing the Best Care at the End of Life

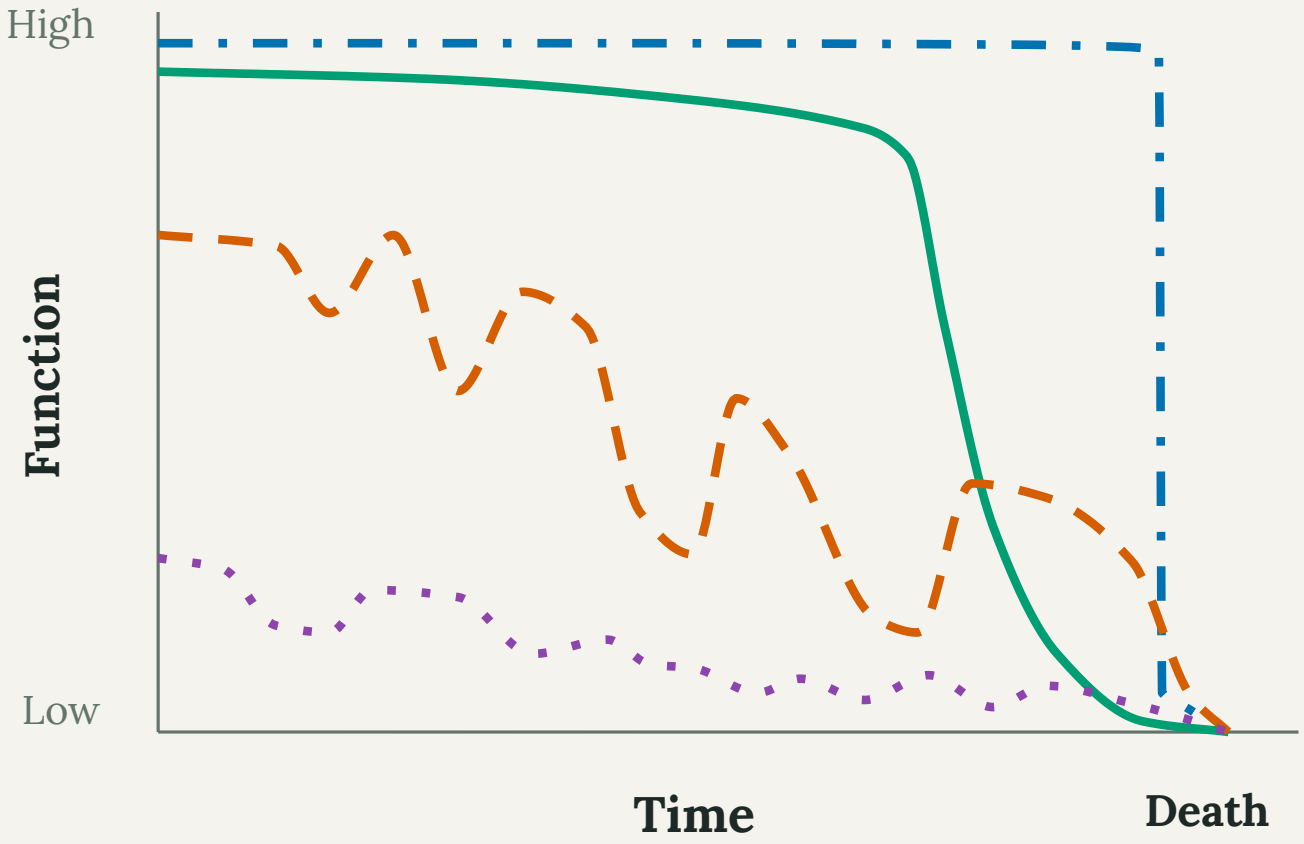
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Objectives

- Recognize the dying phase.
- Manage symptoms, medications, food and fluids in the last days.
- Use proportionate sedation for refractory suffering.

