

# American Board of Family Medicine

## Knowledge Self-Assessment Questions: Palliative Care KSA

Note: The order in which these questions are listed is the order in which they will be presented the first time through the Knowledge Self-Assessment. On subsequent visits to the assessment, the questions will be presented in groups organized by competency (content area).

1. A 74-year-old female has been hospitalized three times in the past 6 months for exacerbations of heart failure with preserved ejection fraction. During rounds the family medicine resident on the team asks whether a hospice referral would be appropriate.

Which one of the following is true about hospice care for this patient?

- A) Hospice would focus on helping her live well
- B) She does not qualify for hospice because her ejection fraction is preserved
- C) Hospice is inappropriate for noncancer diagnoses
- D) Patients under hospice care die earlier because they lose the will to live

Connor SR, Pyenson B, Fitch K, et al: Comparing hospice and nonhospice patient survival among patients who die within a three-year window. *J Pain Symptom Manage* 2007;33(3):238-246.

NHPCO: *Facts and Figures*. National Hospice and Palliative Care Organization, 2018 (revised 7-2-2019).

Teno JM, Gozalo PL, Lee IC, et al: Does hospice improve quality of care for persons dying from dementia? *J Am Geriatr Soc* 2011;59(8):1531-1536.

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2. An 89-year-old female with advanced Alzheimer's dementia has resided in a skilled nursing facility for the past 5 years. She will eat if she is hand fed but has been hospitalized three times in the past 4 months for aspiration pneumonia. The family asks about tube feedings.

Which one of the following would be appropriate advice for this patient's family?

- A) The risk of aspiration is reduced with a feeding tube
- B) The quality of life for patients with advanced dementia is so low that a feeding tube is inappropriate

- C) Feeding tubes increase longevity in patients with advanced dementia
- D) Feeding tubes prevent pressure ulcers in patients with advanced dementia
- E) Careful hand feeding has been shown to be as effective as tube feeding

American Geriatrics Society Ethics Committee and Clinical Practice and Models of Care Committee: American Geriatrics Society feeding tubes in advanced dementia position statement. *J Am Geriatr Soc* 2014;62(8):1590-1593.  
Sampson EL, Candy B, Jones L: Enteral tube feeding for older people with advanced dementia. *Cochrane Database Syst Rev* 2009;(2):CD007209.

Lam RE, Lam PJ: Nutrition in dementia. *CMAJ* 2014;186(17):1319.

American Academy of Hospice and Palliative Medicine, American Geriatrics Society, Consumer Reports: Feeding tubes for people with Alzheimer's: When you need them—and when you don't. ABIM Foundation Choosing Wisely Campaign, 2013.

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3. A 51-year-old male with squamous cell cancer of the mouth is considering chemotherapy and radiation therapy. He has seen some information indicating that a feeding tube is sometimes used during this treatment and he asks you for information about this.

Which one of the following would be appropriate advice?

- A) A nasogastric feeding tube is recommended to minimize the need for surgery
- B) A percutaneous endoscopic gastrostomy (PEG) tube is a better option than a nasogastric tube
- C) Total parenteral nutrition would be the preferred route to provide nutrition for this patient
- D) A feeding tube has not been shown to improve symptoms or longevity in patients with head and neck cancer

Lewis SL, Brody R, Touger-Decker R, et al: Feeding tube use in patients with head and neck cancer. *Head Neck* 2014;36(12):1789-1795.

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4. Although prognostication is often difficult, it promotes thoughtful decision-making, allows for planning, and is often appreciated by patients and families. Which one of the following is true about determining a prognosis?

- A) A prognosis should be given as a range of time

- B) Physicians tend to underestimate longevity
- C) The accuracy of a prognosis improves the longer a physician has known a patient
- D) Multidisciplinary teams are less accurate than individual physicians when determining a prognosis

Gwilliam B, Keeley V, Todd C, et al: Prognosticating in patients with advanced cancer--observational study comparing the accuracy of clinicians' and patients' estimates of survival. *Ann Oncol* 2013;24(2):482-488.

Christakis NA, Lamont EB: Extent and determinants of error in doctors' prognoses in terminally ill patients: Prospective cohort study. *BMJ* 2000;320(7233):469-472.

Glare P, Virik K, Jones M, et al: A systematic review of physicians' survival predictions in terminally ill cancer patients. *BMJ* 2003;327(7408):195-198.

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5. A 79-year-old female with Alzheimer's dementia responds to familiar faces and can speak in short sentences. Until recently she has been able to feed herself but she now requires help with eating and other activities of daily living. She is occasionally incontinent of urine and has been hospitalized twice in 3 months for a urinary tract infection (UTI) with fever. Since her last hospitalization for a UTI she has become unable to walk and requires a one-person assist to get into a wheelchair. A home health nurse sees her three times a week to manage pressure sores.

Which one of the following is true regarding this patient's qualification for Medicare hospice?

- A) She does qualify because the natural course of advanced dementia usually leads to death in less than 6 months
- B) She does qualify because the comorbidity of frequent hospitalization suggests a prognosis of less than 6 months
- C) She does not qualify because she can speak more than six words
- D) She does not qualify because she can respond to familiar faces

Medicare benefit policy manual: Chapter 9: Coverage of hospice services under hospital insurance. Centers for Medicare & Medicaid Services, revised 2018.

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6. A 65-year-old male with metastatic pancreatic cancer is admitted to the hospital

for management of a pain crisis. While he is hospitalized his opioid medications are titrated to control his pain. On hospital day 10, after a goals-of-care conversation with his hospital team, he decides to change to comfort-focused treatment.

Which one of the following would be most appropriate for this patient?

- A) Docusate sodium (Colace), 1 tablet orally daily as needed for constipation
- B) Senna, 2 tablets orally at bedtime daily for constipation
- C) Psyllium (Metamucil), 1 capful daily with 8 ounces of water for constipation
- D) Diazepam (Valium), 5 mg orally every 1 hour as needed to control agitation

Bickel K, Arnold R: Fast facts and concepts #109: Death rattle and oral secretions. Palliative Care Network of Wisconsin, 2015.

Irwin SA, Pirrello RD, Hirst JM, et al: Clarifying delirium management: Practical, evidenced-based, expert recommendations for clinical practice. *J Palliat Med* 2013;16(4):423-435.

Klaschik E, Nauck F, Ostgathe C: Constipation-modern laxative therapy. *Support Care Cancer* 2003;11(11):679-685.

Quijada E, Billings JA, Bukowy EA: Fast facts and concepts #60: Pharmacologic management of delirium: Update on newer agents. Palliative Care Network of Wisconsin, 2019.

Candy B, Jones L, Larkin PJ, et al: Laxatives for the management of constipation in people receiving palliative care. *Cochrane Database Syst Rev* 2015;2015(5):CD003448.

Tarumi Y, Wilson MP, Szafran O, Spooner GR: Randomized, double-blind, placebo-controlled trial of oral docusate in the management of constipation in hospice patients. *J Pain Symptom Manage* 2013;45(1):2-13.

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7. A 72-year-old female has recently been diagnosed with advanced idiopathic interstitial pulmonary fibrosis. You explain the diagnosis and prognosis and advise her on breathing exercises.

Which one of the following would be most likely to decrease her sense of breathlessness and improve her exertional tolerance without affecting mortality?

- A) As-needed morphine
- B) Scheduled morphine
- C) As-needed lorazepam
- D) Scheduled lorazepam

Gallagher R: The use of opioids for dyspnea in advanced disease. *CMAJ* 2011;183(10):1170.

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8. A 52-year-old female Hmong patient is hospitalized with acute gastrointestinal bleeding, presumably associated with her known colon cancer. Her husband explains that people of their culture believe that spirits are responsible for illness. The patient believes that she brought on her illness by traveling close to a large body of water where the spirits live.

