MD Anderson Hospice and Palliative Medicine Physician Board Review 2023 Q&A Handbook

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Board Review Questions

Pain Management I

Suresh Reddy, MD, Larry Driver, MD, and Jaya S Amaram-Davila, MD

1. A 65-year-old patient with a history of non-small cell carcinoma of lung presented with mid-back pain due to thoracic metastatic disease. Patient started on radiation treatment. Patient complained of severe pain, was already on hydrocodone/acetaminophen and ibuprofen 400 mg three times a day. Pain persisted, so morphine started at 15mg q 2 hours p.r.n. pain. Later initiated on morphine extended release 30 mg q 12 hrs. Patient developed radicular pain at T-6 dermatome. Patient was started on gabapentin 300 mg TID. Patient became drowsy next day and was difficult to engage in conversation. The most likely cause of drowsiness is:

   A. Potentiation by opioids
   B. Age of the patient
   C. Drowsiness is transient and will resolve in a few days
   D. Radiation effect potentiated gabapentin

2. A 46-year-old female with ovarian cancer reporting true allergy to morphine given during previous admission. The alternative and safe opioid to give:

   A. Hydromorphone
   B. Oxycodone
   C. Fentanyl
   D. Codeine
   E. Hydrocodone

3. An 82-year-old patient with a history of non-small cell carcinoma of lung presented with chest wall pain due to thoracic metastatic disease. Patient started on radiation treatment. Patient complained of severe pain and was treated with Morphine, Hydromorphone, and oxymorphone, but poor pain control was a major issue. Patient was started methadone with better analgesia. Possible explanation for better pain control includes:

   A. Morphine, Hydromorphone, and oxymorphone are metabolized by glucuronidation in the liver
   B. Methadone is metabolized using the cytochrome 3A4 enzymes in the liver.
   C. Polymorphism of UGT2B7 may be one of the reason for poor pain control using Morphine, Hydromorphone, and oxymorphone.
   D. B and C are incorrect
   E. A, B, and C are correct.

4. A 75-year-old patient developed herpes zoster on the right forehead 4 weeks ago. Pain is severe, controlled mildly by a combination of Fentanyl patch 25 mcg/hr and gabapentin 100 mg tid. The following procedure may be appropriate for this patient:

   A. Trigeminal nerve block
   B. Facial nerve block
   C. Stellate ganglion block
   D. Gasserian ganglion block

5. A 46-year-old female has ovarian carcinoma with deep pelvic pain in the midline. She is on oxycontin 300 mg po q 8 hrs and 30-60 mg oxycodone q 2 hrs prn. She is severely constipated on an ongoing basis despite aggressive laxative regime. She is also mildly drowsy, helped somewhat by Methylphenidate. The following is the appropriate block:

   A. Celiac plexus block
   B. Hypogastric plexus block
   C. Ganglion Impar block
   D. Pudendal nerve block
   E. Stellate Ganglion Block

6. A 65-year-old female with history of metastatic colon CA, with mets to lung, liver, and right adrenal gland, presents with severe abdominal pain with right back radiation. She is vomiting for the last 5 days, dehydrated. AXR revealed stool in all four quadrants. Patient admitted and was treated for dehydration and constipation. Pain persisted and patient experiencing sedation and myoclonus form PCA Hydromorphone. The best one-time block for this patient is:

   A. Intrathecal morphine
   B. Lumbar sympathetic block
   C. Splanchnic Block
   D. Hypogastric plexus block
   E. Psoas compartment block

7. A 36-year-old female presents to pain clinic with chronic neck pain of 2 years duration. NSAIDs, massage, and stretching helped her from time to time, by pain relief is temporary. O/E there are a number if painful sites in the trapezius muscle right more than left. The procedure likely to help include:

   A. Epidural injection
   B. Facet joint injection
   C. Trigger point injection
   D. Selective Root block
   E. Cervical plexus block

8. Mr. Martinez is a 44-year-old male with head and neck cancer undergoing radiation. He is admitted for mucositis related pain and dehydration. He is comfortable after you initiate a continuous infusion of IV fentanyl. He is receiving 40 mcg of fentanyl every hour and did not require a bolus for breakthrough pain in the last 24 hours. He has no opioid induced neurotoxicity and is eager to go home soon. What is the dose of transdermal fentanyl patch that you would prescribe?

   A. Fentanyl 25 mcg/hour patch Q 72 hours
   B. Fentanyl 62 mcg/hour patch Q 72 hours
   C. Fentanyl 100 mcg/hour patch Q 72 hours
   D. Fentanyl 37 mcg/hour patch Q 72 hours
   E. No opioids needed as pain from mucositis is expected to resolve in a few weeks

9. You decide to place a fentanyl patch. What is the best possible way to transition Mr. Martinez from a continuous infusion of fentanyl to a fentanyl patch?

   A. Stop the fentanyl continuous infusion and start the fentanyl patch 6 hours later
   B. Place the fentanyl patch and discontinue the continuous infusion of fentanyl 6 hours later
   C. Place a fentanyl patch and discontinue the fentanyl infusion immediately to prevent any overdose
   D. Place the fentanyl patch and discontinue the continuous infusion of fentanyl 24 hours later

10. Mr. James is a 50-year-old male with NSCLC of the right upper lobe. He has right sided chest pain for which he takes morphine extended release 60mg 3 times daily and takes 15 mg of immediate release morphine at least 4 times daily for breakthrough pain. His opioid regimen was increased twice over the last 3 weeks, and he still experiences uncontrolled pain. The plan is to rotate him to extended-release hydromorphone. Which of the following would you prescribe at this time?

    A. Hydromorphone extended release 8 mg once daily with 8 mg immediate release taken every 4 hours as needed for breakthrough pain
    B. Hydromorphone extended release 16 mg once daily with 4 mg immediate release taken every 4 hours as needed for breakthrough pain
    C. Hydromorphone extended release 40 mg once daily with 8 mg immediate release taken every 4 hours as needed for breakthrough pain

D. Hydromorphone extended release 24 mg once daily with 4 mg immediate release taken every 4 hours as needed for breakthrough pain
E. Hydromorphone extended release 32 mg once daily with 16 mg immediate release taken every 4 hours as needed for breakthrough pain

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Pain Management II

Akhila Reddy, MD, and Jaya S. Amaram-Davila, MD

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1. Mr. K is a 64-year-old man with lung cancer and metastasis to the spine. He is currently receiving chemotherapy. He had an allergic reaction to morphine in the past that included rash, hives, itching, and some swelling of his tongue. He has back pain that is not resolved by taking ibuprofen. His oncologist has recommended that acetaminophen not be used on a regular basis. What would you recommend for managing his severe pain from bone metastasis?

   A. Morphine
   B. Codeine
   C. Oxycodone
   D. Fentanyl

2. Gabapentin is used to treat neuropathic pain. Which of the following is involved in the mechanism of action of gabapentin?

   A. It acts as a selective GABA (gamma-amino butyric acid) agonist
   B. It inhibits GABA uptake
   C. It acts on voltage-gated calcium channels
   D. It inhibits norepinephrine reuptake

3. Mrs. W is a very pleasant 59-year-old woman with severe diabetic neuropathy. Gabapentin caused swelling in her feet, and she refuses to try pregabalin because swelling is a side effect of it, too. What is the next best option?

   A. Acetaminophen
   B. Ibuprofen
   C. Venlafaxine
   D. Citalopram

4. Ms. K has chronic pelvic pain secondary to interstitial cystitis and endometriosis. She has been receiving morphine for the past 3 months. Her son reports that she has recently been using higher doses of morphine than prescribed. She now has delirium with agitation and hallucinations. She now has delirium, psychomotor agitation, and hallucinations, which, along with myoclonus, are symptoms of neurotoxicity that result from the accumulation of which of the following?