Illness trajectories



Murray SA et al. Illness trajectories and palliative care. BMJ. 2005;330:1007–1011.

MCQ 01 / 11

A patient with extensive metastatic cancer cannot move in bed or perform self-care. Staff feed him normal meals, and he remains fully alert. Which Palliative Performance Scale score best fits?

A 10%

B 20%

C 30%

D 40%

Downing GM. Q&A Manual, Instructions & Definitions for Use of Palliative Performance Scale (PPSv2). Victoria Hospice. 2020.

Palliative Performance Scale

PPS	Ambulation	Activity and evidence of disease	Self-care	Intake	Consciousness
100%	Full	Normal activity and work No disease	Full	Normal	Full
90%	Full	Normal activity and work Some disease	Full	Normal	Full
80%	Full	Normal activity and work with effort Some disease	Full	Normal or reduced	Full
70%	Reduced	Unable normal activity and work Significant disease	Full	Normal or reduced	Full
60%	Reduced	Unable hobby/housework Significant disease	Occasional assistance	Normal or reduced	Full or confusion
50%	Mainly sit/lie	Unable to do any work Extensive disease	Considerable assistance	Normal or reduced	Full or drowsy or confusion
40%	Mainly in bed	Unable to do most activity Extensive disease	Mainly assistance	Normal or reduced	Full or drowsy ± confusion
30%	Totally bedbound	Unable to do any activity Extensive disease	Total care	Normal or reduced	Full or drowsy ± confusion
20%	Totally bedbound	Unable to do any activity Extensive disease	Total care	Minimal sips	Full or drowsy ± confusion
10%	Totally bedbound	Unable to do any activity Extensive disease	Total care	Mouth care only	Drowsy or coma
0%	Death	—	—	—	—

© Victoria Hospice Society. Downing GM. PPSv2 Q&A Manual, Instructions & Definitions. 2020.

Recognizing the last days

Earlier, nonspecific

- PPS ≤20%: bedbound, total care, minimal intake
- Dysphagia to liquids
- Reduced consciousness

Late, more specific

- Mandibular breathing
- Cheyne–Stokes breathing
- Pulseless radial artery
- Decreased urine output

Late signs are specific but insensitive. Their absence does not exclude imminent death.

Hui D et al. Clinical signs of impending death in cancer patients. The Oncologist. 2014;19:681–687.

A patient has established painful bone metastases but is comfortable at rest. Brief severe pain occurs only during planned wound care. No new fracture is suspected. What is the best initial opioid adjustment?

A Wait until wound care finishes before offering rescue analgesia.

B Rotate the background opioid without changing rescue timing.

C Time an appropriate rescue dose before the predictable trigger.

D Increase the background infusion to cover the brief peak.

Fallon M et al. Management of cancer pain in adult patients: ESMO Clinical Practice Guidelines. Ann Oncol. 2018;29(suppl 4):iv166–iv191.

MCQ 03 / 11

A patient dying with cancer loses the ability to swallow. Her established fentanyl patch controls background pain, and there is no toxicity. What is the best analgesic plan?

A Remove the patch and await recurrent pain before prescribing.

B Continue the patch and prescribe an appropriate nonoral rescue.

C Remove the patch and immediately replace its full dose parenterally.

D Increase the patch because oral rescue is no longer possible.

Fallon M et al. Management of cancer pain in adult patients: ESMO Clinical Practice Guidelines. Ann Oncol. 2018;29(suppl 4):iv166–iv191.

An established fentanyl patch

Rapid changes

A patch is too slow for rapid titration.
Fentanyl continues to absorb after patch removal.

Safety

Review fever, external heat and toxicity.
Heat can increase fentanyl absorption.

Fentanyl Transdermal System. US Prescribing Information, sections 2.5, 5.11–5.12 and 12.3. Varvel JR et al. Absorption characteristics of transdermally administered fentanyl. Anesthesiology. 1989;70:928–934.