Which one of the following would be an appropriate response?

- A) The bleeding is from your cancer
- B) The idea of spirits causing your bleeding is unfounded and you should not feel guilty
- C) I'm going to ask my partner from behavioral health to see you
- D) What else should I know about your culture?

Kripalani S, Bussey-Jones J, Katz MG, Genao I: A prescription for cultural competence in medical education. *J Gen Intern Med* 2006;21(10):1116-1120.

Horvat L, Horey D, Romios P, Kis-Rigo J: Cultural competence education for health professionals. *Cochrane Database Syst Rev* 2014;(5):CD009405.

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9. The table below displays the conversion factors for morphine, hydrocodone, hydromorphone, and oxycodone. Based on this chart, which one of the following statements is accurate?

	<b>Equianalgesic Parenteral Dose</b>	<b>Equianalgesic Oral Dose</b>
Morphine	10 mg	30 mg
Hydrocodone	NA	30 mg
Hydromorphone	1.5 mg	7.5 mg
Oxycodone	NA	20 mg

- A) A 2-mg dose of oral hydromorphone is roughly equivalent to 5 mg of oral oxycodone
- B) A 5-mg dose of oral oxycodone is roughly equivalent to 15 mg of oral morphine
- C) A 45-mg dose of oral hydrocodone is roughly equivalent to 4 mg of oral

hydromorphone

- D) A 2-mg dose of intravenous morphine is roughly equivalent to 0.1 mg of intravenous hydromorphone

Kishner S: Opioid equivalents and conversions. *Medscape* website, 2018.

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10. A 57-year-old female with stage IV ovarian cancer presents to the emergency department with a new onset of shortness of breath. She is unable to lie down or complete sentences. A chest radiograph reveals a new large, likely malignant, pleural effusion.

Which one of the following is true about this condition?

- A) Repeated thoracentesis is contraindicated because it increases the mortality risk
- B) Tunneled pleural catheters are expensive and ineffective for managing this problem
- C) Chest tube drainage alone prevents re-accumulation of fluid at 30 days 60%–80% of the time
- D) Systemic chemotherapy or hormonal therapy is the most effective treatment

Belani CP, Pajean TS, Bennett CL: Treating malignant pleural effusions cost consciously. *Chest* 1998;113(1 Suppl):78S-85S.

Puri V, Pyrdeck TL, Crabtree TD, et al: Treatment of malignant pleural effusion: A cost-effectiveness analysis. *Ann Thorac Surg* 2012;94(2):374-379.

Thai V, Damant R: Fast facts and concepts #157: Malignant pleural effusions: Interventional management. Palliative Care Network of Wisconsin, 2015.

Tremblay A, Michaud G: Single-center experience with 250 tunneled pleural catheter insertions for malignant pleural effusion. *Chest* 2006;129(2):362-368.

Aydin Y, Turkyilmaz A, Intepe YS, Eroglu A: Malignant pleural effusions: Appropriate treatment approaches. *Eurasian J Med* 2009;41(3):186-193.

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11. A 63-year-old male with advanced lung cancer is admitted to a palliative care unit for pain management. Shortly after admission he develops agitated delirium. He has no contraindications to the use of sedatives or antipsychotics. His behavior is distressing to himself and his family. Nonpharmacologic treatment has not been

effective.

In addition to adjusting his pain medication, the most appropriate treatment for this patient entering terminal delirium would be

- A) oral hydroxyzine (Vistaril)
- B) oral lorazepam (Ativan)
- C) oral haloperidol and diazepam (Valium)
- D) oral haloperidol and lorazepam
- E) intravenous morphine

Fairman N, Hirst JM, Irwin, SA: *Clinical Manual of Palliative Care Psychiatry*. American Psychiatric Publishing, 2016, pp 89-122.

Hui D, Frisbee-Hume S, Wilson A, et al: Effect of lorazepam with haloperidol vs haloperidol alone on agitated delirium in patients with advanced cancer receiving palliative care: A randomized clinical trial. *JAMA* 2017;318(11):1047-1056.

Yohanna D, Cifu AS: Antipsychotics to treat agitation or psychosis in patients with dementia. *JAMA* 2017;318(11):1057-1058.

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12. A 55-year-old female with metastatic breast cancer presents with her husband, who reports that for the past 4 months she has had frequent episodes of crying, a feeling of hopelessness, and a lack of interest in activities that used to bring her joy. She is on palliative chemotherapy and her life expectancy is greater than 3 months.

Which one of the following would be most appropriate at this point?

- A) No further evaluation because her symptoms are a normal response to her terminal cancer diagnosis
- B) Administer a Patient Health Questionnaire-9 (PHQ-9) and a numerical rating scale for pain
- C) Consider quetiapine (Seroquel) if insomnia is also present
- D) Offer hospitalization in a behavioral health unit

Mitchell AJ, Chan M, Bhatti H, et al: Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: A meta-analysis of 94 interview-based studies. *Lancet Oncol* 2011;12(2):160-174.

Fisch M: Treatment of depression in cancer. *J Natl Cancer Inst Monogr* 2004;(32):105-111.

Block SD: Assessing and managing depression in the terminally ill patient. ACP-ASIM End-of-Life Care Consensus Panel. American College of Physicians—American Society of Internal Medicine. *Ann Intern Med* 2000;132(3):209–218.

Rosenberg L, deLima Thomas J: Pharmacologic management of depression in advanced illness #309. *J Palliat Med* 2016;19(7):783-784.

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13. A patient with malignant melanoma and a 2-month history of mid-thoracic back pain presents to the emergency department after a fall. She reports significant progressive weakness over the past 3 days and is now unable to climb stairs or to rise off the toilet seat unassisted.

The most important initial step for addressing this patient's weakness would be

- A) plain radiographs of the thoracic spine
- B) urgent MRI of the thoracic spine
- C) urgent MRI of the cervical, thoracic, and lumbar spine
- D) urgent CT myelography

Mehta R, Arnold R: Fast facts and concepts #237: Evaluation of spinal cord compression. Palliative Care Network of Wisconsin, 2015.

Mehta R, Arnold R: Fast facts and concepts #238: Management of spinal cord compression. Palliative Care Network of Wisconsin, 2015.

White BD, Stirling AJ, Paterson E, et al: Diagnosis and management of patients at risk of or with metastatic spinal cord compression: Summary of NICE guidance. *BMJ* 2008;337:a2538.

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14. Which one of the following is true about a 53-year-old female with chronic alcohol abuse who is hospitalized frequently with encephalopathy?

- A) A medical team may determine whether she is competent to make her own health care decisions
- B) A judge may determine whether she is competent to make her own health care decisions
- C) A social worker may determine whether she is capable of making her own health care decisions
- D) Her health care proxy may automatically make financial decisions for her when she is encephalopathic

Leo RJ: Competency and the capacity to make treatment decisions: A primer for primary care physicians. *Prim Care Companion J Clin Psychiatry* 1999;1(5):131-141.

Palmer BW, Harmell AL: Assessment of healthcare decision-making capacity. *Arch Clin Neuropsychol* 2016;31(6):530-540.

Siegel AM, Barnwell AS, Sisti DA: Assessing decision-making capacity: A primer for the development of hospital practice guidelines. *HEC Forum* 2014;26(2):159-168.

Lai JM, Karlawish J: Assessing the capacity to make everyday decisions: A guide for clinicians and an agenda for future research. *Am J Geriatr Psychiatry* 2007;15(2):101-111.