   A. Codeine
   B. Morphine-6-glucoronide
   C. Morphine-3-glucoronide
   D. Hydromorphone-3-glucoronide

5. Max is a 42-year-old man with hyperparathyroidism, renal failure, and severe osteoporosis. He has been receiving long-term opioid therapy with oxycodone at 20 mg taken orally every 8 hours around the clock for back pain that has persisted despite vertebroplasty. He has numerous spinal compression fractures. His creatinine level increased from 1.2 mg/dl to 2.4 mg/dl in 1 week. His wife reports that he has been very drowsy and irritable recently. His pain control has also been poor. What is the best possible opioid to switch to?

   A. Morphine
   B. Hydromorphone
   C. Codeine

D. Methadone

6. What dose of oral methadone will be used after the rotation?

   A. 5 mg every 8 hours
   B. 2.5 mg every 12 hours
   C. 20 mg every 8 hours
   D. 10 mg every 4 hours

7. Mr. Cook is a 65-year-old man with prostate cancer metastatic to the right hip. He presents with excruciating right hip pain. An x-ray confirms the absence of an impending fracture. What agent would we administer as an adjuvant to opioid therapy for the pain?

   A. Dexamethasone
   B. Acetaminophen
   C. Gabapentin
   D. Duloxetine

8. Opioid rotation is defined as switching from one opioid to another using equianalgesic tables. What are the indications for this practice?

   A. Opioid-related severe nausea despite adequate medical management
   B. Symptoms of opioid-induced neurotoxicity like hallucination, myoclonus, and confusion
   C. Uncontrolled pain despite opioid titration and the addition of adjuvants
   D. All of the above

9. Mr. Smith has been receiving hydromorphone for the past 6 months for severe rheumatoid arthritis. His hospice nurse comes to his home and notes that he has severe myoclonus. He reports taking more medication than prescribed owing to severe pain after a recent fall. He also appears drowsy and mildly confused. After contacting the attending hospice physician, the nurse must initially do which of the following as soon as possible?

   A. Initiate continual administration of haloperidol
   B. Rotate hydromorphone to morphine
   C. Administer clonazepam
   D. Administer chlorpromazine
   E. Administer more hydromorphone

10. Mr. Jones is a 71-year-old man with renal cell cancer and retroperitoneal lymph node involvement. He takes extended-release morphine at 60 mg orally every 12 hours and immediate-release morphine at 15 mg orally every 4 hours as needed. He has taken four doses/day of immediate-release morphine consistently for the past week but still reports poor pain control. What is the ideal next step in optimizing his pain control?

    A. Increase extended-release morphine to 60 mg administered orally every 8 hours around the clock
    B. Change to oxycontin at 20 mg administered orally every 12 hours
    C. Change to transdermal fentanyl at 50 µg every 72 hours
    D. Change to methadone at 50 mg every 12 hours

11. The Transmucosal Immediate-Release Fentanyl (TIRF) Risk Evaluation and Mitigation Strategy (REMS) program is an FDA-required program designed to ensure informed risk-benefit decisions before initiating treatment and while patients are treated to ensure appropriate use of TIRF medicines. The purpose of the TIRF REMS Access program is to mitigate the risk of misuse, abuse, addiction, overdose, and serious complications due to medication errors. The medications included in this program are:

    A. Fentanyl sublingual tablets
    B. Fentanyl citrate oral trans mucosal lozenge
    C. Fentanyl nasal spray
    D. Fentanyl sublingual spray

E. All of the above.

12. Ms. D is a 55-year-old female with breast cancer metastatic to the bones. Her physician prescribed a long-acting opioid regimen that comprises extended-release oxycodone at 20 mg administered orally every 8 hours around the clock. Ms. D noticed that although extended-release oxycodone alleviates her pain most of the day, she still experiences breakthrough back pain a couple of times a day that increases to an intensity of 7/10. She visits her physician in the clinic and requests medication changes to address the breakthrough back pain. What changes should her physician prescribe?

    A. Increase extended-release oxycodone to 40 mg taken every 12 hours
    B. Switch to extended-release morphine at 30 mg taken every 8 hours
    C. Add immediate-release oxycodone at 10 mg taken every 4 hours as needed
    D. Add immediate-release oxycodone at 20 mg taken every 4 hours as needed

13. Mrs. Jones is a 42-year-old female with multiple sclerosis. Her hospice nurse is visiting her at home today. She receives at least five doses per day of hydromorphone at 4 mg orally every 4 hours for pain. She is complaining of severe nausea and vomiting. After confirming that Mrs. Jones has been having regular bowel movements, what medication must her nurse initiate?

    A. Promethazine
    B. Ondansetron
    C. Meclizine
    D. Metoclopramide

14. Mr. Max is receiving extended-release oxycodone at 40 mg every 12 hours for pain associated with radiation-induced mucositis. He takes about three doses of immediate-release oxycodone at 10 mg. He recently completed radiation treatment for squamous cell carcinoma of the tonsil. During the past week, his oral intake diminished greatly. He also did not have a bowel movement for 4 days. He presented to the outpatient palliative care clinic with mild confusion, myoclonus, and drowsiness. What most likely contributed to his symptoms of opioid-induced neurotoxicity?

    A. Constipation
    B. Mucositis complicated by infectious process
    C. Dehydration
    D. Polypharmacy
    E. Hypercalcemia

15. Ms. Sanchez has a right-sided Pancoast tumor. She has constant pain in her right arm that she describes as pricking, burning, and radiating to her fingers. This pain can be best classified as:

    A. Nociceptive somatic pain
    B. Nociceptive visceral pain
    C. Mixed nociceptive and neuropathic pain
    D. Neuropathic pain

16. According to the World Health Organization’s analgesic ladder, what medication should be administered for moderate pain after unsuccessful therapy with celecoxib?

    A. Acetaminophen
    B. Morphine
    C. Codeine
    D. Methadone
    E. Oxycodone

17. Which of the following is an N-methyl-D-aspartate (NMDA) receptor antagonist?

    A. Methadone

B. Ketamine
C. Dextromethorphan
D. All of the above

18. Mr. Jones is a 58-year-old male with metastatic renal cell carcinoma. He has right sided hip pain related to metastatic disease in the right femur. His pain medication regimen consists of methadone 5mg taken orally every 8 hours along with hydromorphone 2mg taken orally every 4 hours as needed for breakthrough pain. Mr. Jones was discharged from the hospital 2 days ago after being admitted for a urinary tract infection. He comes in to the clinic today with increased somnolence, and occasional confusion. What is the most likely explanation for his condition?

    A. Pyelonephritis and sepsis
    B. Interaction of methadone with ciprofloxacin which was prescribed for the UTI
    C. Overuse of hydromorphone
    D. Acute renal failure
    E. Hypercalcemia

19. Mrs. Williams is a 62-year-old lady with appendiceal carcinoma metastatic to the peritoneum. Due to development of chronic partial bowel obstruction, a venting gastrostomy tube was placed, and total parenteral nutrition was initiated. Which of the following is the preferred long-acting opioid for her?

    A. Extended-release morphine
    B. Extended-release oxycodone
    C. Extended-release hydromorphone
    D. Transdermal fentanyl
    E. Extended release oxymorphone

Pediatric Palliative Care

Donna s. Zhukovsky, MD, FACP, FAAHPM, and Jaya S. Amaram-Davila, MD

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1. Maria is a 4-year-old girl who is undergoing evaluation for suspected ALL. Physical examination reveals hepatomegaly. She is not eating her favorite foods or playing with her toys. She complains of tummy pain. What is the most age-appropriate pain assessment tools?