MCQ 04 / 11

A patient needs a continuous subcutaneous opioid for end-of-life pain. eGFR is 8 mL/min and liver function is preserved. Which listed opioid has the most suitable renal pharmacokinetic profile?

A Subcutaneous diamorphine infusion

B Subcutaneous alfentanil infusion

C Subcutaneous oxycodone infusion

D Subcutaneous morphine infusion

Gonçalves JAF et al. Use of Alfentanil in Palliative Care. Pharmacy. 2020;8:240. Van Peer A et al. Alfentanil Kinetics in Renal Insufficiency. Eur J Clin Pharmacol. 1986;30:245–247.

Opioids in severe renal impairment

Higher accumulation risk

Morphine: M3G and M6G accumulate. M6G is active.
Hydromorphone: hydromorphone-3-glucuronide (H3G) may contribute to neurotoxicity.

Options in renal impairment

Fentanyl, methadone and buprenorphine.

Individualize the medication, dose and monitoring.

Nakatani T et al. Steady-State Pharmacokinetics of Intravenous Hydromorphone in Japanese Patients With Renal Impairment and Cancer Pain. J Palliat Med. 2023;26:768–775.

Side effects

Opioid neurotoxicity

Myoclonus, hallucinations or allodynia. Review dose and renal function.

Antipsychotics

Dystonia, akathisia and parkinsonism can resemble terminal agitation.

Serotonin syndrome

SSRIs with tramadol or methadone can cause toxicity.
Clonus, hyperreflexia, sweating or fever warrant urgent review.

Paramanandam G et al. Adverse effects in hospice patients with chronic kidney disease receiving hydromorphone. J Palliat Med. 2011;14:1029–1033. MHRA. Haloperidol: reminder of risks in elderly patients. 2021. FDA. Opioid pain medicines: serotonin syndrome safety communication. 2016.

MCQ 05 / 11

A dying patient has Cheyne–Stokes breathing but denies breathlessness when awake. There is no grimacing or increased effort. Her daughter requests morphine to regularize breathing. What is most appropriate?

A Apply oxygen to abolish the periodic breathing pattern.

B Explain the pattern and continue assessing for distress.

C Start midazolam to prevent distress during apneic pauses.

D Give morphine until the breathing pattern becomes regular.

National Cancer Institute. Last Days of Life (PDQ®), Health Professional Version.

MCQ 06 / 11

A patient needs an antisecretory drug and values conversation. Which listed agent has limited blood-brain barrier penetration and is least likely to cause central antimuscarinic effects?

A Amitriptyline hydrochloride

B Glycopyrronium bromide

C Atropine sulfate

D Hyoscine hydrobromide

ADVANZ Pharma. Glycopyrronium Bromide 200 micrograms/ml Solution for Injection. Summary of Product Characteristics, section 5.1.

Noisy secretions at the bedside

Comfort and explanation

Assess the patient. Noise alone does not establish suffering.

Simple measures

Reposition gently and review unnecessary fluids or feeds. Avoid deep suction.

NICE. Care of dying adults in the last days of life. Guideline NG31, noisy respiratory secretions. 2015.

MCQ 07 / 11

A dying woman becomes restless on an unchanged opioid dose. She has not passed stool for four days or voided for eight hours and has no respiratory distress. What is the best immediate approach?

A Increase the background opioid before examining possible contributors.

B Schedule antipsychotic treatment before assessing bladder and bowel.

C Await a broad laboratory panel before changing symptom treatment.

D Assess pain, bladder, bowel and medicines while relieving distress.

NICE. Care of dying adults in the last days of life. Guideline NG31, agitation and delirium. 2015.

Restlessness in a dying patient

Pain and bladder

Check pain, urinary retention and catheter problems.

Bowel

Check for impaction, painful distension, rectal discomfort or overflow diarrhea.

Medicines and other causes

Consider adverse effects, opioid toxicity, withdrawal, hypoglycemia or infection.