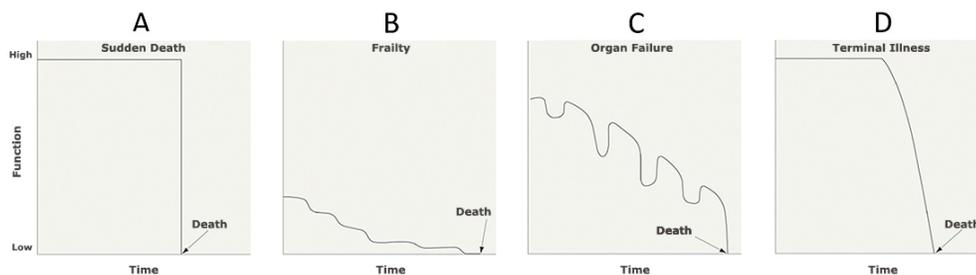
Boettger S, Bergman M, Jenewein J, Boettger S: Assessment of decisional capacity: Prevalence of medical illness and psychiatric comorbidities. *Palliat Support Care* 2015;13(5):1275-1281.

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15. A 74-year-old male is hospitalized with heart failure and an ejection fraction of 14%. He has shortness of breath at rest despite maximal medical therapy. You include the drawing of an illness trajectory as part of your palliative care discussion with the patient and his family.

Which one of the illness trajectories shown below would be most likely for this patient?



- A) Sudden death
- B) Frailty
- C) Organ failure
- D) Cancer/terminal illness

Lunney JR, Lynn J, Foley DJ, et al: Patterns of functional decline at the end of life. *JAMA* 2003;289(18):2387-2392.

Lunney JR, Lynn J, Hogan C: Profiles of older Medicare decedents. *J Am Geriatr Soc* 2002;50(6):1108-1112.

Murray SA, Kendall M, Boyd K, Sheikh A: Illness trajectories and palliative care. *BMJ* 2005;330(7498):1007-1011.

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16. A 59-year-old patient with oxygen- and corticosteroid-dependent COPD is admitted for severe respiratory distress. The pulmonologist recommends

intubation for mechanical ventilation and the patient's family asks for your opinion.

Which one of the following would be appropriate advice?

- A) If a ventilator is started it is unlikely to be needed long term
- B) A tracheostomy will typically be recommended only if intubation is required for longer than 4 weeks
- C) If the family agrees to short-term intubation, a date should be set for reevaluating the situation
- D) Withdrawal of mechanical respiratory support in a ventilator-dependent patient would be physician-assisted suicide
- E) Weaning of ventilator support causes more distress than abrupt withdrawal

Edmonds KP, Ajayi TA, Cain J, et al: Establishing goals of care at any stage of illness: The PERSON mnemonic. *J Palliat Med* 2014;17(10):1087.

*Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease (2020 Report)*. Global Initiative for Chronic Obstructive Lung Disease, 2020.

Gerstel E, Engelberg RA, Koepsell T, Curtis JR: Duration of withdrawal of life support in the intensive care unit and association with family satisfaction. *Am J Respir Crit Care Med* 2008;178(8):798-804.

Downar J, Delaney JW, Hawryluck L, Kenny L: Guidelines for the withdrawal of life-sustaining measures. *Intensive Care Med* 2016;42(6):1003-1017.

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17. A 68-year-old male is hospitalized with multiple morbidities, including end-stage heart, lung, and renal failure. His condition has been deteriorating since he was admitted, despite optimal aggressive treatment. Family members feel there is an impasse between the primary care physician who suggests palliative treatment and the consulting specialists who encourage aggressive interventions. They request input from the ethics committee but the involved physicians resist.

Which one of the following is true in this situation?

- A) A family member may not request an ethics consult
- B) An ethics consult is more likely to help if it is obtained early in the hospitalization
- C) Judges are barred from considering the opinions of the ethics committee in deciding court cases

D) The fact that an ethics investigation is conducted reflects poorly on the involved physicians

McLean SA: What and who are clinical ethics committees for? *J Med Ethic* 2007;33(9):497-500.

Statement on withholding and withdrawing nonbeneficial medical interventions. American Academy of Hospice and Palliative Medicine, 2011.

Hamric AB, Wocial LD: Institutional ethics resources: Creating moral spaces. *Hastings Cent Rep* 2016;46(Suppl 1):S22-S27.

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18. Many conversion charts suggest that a 12 µg/hour fentanyl transdermal patch (Duragesic) is roughly equivalent to 30 mg of morphine in 24 hours. Which one of the following would be the most appropriate fentanyl starting dose for a person taking morphine sulfate (MS Contin), 30 mg every 8 hours, and immediate-release morphine, 7.5 mg two times daily?

- A) Half of a 12 µg/hour patch every 72 hours
- B) One 12 µg/hour patch every 72 hours
- C) One 25 µg/hour patch every 72 hours
- D) One 37.5 µg/hour patch every 72 hours
- E) One 50 µg/hour patch every 72 hours

Reddy A, Tayjasanant S, Haider A, et al: The opioid rotation ratio of strong opioids to transdermal fentanyl in cancer patients. *Cancer* 2016;122(1):149-156.

Kishner S: Opioid equivalents and conversions. *Medscape* website, 2018.

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19. An 86-year-old female with a history of COPD and long-term tobacco use is treated for recurrent pneumonia, which fails to improve despite multiple courses of antibiotics. CT of the chest reveals multiple spiculated lesions throughout the lungs, as well as partially visualized lesions in the dome of the right side of the liver suspicious for metastatic cancer. She decides not to proceed with aggressive treatment and requests your help in filling out her advance directive, which includes a discussion of CPR.

Which one of the following would be accurate advice when counseling this patient?

- A) Television shows depicting CPR have helped to promote widespread public understanding of the procedure
- B) In the United States about 45% of all patients who receive CPR leave the hospital alive
- C) In the United States about 20% of frail elderly who receive CPR leave the hospital alive
- D) In the United States <1% of patients with advanced chronic disease who receive CPR leave the hospital alive

Ebell MH, Becker LA, Barry HC, Hagen M: Survival after in-hospital cardiopulmonary resuscitation. A meta-analysis. *J Gen Intern Med* 1998;13(12):805-816.

Ehlenbach WJ, Barnato AE, Curtis JR, et al: Epidemiologic study of in-hospital cardiopulmonary resuscitation in the elderly. *N Engl J Med* 2009;361(1):22-31.

Peberdy MA, Kaye W, Ornato JP, et al: Cardiopulmonary resuscitation of adults in the hospital: A report of 14720 cardiac arrests from the National Registry of Cardiopulmonary Resuscitation. *Resuscitation* 2003;58(3):297-308.

Diem SJ, Lantos JD, Tulskey JA: Cardiopulmonary resuscitation on television: Miracles and misinformation. *N Engl J Med* 1996;334(24):1578-1582.

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20. A 43-year-old male is treated for squamous cell carcinoma of the throat using chemotherapy and radiation to his neck. Several days after radiation treatment is started he begins to have pain with swallowing and develops sensitivity and blistering of his oral cavity.

Which one of the following is true regarding this problem?

- A) A thorough dental examination is recommended before neck radiation
- B) All chemotherapeutic agents are associated with the same risk of mucositis
- C) Prophylactic antifungal mouthwash should be used to decrease the risk of mucositis
- D) Combination topical agents should not be used for pain relief of mucositis

Henson CF, Arnold R: Fast facts and concepts #121: Oral mucositis: Diagnosis and assessment. Palliative Care Network of Wisconsin, 2015.

Henson CF, Arnold R: Fast facts and concepts #130: Oral mucositis: Prevention and treatment. Palliative Care Network of Wisconsin, 2015.