    A. Children's Hospital of Eastern Ontario Pain Scale (CHEOPS)
    B. Pediatric Memorial Symptom Assessment Scale
    C. Faces Scale
    D. Pain thermometer
    E. C and D

2. Andy is a 13-year-old adolescent with Ewing's sarcoma metastatic to bone and lung. He has received multiple regimens of chemotherapy. He complains of tingling pain in his legs. The most common cause of pain for children in his situation is:

    A. Bone metastases
    B. Chemotherapy-associated peripheral neuropathy
    C. Referred pain from a traumatic bone marrow biopsy
    D. Referred pain from lumbar epidural disease
    E. None of the above

3. Jasmine is a 5-year-old girl. Her father (your husband) has just been diagnosed with advanced pancreatic cancer. She asks you why daddy needs to see the doctor all the time. You answer:

    A. He has a tummy ache.
    B. Why are you asking?

C. He needs pain medicine.
D. He has a medical illness called cancer. What else do you want to know?
E. B and D

4. Jasmine's father dies in the hospital, after being admitted for a pulmonary embolism. She cries inconsolably and then asks if she can go outside to ride bikes with her friend Tommy.

   A. Children who cry when told of a loved one's death and then ask to go outside to play with friends are not demonstrating normal patterns of grieving.
   B. Jasmine may think that her father will wake up again.
   C. Jasmine should not attend her father's funeral.
   D. Jasmine is demonstrating grief behavior consistent with her developmental stage.
   E. B and D

5. Please select the 1 correct answer

   A. Neonates require longer dosing intervals and smaller doses of water-soluble drugs than older children, due to a decreased GFR.
   B. Children ranging in age from 2-6 years require shorter dosing intervals and higher doses than adults, for drugs metabolized by the cytochrome P450 system.
   C. Chemotherapy frequently provides analgesia for pain due to cancer.
   D. None of the above is true.
   E. All of the above are true.

6. Juanita is a 2-year-old girl hospitalized for the treatment of newly diagnosed leukemia. You have been asked to help with her pain and symptom control. As part of her evaluation, a bone marrow aspiration and biopsy is scheduled for tomorrow. You recommend that:

   A. She undergoes the procedure in her crib because it is a familiar and comforting place for her.
   B. She gets low dose morphine just prior to the procedure to prevent procedure-related pain.
   C. She and her parents meet with a child life specialist to help them know what to expect during the procedure.
   D. The procedure be done under conscious sedation
   E. B, C and D

7. Bobby is a 17-year-old boy who has cystic fibrosis. Of late, he has had several hospitalizations for respiratory failure that have resulted in ICU stays, the administration of pressor support and mechanical ventilation. He tells you, his physician for most of his life, that he does not want to be intubated again and does not want to return to the hospital. You now:

   A. Write an Out of Hospital Do Not Resuscitate (OOH DNR) order.
   B. Tell him he is not of legal age, so that the decisions are not his to make.
   C. Explore his understanding of his disease status and ask him to tell you why he made these choices.
   D. Request a psychiatry consultation to evaluate him for depression.
   E. A and C

8. You are consulted to see Kate, a 16-year-old girl with metastatic gastric adenocarcinoma. Dr. Jones, her pediatric oncologist, tells you that her cancer has been unresponsive to chemotherapy and there are no further disease-directed therapies. She has given this information to Kate's parents, but is unsure of whether he will tell Kate. During your consultation, Kate's parents request that you not tell their daughter about her poor prognosis. The best initial response is:

   A. "I know how you must feel. I of course will not share any information you do not want me to with her."
   B. "I am sure that Dr. Jones has some other therapies that may give you hope."
   C. "Can you tell me more about why you do not want to tell Kate?"
   D. "I may be able to find another physician who can enroll her in a Phase I Trial if you'd like."
   E. "Research shows that parents who do not tell their child that they are dying often regret this decision."

9. The following day, Kate is in significant pain. Dr. Jones confides in you that the parents are asking for increased doses of morphine, but she is concerned that they are "trying to move things along". The best response is
   A. "It sounds like her parents want to shield their daughter from knowing what is really going on."
   B. "Don't worry; it is a myth that opioids hasten death at the end of life."
   C. "It is not uncommon for parents to have thoughts of hastening a child's death, but it almost always signals significant emotional distress in the parent."
   D. "It sounds like we should consider palliative sedation."

10. A few days later, Kate's clinical condition worsens. She has worsening dyspnea due to metastatic disease. With your guidance and support, her parents have lovingly and compassionately explained to her that she is dying. Kate worries that she will have tremendous suffering and suffocate. She Googled "sedation at the end of life" and asks whether she would be a candidate. The most accurate statement about palliative sedation in children is:

    A. Rapid titration of opioids is initiated until the patient becomes apneic.
    B. It cannot be done in children because they are minors.
    C. It cannot be done in children because it is euthanasia.
    D. It is an ethical intervention for children who have symptoms that are refractory to standard therapy.

GI Symptoms

Marieberta Vidal, MD, Ali Haider, MD, and Jaya S. Amaram-Davila, MD

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1. Mr. Jones is a 68 y/o man with metastatic prostate cancer to multiple bones who takes morphine extended release 60 mg every 8 hours for pain. During the last week his pain has been increasing requiring 6 breakthrough doses of MSIR 15 mg. Today he presented with confusion, pain, last bowel movement was 5 days ago despite senna bid. What is the next best step?

   A. Give an enema.
   B. Give lactulose.
   C. Give naltrexone.
   D. Opioid rotation.
   E. Check calcium levels.

2. Which of this one is not recommended in the management of constipation for patients with prior history of fecal impaction and poor po intake?

   A. Polyethylene glycol
   B. Fiber
   C. Senna
   D. Lactulose
   E. Bisacodyl suppositories

3. Mrs. Z is a 49 y/o female patient with advanced endometrial cancer with carcinomatosis and ascites. She takes morphine extended release 45 mg every 12 hours and MSIR 15 mg as needed for her lower abdominal pain. She presented to ER with nausea, vomiting abdominal pain and her last bowel movement was 6 days ago. What will be contraindicated?

   A. Morphine infusion
   B. Haloperidol iv
   C. Methylnaltrexone
   D. Hydromorphone infusion
   E. None of the above

4. Which one is an osmotic agent?

A. Polyethylene glycol
B. Docusate
C. Mineral oil
D. Psyllium
E. All of the above

5. What is the best treatment and prophylaxis for opioid induced constipation (OIC)?

   A. Keep the opioid dose low
   B. Drink at least 1.5L of water daily
   C. Daily ambulation
   D. Schedule laxatives
   E. All of the above

6. Patient is a 52-year-old female with stage IV ovarian carcinoma with metastasis involving the lung, liver, peritoneum, pelvic and abdominal lymphadenopathy. She has shown disease progression despite of multiple lines of chemotherapy. She has been diagnosed with malignant bowel obstruction status post venting gastrostomy tube and is receiving total parenteral nutrition (TPN) for the past 8 weeks. She has been transferred to palliative care unit for symptom management. Upon further review of her history, you have noticed that patient performance status has deteriorated in the past several weeks and she required multiple hospital admission for the electrolyte's imbalances and central venous catheter complications. Patient wishes are to focus on the quality of life and void any unnecessary sufferings like the need for frequent blood draws for TPN continuation and hospitalization due to the complications of central venous catheter.
   Husband, who is the primary caregiver of this patient and designated decision maker, wants to continue the total parental nutrition (TPN) but both patient and husbands clearly understand that stopping it would shorten her life considerably. As a physician in charge of her care, what should be your best approach?

   A. You should discontinue the TPN.
   B. You should continue the TPN for now and encourage them to discuss this issue with their primary oncologist.
   C. You should continue the TPN as it has shown survival benefit in patients with malignant bowel obstruction of GYN origin and limited complication risk.
   D. You should continue the TPN by honoring husband's wishes as he is the designated decision maker in this case.