NICE. Care of dying adults in the last days of life. Guideline NG31, agitation and delirium. 2015.

MCQ 08 / 11

An inoperable malignant bowel obstruction produces persistent large-volume vomiting despite antiemetic treatment. Octreotide is added after specialist review. Which mechanism explains its intended benefit?

A Blocking dopamine receptors centrally.

B Blocking serotonin 5-HT3 receptors.

C Reducing gastrointestinal and pancreatic secretions.

D Stimulating propulsive gastrointestinal motility.

Madariaga A et al. MASCC multidisciplinary evidence-based recommendations for the management of malignant bowel obstruction in advanced cancer. Support Care Cancer. 2022;30:4711–4728.

Seizures are controlled with oral levetiracetam 1,000 mg twice daily. The patient now cannot swallow, has days to live and retains IV access. Creatinine clearance is 22 mL/min. Which maintenance plan is best?

A Stop maintenance treatment and rely on rescue if seizures recur.

B Give levetiracetam 1,000 mg IV twice daily without renal adjustment.

C Give the oral levetiracetam solution sublingually at the previous dose.

D Replace oral levetiracetam intravenously, adjusting for current renal function.

UCB. KEPPRA (levetiracetam) injection, for intravenous use. US Prescribing Information, sections 2.4–2.7. Revised 2024.

Seizures when swallowing is lost

Established seizures

Preserve effective antiseizure treatment when its benefit remains relevant.

Levetiracetam

IV replacement is feasible. Recalculate the dose for current renal function.

Rescue

Write a separate plan for an acute seizure. Maintenance treatment is not rescue.

UCB. KEPPRA (levetiracetam) injection, for intravenous use. US Prescribing Information, sections 2.4–2.7. Revised 2024.

Deprescribing in the last days

Current benefit

Keep medicines that relieve symptoms or prevent a near-term crisis.

Remote benefit

Review statins, vitamins and treatment aimed only at long-term prevention.

Withdrawal

Check corticosteroids, opioids, benzodiazepines, clonidine and beta blockers.

Di Palo KE et al. Palliative Pharmacotherapy for Cardiovascular Disease: A Scientific Statement From the American Heart Association. Circ Cardiovasc Qual Outcomes. 2024;17:e000131.

A fasting patient taking empagliflozin develops nausea, abdominal pain and deep rapid breathing. Glucose is 9.8 mmol/L. Which investigation best evaluates the suspected medication-related emergency?

A Serum cortisol and thyroid function.

B HbA1c and fasting lipid profile.

C Blood ketones and acid-base assessment. **Euglycemic DKA due to SGLT2 inhibitors**

D Urine culture and inflammatory markers.

MHRA. SGLT2 inhibitors: monitor ketones in blood during treatment interruption for surgical procedures or acute serious medical illness. Drug Safety Update. 2020.

ICD shocks at the end of life

Shared plan

Discuss unwanted painful shocks with the patient, family and device team. Shock therapy can stop while pacing and CRT continue.

Acute shocks

With most ICDs, a magnet temporarily stops shocks while applied without changing pacing. Verify the device-specific response.

Longer-term plan

Arrange formal reprogramming with cardiology or electrophysiology. Specify shock deactivation and preserve useful pacing or CRT.

Lampert R et al. HRS Expert Consensus Statement on the Management of Cardiovascular Implantable Electronic Devices (CIEDs) in patients nearing end of life or requesting withdrawal of therapy. Heart Rhythm. 2010;7:1008–1026.

MCQ 11 / 11

An irreversibly dying patient with cancer has no appetite and unsafe swallowing. The family requests tube feeding to prevent aspiration and reverse weakness. Which explanation is most accurate?

A Artificial nutrition is unlikely to help and cannot eliminate aspiration.

B Parenteral nutrition reliably restores strength within several days.

C Tube feeding can prevent aspiration but cannot reverse weakness.

D Routine tube feeding has negligible burden in the final days.