Lalla RV, Bowen J, Barasch A, et al: MASCC/ISOO clinical practice guidelines for the management of mucositis secondary to cancer therapy. *Cancer* 2014;120(10):1453-1461.

Maria OM, Eliopoulos N, Muanza T: Radiation-induced oral mucositis. *Front Oncol* 2017;7:89.

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21. A 45-year-old female with diffuse but treatable lymphoma asks you for a referral to a palliative care specialist. You advise her that
- A) a palliative care specialist is appropriate at this time and you will arrange it
  - B) a palliative care specialist is appropriate only after radiation therapy is completed
  - C) a palliative care specialist is not appropriate because her life expectancy may be greater than 6 months
  - D) a palliative care specialist is not appropriate because there are still treatment options available

Ferris FD, Bruera E, Cherny N, et al: Palliative cancer care a decade later: Accomplishments, the need, next steps—from the American Society of Clinical Oncology. *J Clin Oncol* 2009;27(18):3052-3058.

Ferrell BR, Temel JS, Temin S, et al: Integration of palliative care into standard oncology care: American Society of Clinical Oncology clinical practice guideline update. *J Clin Oncol* 2017;35(1):96-112.

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22. A 94-year-old female nursing home resident has ischemic cardiomyopathy, occasional angina, and an ejection fraction of 25%. She uses a wheelchair but is able to pivot transfer. She is seen in the emergency department with a new minimally displaced right hip fracture. The orthopedist has offered to perform surgery to stabilize the fracture and reduce pain.

Which one of the following would be appropriate advice?

- A) The 1-year mortality rate for nonoperative management is similar to that of surgery
- B) Early mobilization is appropriate if the hip is not repaired
- C) The risk of a heart attack automatically precludes hip surgery
- D) Surgery is the only option that will adequately address the pain

Jain R, Basinski A, and Kreder HJ. Nonoperative treatment of hip fractures. *Int Orthop* 2003;27(1):11-17.

Najran PS, Matharu GS, Porter KM: Non-operative treatment following hip fracture. *Injury* 2010;41(10):1094.

Sawka AM, Nixon M, Giangregorio L, et al: The use of hip protectors in long-term care facilities: A survey of nursing home staff. *J Am Med Dir Assoc* 2007;8(4):229-232.

Chlebeck JD, Birch CE, Blankstein M, et al: Nonoperative Geriatric hip fracture treatment is associated with

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23. For more than 2 months, a 52-year-old female with an unresectable glioblastoma multiforme has been using extended-release morphine sulfate (MS Contin), 60 mg orally every 8 hours, plus immediate-release morphine, 20 mg three times a day as needed for breakthrough pain. This regimen provided good control of her pain until the last 2 weeks. During that time she has had severe pain even with light touch, including moving the blankets over her. Her pain has continued to increase despite escalating doses of morphine.

Which one of the following is most likely to help her symptoms?

- A) Continuing to increase the morphine dosage until the pain is controlled
- B) Switching to continuous morphine subcutaneously at an equivalent dosage
- C) Adding diphenhydramine (Benadryl)
- D) Decreasing the morphine dosage and considering a change to a different opioid

McGraw D: Known unknowns: A review of opioid-induced hyperalgesia. *Ment Health Clin* 2015;5(3):138-143.

Yi P, Pryzbylkowski P: Opioid induced hyperalgesia. *Pain Med* 2015;16 (Suppl 1):S32-S36.

Youssef F, Pater A, Shehata M: Opioid-induced hyperalgesia. *J Pain Relief* 2015;4(3):1000183.

Lee M, Silverman SM, Hansen H, et al: A comprehensive review of opioid-induced hyperalgesia. *Pain Physician* 2011;14(2):145-161.

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24. A 76-year-old male is scheduled for follow-up of his hypertension, diabetes mellitus, and heart failure, after a recent hospitalization for exacerbation of the heart failure. Before seeing the patient the staff uses the "Surprise Question" approach to help them plan the discussion that will occur during the visit.

Which one of the following accurately represents the Surprise Question?

- A) Would you be surprised if this patient fully recovered?
- B) Would you be surprised if this patient opted for aggressive treatment?
- C) Would you be surprised if this patient died in the next year?
- D) Would the patient be surprised if informed of a limited prognosis?

Moroni M, Zocchi D, Bolognesi D, et al: The 'surprise' question in advanced cancer patients: A prospective study among general practitioners. *Palliat Med* 2014;28(7):959-964.

Nelson R: 'Surprise' question effective at predicting end of life. Medscape, 2015.

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25. A 75-year-old female with type 1 diabetes presents with significant nausea. A review of the patient's medication list does not show any medications likely to contribute to her nausea, and a CBC, comprehensive metabolic panel, abdominal radiograph, and upper endoscopy are all normal. She reports daily soft, large-volume bowel movements. Gastric emptying testing shows delayed gastric emptying.

The medication most likely to help her nausea is

- A) haloperidol
- B) metoclopramide (Reglan)
- C) pregabalin (Lyrica)
- D) promethazine
- E) senna

Hallenbeck J: Fast facts and concepts #5: The causes of nausea and vomiting (V.O.M.I.T.). Palliative Care Network of Wisconsin, 2015.

Parkman HP, Fass R, Foxx-Orenstein AE: Treatment of patients with diabetic gastroparesis. *Gastroenterol Hepatol (N Y)* 2010;6(6):1-16.

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26. A hospitalized patient with alcohol use disorder requests to be sent home. Which one of the following ethical decision-making concepts allows the physician to discharge the patient despite the knowledge that he is likely to relapse and begin drinking again?

- A) Autonomy
- B) Beneficence
- C) Nonmaleficence
- D) Justice

Gillon R: Defending the four principles approach as a good basis for good medical practice and therefore for good medical ethics. *J Med Ethics* 2015;41(1):111-116.

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27. A 35-year-old female has started scheduled hydromorphone (Dilaudid) tablets for pain associated with ovarian cancer. Which one of the following side effects of opioids will not diminish with time and will likely require active management?

- A) Constipation
- B) Drowsiness
- C) Foggy thinking
- D) Nausea

Kumar L, Barker C, Emmanuel A: Opioid-induced constipation: Pathophysiology, clinical consequences, and management. *Gastroenterol Res Pract* 2014;2014:141737.

Argoff CE, Brennan MJ, Camilleri M, et al: Consensus recommendations on initiating prescription therapies for opioid-induced constipation. *Pain Med* 2015;16(12):2324-2337.

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(Last Modified: May 2020)

(Last Reviewed: May 2020)

28. A hospice patient of yours has recently died and the family calls to ask if his fentanyl transdermal patches (Duragesic) can be returned for disposal. According to the Drug Enforcement Administration, which one of the following is most appropriate for disposing of unused opioids?

- A) Fold the patches, sticky side in, and put them in the garbage
- B) Mix the patches with cat litter or coffee grounds and put them in the garbage
- C) Put the patches in a drop box at a local police station, hospital, or pharmacy
- D) Bring the patches back to the primary care clinic for disposal

Drug Enforcement Administration, Department of Justice: Disposal of controlled substances. Final rule. *Fed Regist* 2014; 79(174):53519-53570.

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(Last Modified: May 2020)

(Last Reviewed: May 2020)

29. A 74-year-old female with advanced COPD has been hospitalized three times in

the past 6 months, each time requiring a period of ventilator support in the intensive-care unit (ICU). Which one of the following statements is true about ICU admissions for the frail elderly?

- A) Poor communication with family members often results in very elderly patients in the ICU receiving less aggressive care than desired
- B) Frequent use of ICU admissions for the frail elderly have been shown to decrease 6-month mortality
- C) Patients treated in a subacute-care unit rather than a traditional ICU have been shown to have a decrease in mortality
- D) Frailty has not been shown to be an independent risk factor for ICU mortality and 6-month mortality

Guidet B, Leblanc G, Simon T, et al: Effect of systematic intensive care unit triage on long-term mortality among critically ill elderly patients in France: A randomized clinical trial. *JAMA* 2017;318(15):1450-1459.