7. Patient is 72-year-old male with stage IV lung cancer with extensive lytic lesions is multiple spines, pelvis and right femur. Previously he was treated chemotherapy and radiation therapy but continued to show disease progression. He has been followed by palliative care clinic for symptom management. Recently he has been complaining of significant fatigue and you decided to consider trial of methylphenidate, but you have to discontinue it due reported side effects. Patient and his family are considering a trip to neighboring state to visit the extended family for the holidays, and they were asking if any alternative treatment options can be considered to improve patient fatigue and other symptoms.
   What should be the best approach to improve this patient cancer related fatigue?

   A. You should consider checking patient hemoglobin and if he is anemic, blood transfusion will improve his fatigue.
   B. You should consider starting a trial of dexamethasone 4mg BID for two weeks as it has shown to improve fatigue in recent clinical trial.
   C. You should consider non-pharmacological options like cognitive behavioral therapy (CBT) and exercise programs to help manage fatigue.
   D. Consider option A, B & C

8. You have been consulted on a 36-year-old female with stage IV gastric carcinoma with metastatic disease in the liver and lung. She has been admitted with 1-week history of intractable nausea and vomiting and inability to tolerate any liquids or solids. Patient abdominal CT has shown complete small bowel obstruction due to tumor infiltration and overall disease progression. Patient is now status post placement of nasogastric tube with

continues wall suction. Surgical oncology team has been consulted to evaluate her but with her recent disease progression and poor performance status she is not been considered for any interventions.

Which of the following pharmacological option is contraindicated in this patient?

A. Metoclopramide 10mg IV every 6 hours around the clock
B. Dexamethasone 4mg BID
C. Haloperidol 1mg IV every 6 hours around the clock
D. Octreotide SubQ 200 to 900 mcg/day in 2 to 3 divided doses

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End Stage Heart Disease and Renal

Linh Nguyen, MD, and Jaya S. Amaram-Davila, MD

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1. An 85-year-old man with ischemic cardiomyopathy (ejection fraction 35%) is being evaluated by the palliative medicine team for dyspnea and advance care panning. This is his fourth admission in 3 months for the same symptoms. The cardiology team feels he is on maximal medical therapy and is not a candidate for revascularization. Medications include intravenous furosemide, losartan, and carvedilol. According to the American College of Cardiology/American Heart Association (ACC/AHA) staging system, which stag of heart failure is he currently in?

   A. Stage A
   B. Stage B
   C. Stage C
   D. Stage D

2. A 55-year-old man with ischemic cardiomyopathy is admitted to the hospital with volume overload and worsening renal function. This is his fourth admission in 3 months despite optimal medical therapies (New York Heart Association class IV). He is now dependent on dobutamine infusion and is being considered for an implantable left ventricular assist device (LVAD). Which of the following statements best describes the role of LVADs in people with advanced heart failure?

   A. LVAD therapy improves exercise tolerance.
   B. Patients who are not eligible for cardiac transplantation are not candidates for LVADs.
   C. Survival after LVAD placement is about 6 months.

3. When comparing patients with advanced heart failure to those with advanced cancer, which of the following factors predispose heart failure patients to a greatest number of physical symptoms?

   A. Higher level of education
   B. Lower socioeconomic status
   C. Worse heart failure-related health status

4. A 75-year-old woman with New York Heart Association class IV heart failure is undergoing comprehensive symptom assessment in the advanced heart failure clinic. Which of the following factors is most likely associated with a lower incidence of depression in this patient?

   A. Male sex
   B. Higher socioeconomic status
   C. Greater spiritual well-being

5. An 85-year-old man with New York Heart Association Class IV congestive heart failure presents to the palliative medicine clinic with anhedonia, tearfulness, and fatigue. A recent sleep study showed no evidence of obstructive sleep apnea. Geriatric depression screen is positive, and he is agreeable to starting a medication for depression.

In addition to cognitive behavioral therapy, which of the following pharmacologic therapies would be most suitable in this patient?

A. Nortriptyline
B. Citalopram
C. Venlafaxine
D. Mirtazapine

Dyspnea/Cough
David Hui, MD & Kaoswi Karina Shih, MD

1. Which of the following is first line in the palliative treatment of dyspnea?

   A. Supplemental oxygen
   B. Benzodiazepines
   C. Opioids
   D. Palliative sedation
   E. Blood transfusions

2. Randomized controlled trials support the role of supplemental oxygen in the palliative treatment of dyspnea for

   A. Cancer patients with hypoxemia and dyspnea
   B. Cancer patients without hypoxemia but with severe dyspnea
   C. COPD patients with hypoxemia but only mild dyspnea
   D. A and B
   E. A and C
   F. A, B and C

3. Mrs. Sonia O. Bucket has breast cancer and lymphangitic carcinomatosis, with dyspnea at rest rated 7/10. Which of the following routes of opioid administration would decrease her shortness of breath?

   A. Intravenous
   B. Oral
   C. Nebulized
   D. Subcutaneous
   E. A, B and D
   F. All of the above

4. A73 year-old male with non-small cell lung cancer with metastases to the spine is admitted to the hospital with severe back pain and respiratory distress. He reports severe dyspnea and fatigue with minimal intake by mouth. He has been on as needed morphine by mouth, but reports his pain improves somewhat only for a short time after each dose. He has had a wet cough that worsens his dyspnea. After having undergone multiple lines of therapy in the past two years, he was recently found with brain metastases on imaging. He has had discussions with his wife and children about focusing on comfort and quality of life but had not completed any advanced directives or living will. After discussions are held with his oncologist and primary admitting physician, the patient and family have decided to pursue comfort measures. A palliative care consult is placed, and the patient is seen with labored breathing, tachypnea, and a frequent cough. There are mildly audible rales. Oxygen saturations are consistently above 94%. The following treatments are all reasonable to begin with EXCEPT?

   A. Starting the patient on high flow oxygen
   B. Starting the patient on a hydromorphone PCA
   C. Reducing the current rate of IV fluids
   D. Placing a consult for a chaplain and counselor
   E. Providing a bedside fan

5. Which of the following treatments have been shown to have some relief in the treatment of cancer-related cough?

A. Sodium cromoglycate
B. Hydromorphone
C. Brachytherapy
D. High intrathoracic vagotomy
E. All of the above

Prognostication

David Hui, MD & Kaoswi Karina Shih, MD

1. In estimating prognosis for far advanced cancer patients, clinicians tend to:

   A. Overestimate by 6-10-fold
   B. Overestimate by 2-5-fold
   C. Be correct most of the time
   D. Underestimate by 2-5-fold
   E. Underestimate by 6-10-fold

2. Which of the following prognostic models for patients with advanced cancer requires laboratory testing?

   A. Palliative Prognostic Index
   B. Palliative Prognostic Score
   C. Terminal Cancer Patient Score
   D. Palliative Performance Scale
   E. None of the above

3. For end stage renal disease, the median survival after stopping dialysis is:

   A. one month
   B. 7 - 10 days
   C. 3 – 6 months
   D. one year
   E. less than 24 hours

4. Which of the following disease states is associated with the poorest prognosis?

   A. Stage IV heart failure after placement of a left ventricular assist device
   B. End stage renal disease on hemodialysis for the past year
   C. Newly diagnosed AIDS with CD4 of 170 and PCP
   D. COPD with FEV1 of 35%
   E. Lung cancer with brain and bone metastases, presenting with hypercalcemia and Karnofsky score 30

5. Which of the following prognostic factors is/are important in liver disease?

   A. Elevated bilirubin
   B. Elevated INR
   C. Elevated creatinine
   D. A and C
   E. A, B and C

6. Mr. Smith is comatose and actively dying in the palliative care unit. Which of the following physical signs is likely to occur closest to death?