Crawford GB et al. Care of the adult cancer patient at the end of life: ESMO Clinical Practice Guidelines. ESMO Open. 2021;6:100225.

Breathlessness at the bedside

OSCE CASE

A 67-year-old woman with metastatic lung cancer is in her last days. She is breathless and increasingly restless despite regular morphine and rescue doses. She remains able to describe her symptoms.

Nurse: “Nothing seems to be working. Should we sedate her?”

Hui D et al. Management of Dyspnea in Advanced Cancer: ASCO Guideline. J Clin Oncol. 2021;39:1389–1411.

OSCE QUESTION 1 / 7

You arrive at the bedside. What will you assess and treat now?

- Assess air hunger, pain, respiratory effort, hypoxemia and delirium.
- Check opioid doses, renal function and delivery. Consider neurotoxicity.
- Check retention and impaction. Relieve distress with positioning and airflow.
- Give oxygen if hypoxemic and optimize symptom treatment.

Hui D et al. Management of Dyspnea in Advanced Cancer: ASCO Guideline. J Clin Oncol. 2021;39:1389–1411.

Which investigations could change her care soon enough?

- Bedside POCUS or chest X-ray for an effusion, pulmonary edema or another actionable cause.
- Consider bronchospasm, infection, anemia and metabolic causes.
- Investigate PE only if treatment is feasible and consistent with her wishes.

Hui D et al. Management of Dyspnea in Advanced Cancer: ASCO Guideline. J Clin Oncol. 2021;39:1389–1411.

OSCE QUESTION 3 / 7

No actionable cause remains. She is still intolerably breathless. What makes this refractory?

- Her suffering remains intolerable despite appropriate treatment.
- No acceptable option can provide adequate relief in time without unacceptable burden.

Surges SM et al. Revised European Association for Palliative Care (EAPC) recommended framework on palliative sedation: an international Delphi study. Palliat Med. 2024;38:213–228.

OSCE QUESTION 4 / 7

Her wishes were discussed earlier. You revisit them with her and her family. How would you start palliative sedation?

- Discuss expectations with the patient, family and care team. Document informed consent.
- Use a titratable sedative, commonly midazolam. Individualize dose and route for prior exposure and patient factors.

Surges SM et al. Revised European Association for Palliative Care (EAPC) recommended framework on palliative sedation: an international Delphi study. Palliat Med. 2024;38:213–228.

The nurse asks whether to stop her opioid when sedation starts. What will you say?

- Continue opioids for the breathlessness or pain they were treating.
- Avoid abrupt discontinuation, especially after long-term use, to prevent withdrawal.

Surges SM et al. Revised European Association for Palliative Care (EAPC) recommended framework on palliative sedation: an international Delphi study. Palliat Med. 2024;38:213–228.

She is comfortable but opens her eyes. Her family asks for deeper sedation. How will you respond?

- Eye opening alone does not indicate suffering. Ask her about comfort when possible.
- Use the least reduction in awareness that reliably relieves suffering.
- Deepen sedation only for persistent distress.

Surges SM et al. Revised European Association for Palliative Care (EAPC) recommended framework on palliative sedation: an international Delphi study. Palliat Med. 2024;38:213–228.

OSCE QUESTION 7 / 7

Her family asks: “Does sedation mean stopping fluids, analgesia and mouth care?”

- No. Sedation does not automatically stop these treatments.
- Continue indicated analgesia, mouth care and other comfort care.
- Decide hydration separately, based on benefit, burden and her wishes.

Surges SM et al. Revised European Association for Palliative Care (EAPC) recommended framework on palliative sedation: an international Delphi study. Palliat Med. 2024;38:213–228.

Three exam takeaways

01 Recognize dying while continuing to assess treatable suffering.

02 Match each treatment to current comfort, benefit and burden.

03 Use the least sedation needed to relieve refractory suffering.

Questions & Reflections

Questions later? Leave a note with your email on the website, or message me on WhatsApp.

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