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Le Maguet P, Roquilly A, Lasocki S, et al: Prevalence and impact of frailty on mortality in elderly ICU patients: A prospective, multicenter, observational study. *Intensive Care Med* 2014;40(5):674-682.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

30. A 52-year-old female with metastatic, end-stage ovarian cancer is admitted to the hospital with nausea and bilious vomiting. Air-fluid levels are seen on abdominal radiographs and CT shows a complete bowel obstruction. The patient has a previous history of bowel obstruction but declined surgery.

Which one of the following would be most appropriate at this point?

- A) A nasogastric tube to relieve the pressure
- B) Octreotide (Sandostatin) subcutaneously
- C) Fentanyl (Duragesic), one 25 µg/hour transdermal patch every 72 hr
- D) A PET scan

Mercadante S, Porzio G: Octreotide for malignant bowel obstruction: Twenty years after. *Crit Rev Oncol Hematol* 2012;83(3):388-392.

Obita GP, Boland EG, Currow DC, et al: Somatostatin analogues compared with placebo and other pharmacologic agents in the management of symptoms of inoperable malignant bowel obstruction: A systematic review. *J Pain*

(Last Modified: May 2020)

(Last Reviewed: May 2020)

31. A hospice patient tells you that he wants full-code status. Which one of the following would be most appropriate for initiating counseling in this situation?

- A) Inform him that full-code status is not permitted for hospice patients
- B) Describe the potential risks of CPR, such as broken ribs
- C) Ask him what he knows about the components of full resuscitation
- D) Ask to meet with his health care proxy

Ankuda CK, Fonger E, O'Neil T: Electing full code in hospice: Patient characteristics and live discharge rates. *J Palliat Med* 2018;21(3):297-301.

Medicare benefit policy manual: Chapter 9: Coverage of hospice services under hospital insurance. Centers for Medicare & Medicaid Services, revised 2018.

Disclose serious news. VitalTalk website.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

32. You see a 68-year-old male whose metastatic prostate cancer was unsuccessfully treated with hormonal therapy. He presents with severe suprapubic pain and is found to have a metastatic lesion in his symphysis pubis. Opioid pain management helps but has not controlled his pain and has caused heavy sedation and confusion. He lives at home with minimal assistance.

The most appropriate first-line treatment option would be

- A) an increase in the oral opioid dosage
- B) daily oral NSAIDs
- C) intrathecal opioids
- D) anesthetic injections
- E) palliative radiation

Yamaguchi S, Ohguri T, Matsuki Y, et al: Palliative radiotherapy in patients with a poor performance status: The palliative effect is correlated with prolongation of the survival time. *Radiat Oncol* 2013;8:166.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

33. Which one of the following has been shown to prevent patients with late-stage chronic illnesses from receiving unwanted and often futile interventions?
- A) Having only a treatment-limiting advance directive
  - B) Having only an identified surrogate decision maker available
  - C) Having both a treatment-limiting advance directive and a surrogate decision maker
  - D) No method of communicating patient preferences

Hickman SE, Nelson CA, Moss AH, et al: The consistency between treatments provided to nursing facility residents and orders on the physician orders for life-sustaining treatment form. *J Am Geriatr Soc* 2011;59(11):2091-2099.

Kurella Tamura M, Liu S, Montez-Rath ME, et al: Persistent gaps in use of advance directives among nursing home residents receiving maintenance dialysis. *JAMA Intern Med* 2017;177(8):1204-1205.

Nasir SS, Muthiah M, Ryder K, et al: ICU deaths in patients with advanced cancer. *Am J Hosp Palliat Care* 2017;34(2):173-179.

Palan Lopez R, Mitchell SL, Givens JL: Preventing burdensome transitions of nursing home residents with advanced dementia: It's more than advance directives. *J Palliat Med* 2017;20(11):1205-1209.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

34. A 55-year-old male living in Colorado is diagnosed with colon cancer and found to have bone metastases. After receiving radiation treatment he is started on low-dose opioid medications. The medications help relieve his symptoms but make him tired. He asks about the use of medical marijuana.

Which one of the following statements is true regarding the use of medical marijuana?

- A) It has been decriminalized in most states but its legality varies on a city and county level
- B) It is closely regulated by the FDA
- C) There is robust data to support its utility as a first-line treatment of cancer-related pain, nausea, and anxiety
- D) It contains many active metabolites that are present in varying concentrations

Bridgeman MB, Abazia DT: Medicinal cannabis: History, pharmacology, and implications for the acute care setting. *P T* 2017;42(3):180-188.

Drug scheduling: Drug schedules. United States Drug Enforcement Administration.

VanDolah HJ, Bauer BA, Mauck KF: Clinicians' guide to cannabidiol and hemp oils. *Mayo Clin Proc*

(Last Modified: May 2020)

(Last Reviewed: May 2020)

35. A 61-year-old female with a history of breast cancer diagnosed 7 years ago has bone metastases and is brought to the emergency department (ED) with a sudden onset of excruciating left hip pain that caused her to fall while walking in her kitchen. She has no allergies, her vital signs are stable, and her pain in the ED remains severe.

The most appropriate initial step in the ED would be

- A) plain radiographs of the left hip
- B) CT of the left hip
- C) oral opioids
- D) intravenous corticosteroids
- E) intravenous opioids

Bandieri E, Romero M, Ripamonti CI, et al: Randomized trial of low-dose morphine versus weak opioids in moderate cancer pain. *J Clin Oncol* 2016;34(5):436-442.

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Portenoy RK: Treatment of cancer pain. *Lancet* 2011;377(9784):2236-2247.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

36. An 84-year-old female who is in a hospice facility with end-stage liver disease is breathing heavily with her mouth open. She is moaning and opens her eyes occasionally. She has not had anything to eat or drink in 2 days and her family asks about interventions for comfort.

Which one of the following would be appropriate to tell the family?

- A) Intravenous fluids improve patient comfort
- B) Cautiously titrated opioids do not hasten death
- C) Lorazepam (Ativan) should not be used routinely
- D) Supplemental oxygen should be used routinely

Portenoy RK, Sibirceva U, Smout R, et al: Opioid use and survival at the end of life: A survey of a hospice population. *J Pain Symptom Manage* 2006;32(6):532-540.

Sykes N, Thorns A: The use of opioids and sedatives at the end of life. *Lancet Oncol* 2003;4(5):312-388.  
Abernethy AP, McDonald CF, Frith PA, et al: Effect of palliative oxygen versus room air in relief of breathlessness in patients with refractory dyspnoea: A double-blind, randomised controlled trial. *Lancet* 2010;376(9743):784-793.  
Glare P, Miller J, Nikolova T, Tickoo R: Treating nausea and vomiting in palliative care: A review. *Clin Interv Aging* 2011;6:243-259.  
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(Last Modified: April 2020)

(Last Reviewed: April 2020)

37. A 65-year-old female with breast cancer widely metastatic to bone presents with confusion and decreased appetite. A laboratory workup reveals a corrected serum calcium level of 13.9 mg/dL (N 8.6–10.0).

Which one of the following statements is true in this situation?