   A. Death rattle
   B. Respiration with mandibular movement
   C. Peripheral cyanosis

D. Pulselessness of radial artery

7. Which of the following sign(s) is/are specific for impending death?

A. Drooping of nasolabial fold
B. Tachycardia and fever
C. Hyperextension of neck
D. A and C
E. B and C

8. Mr. Smith had grade 3 death rattle. Which of the following statements is true about death rattle?

A. Hyoscine butylbromide is an effective treatment for death rattle
B. Scopolamine is superior to atropine for death rattle
C. Death rattle is secondary to vibration of the vocal cords
D. Grade 3 death rattle is clearly audible at the door of the room
E. Death rattle is associated with auditory hallucinations

Grief and Bereavement

Rony Dev DO, and Kaoswi Karina Shih, MD

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1. Which reaction is less likely to be a part of a normal grief response?

A. Brief Episodes of Breathlessness
B. Hallucinations of the Deceased
C. Fatigue and Insomnia
D. Fleeting thoughts of not wanting to live
E. Calm Acceptance
F. Anorexia and Weight loss

2. Which of the following is least likely to predict a person at risk for prolonged (complicated or traumatic) grief?

A. A person's previous grief response
B. Nature of a person's attachment to the deceased
C. A person's support network of family, friends, or social network
D. Location and nature of death

3. Which of the following negative indicators of grief is the most frequent two months after the loss of a loved one?

A. Yearning
B. Depression
C. Anger
D. Disbelief

4. Which of the following would distinguish major depression from anticipatory grief in a cancer patient at the end of life?

A. Anorexia with cancer cachexia
B. Persistent thoughts of ending one's life and suicidal ideation
C. Fatigue and Insomnia
D. Anger and Irritability

5. All of the following are true of anticipatory grief EXCEPT:

A. Can include many of the same symptoms of grief after a loss

B. Approximately 25% of patients with incurable cancer are known to experience anticipatory grief
C. Empirically associated with escalated distress, pain, and medical complications
D. Can be experienced by both family members or a patient's social networks and the dying individual as well
E. Affects everyone aware of life-threatening illness or has been given significant time elapse between awareness and death

6. Which of the following statements would be the best thing to say to someone in grief?

A. Be Strong
B. It was her time to go
C. She was a good person; it is God's will
D. She is in a better place
E. I wish I had the right words, just know that I am here to help in any way I can.

7. Hospice benefits include bereavement counseling which must be provided for family members and friends for what duration of time after the death of a loved one?

A. 6 months
B. 9 months
C. 1 year
D. 2 years
E. Not required

Symptom Management

Sriram Yennu MD, and Kaoswi Karina Shih, MD

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1. A 75-year-old woman with advanced breast cancer complains of severe fatigue. Contributors to this syndrome include:

A. Depression
B. Autonomic Failure
C. Anemia
D. Cachexia
E. All of the above

2. A 70-year-old patient with advanced cancer complains of pain in the mouth. The following are common causes of this symptom:

A. Candida infection
B. Herpes Infection
C. Mucositis Related to Chemotherapy
D. Side Effects of Antidepressants
E. A, B, and C

3. A 45-year-old woman with advanced renal cell carcinoma complains of nausea and vomiting. She has not received chemotherapy for the last 3 weeks and has been having daily bowel movements. She is unable to eat much of her meals, and after trying, does not feel she can fit in snacks during the day. The most effective treatment includes the following:

A. Ondansetron
B. Marijuana Derivatives
C. Promethazine
D. Metoclopramide
E. Haloperidol

4. A 50-year-old man with lung cancer and recently diagnosed metastases to the spine has been taking long-acting morphine and intermittent, occasional immediate release morphine during the day. He notes improved overall pain control since starting the long-acting morphine but has not had a bowel movement for the last 5 days. He notes occasional nausea, and as a result, has been eating less and feeling more fatigued. The following are known contributors to this problem:

   A. Decreased Oral Intake
   B. Decreased Physical Activity
   C. Opioid Analgesics
   D. Autonomic Failure
   E. All of the above

5. Effective initial treatment for this problem include the following:

   A. Sennosides
   B. Opioid Antagonists
   C. Frequent Enemas
   D. Increased Diet
   E. Exercise

6. A 50-year-old man with colon cancer with metastases to the liver and peritoneum presents with nausea and vomiting for the past 3 days. An x-ray shows presence of air fluid levels in the small bowel. Which of the following are possible palliative interventions for this problem?

   A. Nasogastric Tube followed by Venting G-Tube Insertion
   B. Octreotide
   C. Anticholinergic
   D. Dexamethasone
   E. All of the above

7. The role of benzodiazepines for the treatment of sleep disturbances in palliative care can be best explained by:

   A. When used for a short term it reduces the time of sleep onset and improves sleep efficacy
   B. Prolonged use may result in fragmented sleep, tolerance and/ or dependence
   C. May cause daytime delirium, sedation and fatigue in older adults
   D. May exacerbate respiratory suppression when they are used in combination with opioids
   E. All of the above

8. Mr. Blum is a 63-year-old man with a history of colon cancer with liver metastasis. He is currently undergoing chemotherapy. He has right upper quadrant pain which is well controlled with morphine extended release 45mg taken every 12 hours. He takes a single dose of morphine immediate release of 15mg at least once daily for breakthrough pain. He is very happy with his pain control, however, has severe fatigue and daytime drowsiness. He does not have any confusion, myoclonus, or hallucinations. Which of the following would be recommended?

   A. Decrease the dose of long-acting morphine to 30mg orally every 12 hours
   B. Change the dose of Morphine extended release to 30 mg orally every 8 hours
   C. Add methylphenidate
   D. Add duloxetine

Critical Care, Discontinuation of Technological Support and Restless Leg Syndrome

Susan Gaeta MD & Patricia Bramati MD

Scenario 1

35-year-old Arabic woman with B cell lymphoma admitted to ICU with respiratory distress and pneumothorax. Patient continues to have worsening respiratory distress requiring intubation and vasopressor support. During

ICU stay patient continues to deteriorate and has neurological changes manifested by irregular pupils. Patient is found to have on CT scan of head multiple infarcts. Concern that patient is clinically brain dead.

A family meeting is convened to discuss patient condition and you are aware that the patient's family is very upset that patient respiratory distress has worsen and furthermore base on their cultural and religious beliefs they are not accepting of the diagnosis of brain death.

1. Upon convening the family meeting would you proceed with discussing brain death criteria or are there other options to consider?

   A. Proceed with meeting and inform the family that you will proceed with exam to confirm that patient is brain death since they are in the U.S.
   B. Obtain assistance from Arabic translator to convince family to proceed with brain death exam.
   C. Obtain assistance from chaplaincy as well as Arabic translator to proceed with brain death exam.
   D. Obtain assistance from chaplaincy as well as Arabic translator and meet with family to begin to discuss patient's current condition and to understand their perspective.
   E. Meet with chaplaincy and Arabic translator first to understand the cultural and religious issues and then meeting with family as a group.

2. During the meeting patient's family agrees to proceed with evaluation of brain death?

   A. You proceed with evaluation and pronounce patient dead and then informed patient's family that patient has died.
   B. You discuss the process for evaluation of brain death; give time for patient's family to be with patient before proceeding with evaluation since once the test is positive the patient will be declared brain dead and you will proceed with withdrawal of support.
   C. You discuss the process for evaluation of brain death and then proceed with evaluation and pronounce patient dead and then informed family after mechanical ventilation support has been removed.
   D. You discuss the process for evaluation of brain death; give time for patient's family to be with patient before proceeding with evaluation since once the test is positive the patient will be declared brain dead and you will proceed with withdrawal of support after patient's family has said their goodbyes.
   E. You discuss the process for evaluation of brain death, give time for patient's family to be with patient before proceeding with evaluation and the once patient is declared brain dead you keep patient on mechanical ventilation until family is ready to withdraw support.

Scenario 2

46-year-old male with relapse leukemia admitted to ICU in septic shock and multi-organ failure on multiple vasopressors who continues to deteriorate clinically despite medical support.

A family meeting needs to be convened to discuss patient worsening condition and to establish code status and consideration for withdrawal of support.

3. As Palliative care consultant you are asked to assist with the family meeting. What is the first step you would do before convening the meeting?

   A. Meet with the ICU attending to determine the patient prognosis.
   B. Meet with the ICU attending to determine the patient prognosis and explore what conversations/meetings if any have occurred.
   C. Convene family meeting and address symptom management
   D. Meet with the ICU attending to determine the patient prognosis and explore what conversations/meetings if any have occurred and then convene meeting with family.
   E. Meet with the ICU attending to determine the patient prognosis and explore what conversations/meetings if any have occurred and then convene meeting with family and ICU attending.

4. During the family meeting one of the family members states that God will cure patient and no need to make patient DNR and will not consider withdrawal of support?

A. Walk out of the meeting and state to the ICU attending that family will not agree to DNR and must continue all aggressive support.
B. Explore with family member why they believe that God will cure the patient with the assistance of chaplaincy.
C. Insist that the patient must be made DNR and then schedule a meeting to discuss withdrawal of support for the following day.
D. Acknowledge family members beliefs and with the assistance of chaplaincy encourage the family to agree to making patient DNR base on the medical condition.
E. Acknowledge family members beliefs and with the assistance of chaplaincy continue to meet with family to see if they agree with DNR and recommendation of withdrawal of support over time.

5. After the third meeting the family agrees to DNR but not withdrawal of support.

A. Accept the patient's family decision to not withdraw support and continue to provide emotional and spiritual support to patient's family up to and including support after patient dies.
B. Acknowledge patient's family decision but insist that family must agree to withdrawal of support.
C. Acknowledge patient's family decision but consult Ethics service to help with convincing family to agree with withdrawal of support.
D. Acknowledge patient's family decision but consult Legal service to help with convincing family to agree with withdrawal of support.
E. Accept the patient's family decision to not withdraw support and inform ICU team that Palliative Care service is signing off.

6. It has been 6 months since the patient expired and the patient's wife call's your office requesting an appointment to see you

A. You ask you secretary to not schedule an appointment and to tell the patient's wife that you are not available.
B. You ask you secretary to not schedule an appointment and to tell the patient's wife that you are not available and to see her own medical doctor.
C. You ask you secretary to not schedule an appointment and informed the patient's wife to see her own medical doctor.
D. You ask you secretary to schedule an appointment for next available which is not until 4 months from now and to inform patient's wife that if she wants an earlier appointment to see her own medical doctor.
E. You ask you secretary to schedule an appointment for next available and speak to patient's wife over the phone and determine that patient's wife should be seen today due to the possibility that she may be experiencing complicated grief and you want to refer her to a psychiatrist.

Scenario 3

65-year-old female with severe pulmonary hypertension, aortic stenosis and COPD s/p cardiac arrest times 2 is made DNR and continues to deteriorate clinically despite maximum support.

7. Family meeting is convened to discuss patient's worsening condition. The majority of patient's family states that patient wouldn't want to be on prolonged support if outcome is poor except for one family member.

A. During the family meeting you state that majority wins and proceed with terminal extubation.
B. Prior to family meeting you determine who the decision maker is and approach them and tell them you only want to meet with the decision maker. You decide on this action in order to avoid confrontation with the family member who is not in agreement.
C. You proceed with convening the family meeting and listen to the reason why the family member does not agree with the rest of the family. You then explain and help the family member understand the patient's condition. This explanation helps the family member understand and he then agrees with withdrawal of support.
D. You proceed with convening the family meeting and listen to the reason why the family member does not agree with the rest of the family. You then tell the family member that the only person who has decision making responsibility is the appointed decision maker and proceed with terminal extubation.

E. Prior to family meeting you determine who the decision maker is and approach them and tell them you only want to meet with the decision maker and the family members who are in agreement with withdrawal of support. You decide on this action in order to avoid confrontation with the family member who is not in agreement

8. Once all the patient's family is in agreement about proceeding with withdrawal of support. You then?

A. Tell the family you will write the order for terminal extubation, proceed with writing the order and then leave for the day.
B. Go over the process of terminal extubation, giving opportunity for patient's family to ask question and then proceed with writing the order.
C. Go over the process of terminal extubation, giving opportunity for patient's family to ask question and informed the RN, RT and the rest of multidisciplinary team so they can provide emotional and spiritual support to the patient's family
D. Go over the process of terminal extubation, giving opportunity for patient's family to ask question and informed the RN and RT as well as write the order.
E. Tell the family you will write the order for terminal extubation, proceed with writing the order and informing the RN and RT. You then leave for the day.

9. During the family meeting, one of the family members discloses that the patient's religious belief is that once the patient dies the body should not be touch for four hours and religious songs must be sang during the time period.

A. You inform the family member that you cannot honor the request since you need the bed and as soon as the patient dies you will move the body to the morgue.
B. You inform the family member that you cannot honor the request since you need the bed, and this is not a religious hospital.
C. You inform the family member that you cannot honor the request since the religious songs will disturb the other patients and families.
D. You inform the family member that you will honor the request then informed the ICU staff so appropriate accommodations can be made to full fill the request.
E. You inform the family member that you honor the request but do not inform anyone of the request.

10. After the process of terminal extubation has begun one of the patient's family members request to speak to you. He states that the process is taking too long and inquires if anything can be done to speed the process.

A. You remind the patient's family member that the terminal extubation is to allow a natural death and that you cannot actively give medication to cause the patient to die and that the medications are to for managing symptoms in particularly dyspnea.
B. You inform patient's family member that you cannot actively give medication to cause the patient to die and then state you have to go see other patients.
C. You inform patient's family member that you cannot actively give medication to cause the patient to die and then state you have to go see other patients.
D. You inform patient's family member that are able to discuss the process further since you have other patients to see.
E. You inform patient's family member that you will give medication to cause the patient to die faster but that all the family members must agree not to complain about the physician.

11. A 54-year-old male patient with advanced pancreatic carcinoma was admitted to ICU due to septic shock and multiorgan failure. Currently, the patient is critically ill, on mechanical ventilation, and on multiple vasopressors. The patient continues to deteriorate clinically despite aggressive medical support. A family meeting is scheduled to discuss the code status and goals of care. After 2 hours of discussion the family wants to keep patient full code. What is the survival rate after CPR in patients with advanced cancer?

A. 5%-15%
B. 30%-40%
C. 1%-5%

D. 50-70%

12. Mrs. Bungaloo is a 96-year-old female nursing home resident with a past medical history of advanced dementia, recurrent UTIs and atrial fibrillation. The patient is non-verbal and bedbound. She was transferred to ER by EMS because of fever, altered mental status and leukocytosis. The patient required endotracheal intubation for acute hypoxemic respiratory failure and a chest-x-ray demonstrated a right lower lobe consolidation suggestive of aspiration. A family meeting was scheduled to discuss goals of care, symptom management and code status. The family agreed with a Do Not Resuscitate order, but they want to proceed with PEG tube placement. What has been shown regarding artificial nutrition/PEG tube placement in patients with advanced dementia?