- A) Approximately 10% of patients with these findings will die within 30 days
- B) Depending on goals of care, not treating her hypercalcemia is an option
- C) Furosemide (Lasix) is the drug of choice to treat this patient's hypercalcemia
- D) Bisphosphonate treatment may not be repeated for 30 days

DeGroot LJ, Jameson JL (eds): Malignancy-associated hypercalcemia. *Endocrinology*, ed 5. Saunders, 2005.  
Siddiqui F, Weissman DE: Fast facts and concepts #151: Hypercalcemia of malignancy. Palliative Care Network of Wisconsin, 2015.  
Zagzag J, Hu MI, Fisher SB, Perrier ND: Hypercalcemia and cancer: Differential diagnosis and treatment. *CA Cancer J Clin* 2018;68(5):377-386.  
Mirrakhimov AE: Hypercalcemia of malignancy: An update on pathogenesis and management. *N Am J Med Sci* 2015;7(11):483-493.  
Gastanaga VM, Schwartzberg LS, Jain RK, et al: Prevalence of hypercalcemia among cancer patients in the United States. *Cancer Med* 2016;5(8):2091-2100.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

38. A 72-year-old farmer with stage IV adenocarcinoma of the lung wants to assist his son on the farm and do what he can to participate in chores for his remaining days, but he does not have enough energy to do so. He is sleeping well and is not taking any opioids, benzodiazepines, or sleeping medications.

Which one of the following is likely to be the most effective palliative approach for this patient?

- A) Physical therapy to increase his endurance

- B) Methylphenidate to improve his energy
- C) Referral for behavioral health counseling
- D) Referral for a second oncologic opinion regarding additional chemotherapy

Kerr CW, Drake J, Milch RA, et al: Effects of methylphenidate on fatigue and depression: A randomized, double-blind, placebo-controlled trial. *J Pain Symptom Manage* 2012;43(1):68-77.

National Comprehensive Cancer Network (NCCN): Guidelines and clinical resources: Cancer-related fatigue. NCCN, accessed 2020.

(Last Modified: April 2020)

(Last Reviewed: April 2020)

39. An 83-year-old female is receiving palliative chemotherapy for stage IV colon cancer with bone metastases, which are managed with oral corticosteroids and opioid medications. Her daughter calls to discuss her mother's sleep disruption, which is affecting the family's ability to care for her. The problem seems to be due to frequent jerky movements that awaken the patient and then her caregivers. On examination she is awake and oriented but has occasional sudden jerking movements and twitches of all four extremities.

Which one of the following would be the most appropriate initial management of the sleep disruption?

- A) Review the patient's medications and eliminate as many as possible
- B) Increase the nightly dose of the patient's opioid by 10%–20%
- C) Prescribe an antiseizure medication such as levetiracetam (Keppra), 500 mg at bedtime
- D) Recommend melatonin at bedtime

Caviness JN: Treatment of myoclonus. *Neurotherapeutics* 2014;11(1):188-200.

Harada S, Tamura F, Ota S: The prevalence of neuropathic pain in terminally ill patients with cancer admitted to a palliative care unit: A prospective observational study. *Am J Hosp Palliat Care* 2016;33(6):594-598.

Smith EL, Whedon MB, Bookbinder M: Quality improvement of painful peripheral neuropathy. *Semin Oncol Nurs* 2002;18(1):36-43.

Watson JC, Dyck PJ: Peripheral neuropathy: A practical approach to diagnosis and symptom management. *Mayo Clin Proc* 2015;90(7):940-951.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

40. The Palliative Performance Scale (PPS) is a useful tool for clinicians, patients, and families. Which one of the following is true about the PPS?

- A) It has been validated in large, multicenter trials
- B) It measures function in one domain to assess patient status
- C) Changes in the PPS score are useful to determine patient recertification in hospice
- D) The PPS score has no correlation with longevity in outpatient cancer patients

Myers J, Kim A, Flanagan J, Selby D: Palliative performance scale and survival among outpatients with advanced cancer. *Support Care Cancer* 2015;23(4):913-918.

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Baik D, Russell D, Jordan L, et al: Using the Palliative Performance Scale to estimate survival for patients at the end of life: A systematic review of the literature. *J Palliat Med* 2018;21(11):1651-1661.

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(Last Modified: May 2020)

(Last Reviewed: May 2020)

41. Denial can help patients cope with overwhelming news but it can also hinder them from facing reality. A “Hope-Worry” statement is a tool that caregivers can use to approach topics that patients want to avoid discussing.

A “Hope-Worry” phrase would be appropriate when

- A) assessing what a patient understands about their illness
- B) a family member tells you that they think they should be doing more for the patient
- C) a patient asks that their health care team talk only about positive things
- D) a patient asks you to “hurry up this dying business”

Lakin JR, Jacobsen J: Softening our approach to discussing prognosis. *JAMA Intern Med* 2019;179(1):5-6.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

42. A 77-year-old female is found to have a new 3.5-cm pelvic mass. She has a long history of multiple cancer diagnoses. Ten years ago she was treated for uterine cancer and 3 years ago she was treated for colon cancer. Having gone through multiple surgical procedures and rounds of chemotherapy in the past, she adamantly declines further treatment. Her family history is positive for a brother who died at age 45 from colon cancer and her mother’s death at an early age

from endometrial cancer. The patient has three living children. You want to encourage her to have genetic testing.

You advise the patient that genetic testing may

- A) allow her to participate in a research trial
- B) provide important information for her family
- C) help her pay for her ongoing care
- D) influence the monitoring process

Daniels MS, Burzawa JK, Brandt AC, et al: A clinical perspective on genetic counseling and testing during end of life care for women with recurrent progressive ovarian cancer: Opportunities and challenges. *Fam Cancer* 2011;10(2):193-197.

Møller P, Seppälä T, Bernstein I, et al: Incidence of and survival after subsequent cancers in carriers of pathogenic MMR variants with previous cancer: A report from the prospective Lynch syndrome database. *Gut* 2017;66(9):1657-1664.

Pokharel HP, Hacker NF, Andrews L: Improving attendance to genetic counselling services for gynaecological oncology patients. *Gynecol Oncol Res Pract* 2018;5:2.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

43. A terminally ill patient is not eating or drinking. The patient's daughter is concerned about hydration and asks about methods to address this.

You consider recommending parenteral hydration using hypodermoclysis (HDC). Which one of the following statements about this method of hydration is correct?

- A) Parenteral hydration is required when palliative care patients are admitted to the hospital in order to justify their admission
- B) Nonmedical caregivers can be taught to safely administer HDC
- C) The same volume of fluid can be given by HDC as by intravenous administration
- D) The preferred hydration solution for HDC is D5W

Kamal AH, Bruera E: Fast facts and concepts #220: Hypodermoclysis. Palliative Care Network of Wisconsin website. O'Keeffe ST, Lavan JN: Subcutaneous fluids in elderly hospital patients with cognitive impairment. *Gerontology* 1996;42(1):36-39.

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(Last Modified: May 2020)

(Last Reviewed: May 2020)

44. You and a family medicine resident working with you are asked to tell a 75-year-old male that he has acute leukemia. To help the resident prepare for this discussion you review the elements of the SPIKES mnemonic, which stands for
- A) Situation, Perspective, Inhale, Knowledge, Educate, and Strategy/Suggestions
  - B) Smile, Perceive, Incline, Knowledge, Empathy, and Summary/Survey
  - C) Setting, Perception, Invitation, Knowledge, Emotions, and Strategy/Summary
  - D) Sense, Practice, Inspire, Knowledge, Educate, and Strategy/Suggestions
  - E) Suggest, Personalize, Inspiration, Knowledge, Emphasize, Survey/Smile

Baile WF, Buckman R, Lenzi R, et al: SPIKES-A six-step protocol for delivering bad news: Application to the patient with cancer. *Oncologist* 2000;5(4):302-311.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

45. A 54-year-old male, who had not sought medical care for 20 years, was recently diagnosed with advanced COPD. He has a 50-pack-year smoking history, and stopped smoking 4 years ago. He reports that he now has breathlessness even when walking around his home. He is found to have an FEV<sub>1</sub> <30% of predicted.