    A. Patients will gain weight and fat body mass once artificial nutrition is started
    B. PEG tubes decrease the risk of aspiration
    C. Tube feeding will prolong survival
    D. Tube feeding will not improve the healing rate of pressure ulcers and risk of infections

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End-stage COPD & ICU care

Kenneth Unger, MD, and Patricia Bramati, MD

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1. Mr. Agee is a 57-year-old ex-smoker with COPD, who has chronic cough, sputum production, dyspnea with mild exertion, and ankle edema. His FEV1 is 40% of predicted and his pO2 at rest is 57 mm Hg. His physician has prescribed the use of oxygen by nasal cannula at 2 L/min. The use of oxygen for Mr. Agee is mostly likely going to:

    A. Improve dyspnea at rest.
    B. Improve dyspnea with exertion.
    C. Improve his chances of survival over the next year.
    D. Increase the risk of CO2 retention and respiratory failure.

2. Which of the following is true regarding the use of non-invasive ventilation (NIV) in the setting of end-stage COPD?

    A. Non-invasive ventilation is highly effective in relieving dyspnea at the end-of-life.
    B. The rationale for using NIV in patients near the end-of-life should be to help achieve the patient's goals of care.
    C. Non-invasive ventilation is rarely utilized in the management of moderate to severe exacerbations of COPD.
    D. Non-invasive ventilation is not recommended because it goes against the philosophy of palliative care.
    E. None of the above.

3. Which of the following statements is true regarding CPR?

    A. The proportion of patients that survive to hospital discharge has improved over the last 10 years.
    B. Patients whose initial rhythm was ventricular fibrillation were less likely to survive to hospital discharge than those with asystole.
    C. Cancer patients are less likely to survive than other hospitalized patient populations.
    D. The average survival rate to hospital discharge is 33%.
    E. Survival to hospital discharge is independent of the patient's age.

4. A 65-year-old female with COPD and cor pulmonale has had CPR twice and has been made DNR. She has been on the ventilator, in coma, for 10 days and has developed fever, leukocytosis and hypotension. The family members all agree she would not want to be on prolonged life support if her expected outcome was poor.

    After life-sustaining therapies have been withdrawn, one of the patient's family members states that the process is taking too long and asks if anything can be done to speed the process. What is your response?

A. You remind the patient's family member that the terminal extubation was to allow a natural death and that you cannot actively give medication to hasten death.
B. You agree to increase the opioid drip, to make sure that patient is not suffering from dyspnea, if the rest of the family members agree.
C. You inform patient's family member that you cannot actively give medication to hasten death because it would put your license at risk.
D. You inform patient's family member that are unable to discuss the process further since you have other patients to see.

5. Mrs. M is a 67-year-old female with COPD and multiple other medical problems. You are sent to perform a face-to-face visit to determine hospice eligibility. Which of the statements below is true regarding prognostication in COPD?

   1. A high score on the BODE scale predicts mortality within the next 6 months.
   2. BODE point system, which is derived from the BMI, Airflow Obstruction (FEV_1), Dyspnea, and Exercise Capacity, is no better a predictor of mortality than FEV1 alone.
   3. Following NHPCO guidelines helps to identify > 75% of patients who will die in 6 months or less
   4. The patient who is dyspnic at rest and whose weight is now 134 lbs. (down from 152 lbs.) is eligible for the Medicare hospice benefit.
   5. An echocardiographic finding that width of the left atrium is 6.5 cm predicts death in the next 6 months.

6. A 72-year-old on hospice for lung cancer has had difficulty sleeping for the past 3 weeks. Neither sleep hygiene measures nor the use of zolpidem has helped. On further questioning, she states that when she lies down in bed at night, she develops an uncomfortable sensation in her legs which is relieved by moving or rubbing her legs or by getting up out of bed and walking.

   Which of the following pharmacologic agents is the most appropriate therapy for this patient's symptoms?

   A. Trazodone
   B. Pramipexole
   C. Clonazepam
   D. Eszopiclone
   E. Methylphenidate

7. A 57-year-old man collapses while rushing to catch his airplane. Bystander CPR is started immediately. The EMTs arrive about 10 minutes later and find the initial rhythm to by ventricular tachycardia. After an additional 15 minutes of CPR a sinus rhythm is obtained.

   Six weeks later, the patient is still intubated and mechanically ventilated. His pupils are symmetric and react to light; he is triggering the ventilator at a rate of 14 breaths per minute; he has no purposeful response to voice or touch; and, he has sleep-wake cycles as evidenced by periods of rapid-eye movements and random, non-purposeful movements of his arms. What is his neurological state?

   A. Brain death
   B. Coma
   C. Persistent vegetative state
   D. Minimally responsive state
   E. Locked-in state

8. A 64-year-old man has been admitted to the hospital for chest pain. He had a non-ST elevation myocardial infarction, was taken to the catheterization lab, and received three coronary artery stents.

   Three days after admission, he had a cardio-pulmonary arrest associated with torsades de pointes. Cardio-pulmonary resuscitation (CPR) was started immediately. On day 5 after the arrest, he remains comatose and ventilator dependent.

   Which of the following findings indicates severe and irreversible neurologic damage?

A. He had 30 minutes of CPR before a sinus rhythm was obtained.
B. He is not triggering the ventilator.
C. He has developed hyperreflexia
D. His creatinine has risen to 2.4 gm/dL and he is developing Adult Respiratory Distress Syndrome (ARDS).
E. He had no pupillary or corneal response 24 to 72 hours after the arrest.

9. A 28-year-old woman was admitted six months ago to the hospital after a motor vehicle accident. She was not wearing her seat belt and sustained trauma to her head and chest. She has been on a ventilator since, but her pulmonary contusions have resolved, and she is to be weaned and extubated. She remains unaware of her environment and does not respond in a meaningful way to verbal or tactile stimuli.

   Based on her previously expressed wishes, her husband requests no further life-sustaining treatments, but asks if the use of morphine or lorazepam will hasten her death.

   Which of the following is the most appropriate response?

   A. Benzodiazepines have been shown to hasten death, but opioids have not.
   B. Both benzodiazepines and opioids have been shown to hasten death.
   C. Neither benzodiazepines nor opioids have been shown to hasten death.
   D. Opioids have been shown to hasten death, but their use is permissible because of the principal of Double Effect.
   E. Opioids have been shown to hasten death and should not be used.

10. A 57-year-old woman has been in your ICU for 6 days after having required a 40-minute resuscitation in the field before there was restoration of spontaneous circulation. Her medical history includes coronary artery disease. On admission, laboratory tests, including urine drug screen and a CT scan of the head, show no abnormalities.

    The patient's temperature is 36.5°C (97.7°F). She is nonresponsive on the ventilator with no sedative or paralytic agents. Her pupils are 5 mm, equal, and do not react. She has absent corneal, oculocephalic, and oculovestibular reflexes. She has no gag or cough even with aggressive endotracheal suctioning. She has no motor responses to painful stimuli. A 10-minute apnea test showed a rise of PC02 from 40 mm Hg to 63 mm Hg on arterial blood gas measurement and absence of spontaneous respiration.

    In addition to a repeat clinical examination, which of the following is the most appropriate next step in determining brain death?

    A. Repeat the neurologic examination in 24 hours.
    B. Warm the patient to a temperature of greater than 37.5°C (99.5°F).
    C. Conduct brain perfusion testing with Transcranial Doppler Ultrasonography or Cerebral Scintigraphy.
    D. No further action is needed to confirm the diagnosis of brain death.
    E. Conduct an electroencephalogram (EEG).

11. An 80-year-old male patient, with a past medical history of heavy smoker, hypertension, CHF and COPD, comes to see you complaining of severe dyspnea. He is on 4 liters of oxygen by nasal canula. He reports depression because he is not able to participate in any activities. He spends the day in bed. He also reports difficulties going to his medical appointments. The patient would like to discuss hospice. Which of the following is an eligibility criterion for hospice admission?