Which one of the following would be appropriate advice at this time?

- A) He is at risk for CO<sub>2</sub> retention with excessive supplemental oxygen
- B) His disease is too advanced for him to benefit from pulmonary rehabilitation
- C) His COPD at this point is untreatable
- D) He should avoid all opioids

Abernethy AP, Currow DC, Frith P, et al: Randomised, double blind, placebo controlled crossover trial of sustained release morphine for the management of refractory dyspnoea. *BMJ* 2003;327(7414):523-528.

Clemens KE, Quednau I, Klaschik E: Use of oxygen and opioids in the palliation of dyspnoea in hypoxic and non-hypoxic palliative care patients: A prospective study. *Support Care Cancer* 2009;17(4):367-377.

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Lange P, Marott JL, Vestbo J, et al: Prediction of the clinical course of chronic obstructive pulmonary disease, using the new GOLD classification: A study of the general population. *Am J Respir Crit Care Med* 2012;186(10):975-981.

(Last Modified: May 2020)

46. A 46-year-old university professor has recently been diagnosed with early amyotrophic lateral sclerosis (ALS). She and her partner ask about what to expect.

Which one of the following would be appropriate counseling?

- A) A feeding tube is one option when the patient is not able to consume sufficient nutrition
- B) A tracheostomy and ventilator may be offered but do not improve longevity
- C) Pain is rare but when it is present it is difficult to treat
- D) New medications such as riluzole (Rilutek) and edaravone (Radicava) improve symptoms but do not delay death

Eisen A: Amyotrophic lateral sclerosis: A review. *BCMj* 2002;44(7):362-366.

Jackson CE, McVey AL, Rudnicki S, et al: Symptom management and end-of-life care in amyotrophic lateral sclerosis. *Neurol Clin* 2015;33(4):889-908.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

47. A 48-year-old male with abdominal pain from pancreatic cancer is taking 8- to 12-hour extended-release morphine, 30 mg orally every 8 hours, plus immediate-release morphine, 10 mg orally every 4 hours as needed, taken an average of three times a day. The patient has difficulty swallowing pills.

Which one of the following would be most appropriate at this time?

- A) Continue the extended-release and immediate-release morphine, as they are working well together
- B) Continue the extended-release morphine for 72 hours after he starts the fentanyl transdermal patch (Duragesic)
- C) Start the fentanyl transdermal patch and give one final extended-release morphine dose at the same time
- D) Stop the extended-release morphine at night and begin the fentanyl transdermal patch the next morning

Wang DD, Ma TT, Zhu HD, Peng CB: Transdermal fentanyl for cancer pain: Trial sequential analysis of 3406 patients from 35 randomized controlled trials. *J Cancer Res Ther* 2018;14(Supplement):S14-S21.

Tassinari D, Sartori S, Tamburini E, et al: Transdermal fentanyl as a front-line approach to moderate-severe pain: A meta-analysis of randomized clinical trials. *J Palliat Care* 2009;25(3):172-180.

(Last Modified: June 2020)

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48. A 55-year-old female who has been your patient for 30 years was recently diagnosed with stage III breast cancer and presents to your office to discuss the treatment options offered at her oncology appointment. She is with her husband, who is sitting silently in the room while the patient discusses her fear and distrust of the options for care that she was offered. The patient says that she wants to seek only natural and alternative treatments for her cancer, including herbal and homeopathic treatments.

Which one of the following would be most appropriate at this visit?

- A) Ask the patient's husband to step out of the room during the discussion to enhance communication
- B) Tell the patient you agree with the treatment options provided and refer her back to the oncologist
- C) Tell the patient her decision is not evidence based and you will not support it
- D) Assist the patient in understanding and evaluating the risks and benefits of all the options
- E) Schedule a mental health assessment for your patient to determine her cognitive status

Brogan P, Hasson F, McIlpatrick S: Shared decision-making at the end of life: A focus group study exploring the perceptions and experiences of multi-disciplinary healthcare professionals working in the home setting. *Palliat Med* 2018;32(1):123-132.

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(Last Modified: May 2020)

(Last Reviewed: May 2020)

49. A 38-year-old female with stage IV pancreatic cancer is on a morphine intrathecal pump. Her pain is well managed but she has developed constant itching.

Which one of the following is true?

- A) Itching is less common with intrathecal morphine than with oral or parenteral morphine
- B) Itching from morphine is a sign of allergy and increases her risk for anaphylaxis
- C) Itching should prompt switching from morphine to a non-opioid pain medication
- D) Ondansetron (Zofran) has been shown to have some effectiveness for managing opioid-induced pruritus

Reich A, Szepletowski JC: Opioid-induced pruritus: An update. *Clin Exp Dermatol* 2010;35(1):2-6.

Swegle JM, Logemann C: Management of common opioid-induced adverse effects. *Am Fam Physician* 2006;74(8):1347-1354.

Jannuzzi RG: Nalbuphine for treatment of opioid-induced pruritus: A systematic review of literature. *Clin J Pain* 2016;32(1):87-93.

Ganesh A, Maxwell LG: Pathophysiology and management of opioid-induced pruritus. *Drugs* 2007;67(16):2323-2333.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

50. A 74-year-old hospice patient with prostate cancer and metastatic bone disease has been taking morphine, 5 mg orally every 4 hours as needed for pain, averaging six doses a day. He reports that his pain level is 5–7 on a scale of 10, which he feels is tolerable. However, he has moments of breakthrough pain and it is difficult for him to take the medicine so frequently.

Which one of the following would be most appropriate at this point?

- A) Continue the current dosage
- B) Increase the morphine to every 3 hours as needed
- C) Add oxycodone (Roxicodone), 5 mg orally every 4 hours as needed
- D) Add extended-release morphine sulfate (MS Contin), 15 mg orally every 12 hours
- E) Add fentanyl (Duragesic), 12 µg/hour via transdermal patch daily

McPherson ML: *Demystifying Opioid Conversion Calculations: A Guide for Effective Dosing*. American Society of Health-System Pharmacists, 2009.

Groninger H, Vijayan J: Pharmacologic management of pain at the end of life. *Am Fam Physician* 2014;90(1):26-32.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

51. A 58-year-old male with a history of prostate cancer with vertebral metastases presents to the emergency department with uncontrolled back pain that he rates as 10 on a scale of 10. His home pain regimen includes extended-release morphine sulfate (MS Contin), 30 mg every 8 hours. For breakthrough pain he takes immediate-release morphine sulfate, 15 mg every 4 hours as needed. He has taken six doses of short-acting medication in the last 24 hours, along with his scheduled pain medications. He is given a single dose of hydromorphone (Dilaudid), 1 mg intravenously, and reassessed. His pain score has decreased only to 9 out of 10 and he is still uncomfortable and writhing in pain.

Which one of the following would be the most appropriate next step in managing this patient's pain?

- A) Morphine, 15 mg orally, and reassessment in 30 minutes
- B) Acetaminophen, 1000 mg intravenously in a single dose
- C) Hydromorphone, 0.5 mg intravenously, and reassessment in 30 minutes
- D) Hydromorphone, 2.0 mg intravenously, and reassessment in 10 minutes

Bao YJ, Hou W, Kong XY, et al: Hydromorphone for cancer pain. *Cochrane Database Syst Rev* 2016;10(10):CD011108.

Treillet E, Laurent S, Hadjiat Y: Practical management of opioid rotation and equianalgesia. *J Pain Res* 2018;11:2587-2601.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

52. A 51-year-old female has long-standing poorly controlled diabetes mellitus, atrial fibrillation, and idiopathic cardiomyopathy with an ejection fraction of <15%. She has had multiple hospitalizations and has spent 4 of the last 6 months in a skilled nursing facility. She has developed severe cardiorenal syndrome and is not a transplant candidate. You have been asked to see her for a conversation about goals of care.

Your discussion should include all of the following EXCEPT

- A) her understanding of her illness
- B) her past health experiences
- C) her worries and hopes
- D) her plans for the future

E) why she keeps getting sick

Edmonds KP, Ajayi TA, Cain J, et al: Establishing goals of care at any stage of illness: The PERSON mnemonic. *J Palliat Med* 2014;17(10):1087.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

53. A 48-year-old male with a 10-year history of chronic kidney disease now has an estimated glomerular filtration rate less than 10 mL/min/1.73 m<sup>2</sup> and has been advised to start hemodialysis. Which one of the following would be appropriate advice regarding hemodialysis?

- A) If he starts dialysis he is likely to experience pruritus, hypotension, muscle cramping, and fatigue
- B) If he starts dialysis he will be able to continue taking his scheduled morphine
- C) If he does not start dialysis he will probably die within 1–2 months
- D) A trial of hemodialysis is low risk and will not affect his remaining renal function

Dean M: Opioids in renal failure and dialysis patients. *J Pain Symptom Manage* 2004;28(5):497–504.

Landry B: End-stage renal disease life expectancy. NephCure Kidney International website, 2019.

Arnold R, Verrico P, Davison S: Fast Facts and Concepts #161: Opioid use in renal failure. Palliative Care Network of Wisconsin, 2006.

Cohen LM, Moss AH, Weisbord SD, Germain MJ: Renal palliative care. *J Palliat Med* 2006;9(4):977–992.

Weisbord SD, Fried LF, Arnold RM, et al: Prevalence, severity, and importance of physical and emotional symptoms in chronic hemodialysis patients. *J Am Soc Nephrol* 2005;16(8):2487–2494.

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(Last Reviewed: May 2020)

54. Which one of the following is a side effect of high-dose, frequent marijuana use?

- A) Anorexia
- B) Excessive salivation
- C) Flashback
- D) Hypertension
- E) Vomiting

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(Last Modified: May 2020)

(Last Reviewed: May 2020)

55. A 10-year-old male with glioblastoma multiforme is brought to your local emergency department (ED) by ambulance after he had a prolonged seizure while at school. Despite the efforts of the ED team, the child dies. You are his primary physician and are called to tell the parents, who have been in the ED waiting area for over an hour. You begin by saying, "I have heavy news... Noah has died." The family becomes quite distraught.

Which one of the following would be the best thing to say at this point?

- A) God wanted another flower in his garden
- B) I understand what you are going through
- C) You are still young and you can have another child
- D) I'm so sorry to have to tell you this

Back AL, Bauer-Wu SM, Rushton CH, Halifax J: Compassionate silence in the patient-clinician encounter: A contemplative approach. *J Palliat Med* 2009;12(12):1113-1117.

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(Last Modified: May 2020)

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56. A 62-year-old female presents to your clinic with right hip pain and a radiograph is reported to show a "suspicious sclerotic lesion with a thin cortex at high risk for hip fracture." MRI of the hip shows extensive metastatic disease involving the entire femoral neck. A palpable, firm, 4-cm lesion is identified in her right breast. You are able to control her pain with medication.

The most urgent need at this time is for

- A) chemotherapy by the oncologist
- B) radiation to the lesion by the oncologist
- C) bronchoscopy by the pulmonologist
- D) hip stabilization by the orthopedic surgeon
- E) review with an ethics committee

Feng H, Wang J, Guo P, et al: CT-guided percutaneous femoroplasty for the treatment of proximal femoral metastases. *Pain Physician* 2016;19(5):E767-E773.

Haidukewych GJ: Metastatic disease around the hip: Maintaining quality of life. *J Bone Joint Surg Br* 2012;94(11 Suppl A):22-25.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

57. A 65-year-old male is experiencing complications from diabetes mellitus and hypertension. During a brief hospitalization for complications of his diabetes, you talk with the patient and his family about his changing health condition and his wishes for the future.

Which one of the following would be the most appropriate initial question to ask this patient?

- A) If your heart was beating but your brain was dead, would you want to be kept alive?
- B) Would you want to be placed on a ventilator if it is indicated?
- C) If your heart stops, would you like us to try to revive you with CPR?
- D) What do you know about your current health issues?

Edmonds KP, Ajayi TA, Cain J, et al: Establishing goals of care at any stage of illness: The PERSON mnemonic. *J Palliat Med* 2014;17(10):1087.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

58. A 70-year-old female who is in hospice care with multiple myeloma and diffuse bone pain has good relief most of the day from a fentanyl transdermal patch (Duragesic), 50 µg/hour every 72 hours, which is roughly 125 milligrams morphine equivalent (MME) daily. However, she has breakthrough pain most mornings while showering and dressing.

Which one of the following would be most appropriate at this time?

- A) Essential oils rubbed onto the lower back at night
- B) Acetaminophen, every 4 hours as needed for breakthrough pain
- C) Morphine, 2.5 mg orally every 4 hours as needed for breakthrough pain
- D) Morphine, 15 mg orally every 4 hours as needed for breakthrough pain

Reddy A, Tayjasanant S, Haider A, et al: The opioid rotation ratio of strong opioids to transdermal fentanyl in cancer patients. *Cancer* 2016;122(1):149-156.

Portenoy RK: Treatment of cancer pain. *Lancet* 2011;377(9784):2236-2247.

(Last Modified: June 2020)

(Last Reviewed: April 2020)

59. A determination is made that a 93-year-old female with severe osteoarthritis of her knees is not a surgical candidate due to advanced cerebrovascular and cardiac disease. She experiences severe knee pain when she tries to walk more than a few steps. Acetaminophen has not been effective and she takes nabumetone, 500 mg daily, with close monitoring of her renal function.

The most appropriate next step for her pain management would be

- A) elastic knee braces
- B) a progressive physical therapy walking program
- C) oral glucosamine/chondroitin
- D) low-dose tramadol (Ultram) therapy
- E) platelet-rich plasma injections of the knees

Fatimah N, Salim B, Raja EU, Nasim A: Predictors of response to intra-articular steroid injections in patients with osteoarthritis of the knee joint. *Clin Rheumatol* 2016;35(10):2541-2547.

Zis P, Daskalaki A, Bountouni I, et al: Depression and chronic pain in the elderly: Links and management challenges. *Clin Interv Aging* 2017;12:709-720.

Kolasinski SL, Neogi T, Hochberg MC, et al: 2019 American College of Rheumatology/Arthritis Foundation guideline for the management of osteoarthritis of the hand, hip, and knee. *Arthritis Care Res (Hoboken)* 2020;72(2):149-162.

(Last Modified: May 2020)

(Last Reviewed: May 2020)

60. A 67-year-old male with metastatic malignant melanoma has questions about hospice. Which one of the following statements about hospice is true?

- A) A person receiving hospice care is not permitted to return to the hospital
- B) If a patient is still alive after 6 months on hospice, that person must leave hospice care
- C) A multidisciplinary hospice team meets to discuss patient care every 2 weeks
- D) Hospice has been shown to increase the "widow effect"

Ahrens J: The positive impact of hospice care on the surviving spouse. *Home Healthc Nurse* 2005;23(1):53-55.

Centers for Medicare & Medicaid Services: Medicare hospice benefits. US Department of Health and Human

Services, revised 2019.  
How hospice works. Medicare.gov, 2020.

*(Last Modified: May 2020)*

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