    A. Hypoxemia at rest (p02 <55 mm Hg)
    B. Oxygen saturation > 90%
    C. Left heart failure
    D. Arrythmia

12. Mr. Gallo, a 56-year-old male patient with history of COPD comes to your clinic accompanied by his wife. He complains of dyspnea, fatigue and anxiety. He is not able to rest well at night secondary to dyspnea. The patient

is on supplemental oxygen at 6 liters by nasal cannula, still feeling shortness of breath at rest. Today he would like to discuss with you, treatment options.
What is the INITIAL recommendation for this patient?

A. Start with systemic opioids
B. Start with Midazolam to treat his anxiety
C. Recommend a trial with cannabis
D. Start nebulized opioids

13. Regarding COPD, which of the following statements is true?

A. COPD prevalence is higher among poor adults than for adults with high income
B. GOLD "ABCD" assessment tool does not incorporate the number of exacerbations / hospitalizations
C. Acupuncture has no effect on dyspnea or exercise tolerance in patients with COPD
D. There are randomized controlled trials that assess the efficacy of benzodiazepines to treat the anxiety in COPD patients

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Wound Care/Pressure Ulcers/Pruritis/Xerostomia

Linh Nguyen, MD, and Patricia Bramati, MD

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1. A 45-year-old man with pancreatic cancer complains of severe itching to the palliative care clinic. His cancer is locally advanced and unresectable. He is receiving experimental chemotherapy. He has a good performance status. Recent imaging shows tumor progression with intra- and extra-hepatic ductal dilation. On physical exam, he has new jaundice and scleral icterus. The skin has mild excoriations but no obvious abnormalities. Labs reveal a total bilirubin of 13. Which of the following treatments will most likely relieve his pruritis?

A. Diphenhydramine
B. Hydrocortisone cream
C. Avoid common skin allergens
D. Refer the patient for stenting of the bile duct
E. Gabapentin

2. A 47-year-old man with progressive end-stage liver disease secondary to cholangiocarcinoma with metastases to the liver is admitted to home hospice. He complains of new onset of severe itching which interferes with his quality of life. His chronic abdominal pain is controlled on morphine for the last month. On physical exam, he has jaundice, sclera icterus, and ascites. What is the appropriate medical management?

A. Cholestyramine
B. Opioid rotation
C. Diphenhydramine
D. Topical emollient
E. Naltrexone

3. A 59-year-old woman with recurrent metastatic breast cancer has a fungating wound at the recurrence site on her chest wall. The wound is malodorous and necrotic. There is mild surround erythema. There is no fever or leukocytosis. Because of the odor she refuses to engage in social activities which she previously enjoyed. What is the best wound care treatment?

A. Systemic antibiotics
B. Alginate dressings

C. Topical lidocaine gel
D. Wet-to-dry dressing
E. Topical metronidazole gel

4. A 72-year-old man with end-stage chronic obstructive pulmonary disease (COPD) complains of mouth sores and oral dryness resulting in painful swallowing and limited oral intake. He says these symptoms have been worsening over the past 2 weeks. He denies any medication changes. On physical exam, the patient is noted to have erythema of the palate and small white plaques on the posterior oropharynx. Which of the following would most likely relieve his symptoms?

   A. Add oral nystatin suspension swish and swallow four times daily.
   B. Add topical mouthwash with lidocaine, diphenhydramine, and hydrocortisone swish and swallow four times daily.
   C. Add artificial saliva.

5. A 45-year-old woman with advanced breast cancer has a recurrence to the chest wall and has an open malignant wound. On physical exam, she has substantial exudate and a small amount of bleeding. Which of the following treatments would prevent the exudate from macerating other normal tissues and prevent exudate from dripping off the patient into clothes and bedclothes?

   A. Alginate dressings
   B. Saline wet-dry dressings
   C. Cotton gauze
   D. Thin film (OpSite, Tegaderm)

6. Mr LM is a 53-year-old male patient with history of alcohol abuse and heavy smoking. He was recently diagnosed with squamous cell carcinoma of the tongue. He presents today to start radiotherapy. He would like to discuss its potential side effects. Regarding xerostomia, which one of the following is an accurate description of its complications?

   A. The need of frequent visits to the dentist for evaluation of dental caries is a common occurrence associated with the reduction of salivary flow
   B. Xerostomia will not affect the patient's voice or speech
   C. Xerostomia will not affect the food taste
   D. Chewing sugar free gum is not effective in patients with xerostomia.

7. Which of the following statement is <u>NOT TRUE</u> regarding dysgeusia?

   A. Patients who received Tyrosine Kinase inhibitors and taxanes based regimens are at high risk of developing dysgeusia
   B. Using plastic utensils to avoid metallic taste
   C. Brushing teeth and tongue before meals to increase the taste of meals
   D. Acupuncture prevent dysgeusia
   E. Start zinc supplementation

Medicare Hospice Benefit

Linda Tavel, MD, and Patricia Bramati, MD

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1. Mrs. R is a 76-year-old woman with breast cancer, metastatic to lungs, has slipped on a wet surface and fractured her left hip. She has been on home hospice about 3 weeks. Her PPS prior to the fall was 60%. She has comorbidities of mild congestive heart failure, hypertension, and diabetes. The hip repair demonstrated no presence of metastatic disease in the involved leg (not pathologic fracture). The patient and her family have requested a brief course of rehab at a local skilled nursing facility to return to optimum function, as she was able to manage a fair amount of her self-care.

   Choose the correct choice below:

   A. She may enroll in the skilled nursing facility rehab at the local long-term care for rehab of the hip fracture and remain in hospice.
   B. She may enroll in the rehab program at the skilled nursing facility, but hospice will be responsible for payment.
   C. She must revoke hospice services while in treatment and can return to hospice following completion of rehab program.
   D. The hospice may discharge her for “seeking aggressive treatment”.

2. Mrs. G is an 87-year-old woman with end stage Alzheimer’s dementia. She is eligible for hospice with FAST 7B, PPS 40%, recurrent urinary tract infections and weight loss despite definite therapy. Her family does not wish a PEG and they are interested in hospice. The patient is attended by a Geriatric Nurse Practitioner affiliated with the medical school Geriatric Home Visit Service; she has not formal relationship with the hospice. The nurse practitioner wishes to remain attending for this patient.

   Which statement is correct?

   A. The nurse practitioner can be attending and certify Mrs. G’s eligibility for hospice as she knows her best.
   B. The attending nurse practitioner can do the face-to-face evaluation at the 3rd benefit period as long as it is within 30 days of the next benefit period.
   C. The nurse practitioner must relinquish management of her patient to the hospice medical director.
   D. The nurse practitioner can remain attending, but hospice physician must certify eligibility and do face-to-face evaluations for this patient.

3. Mr. M, a 55-year-old man with lung cancer metastatic to brain, has been in home-based hospice for 8 weeks. His wife is his principal caregiver and is doing well with medications for pain, agitation, and dyspnea. The last three days, she has called daily about her husband’s inability to sleep at night. She is exhausted and wishes something be done or she will take him back to the hospital.

   Which is the best choice?

   A. Respite for 5 days to allow the wife to sleep and get rest, also increase visits by the social worker to aid the wife with coping with her husband’s terminal illness.
   B. Increase patient’s restoril (temazepam) to 30 mg per night and discuss sleep hygiene with the wife: i.e., no naps after 3pm, no caffeinated beverages in evening, relaxation techniques.
   C. Recommend placement in nursing facility as wife cannot handle the patient.
   D. Admit patient to inpatient unit for workup and management of suspected delirium and medication adjustment.
   E. Start crisis/continuous care in their home to minimize husband’s distress and send the wife to a spa for 2 days to relieve her burnout.

4. It is Saturday of Thanksgiving weekend, and the local general hospital calls with a referral to hospice: a 67-year-old woman with end stage COPD has returned to the emergency department for the third time in as many

months. Her children have come into town and discussed goals of care at Thanksgiving dinner. They wish to consider hospice. The emergency department physician is willing to certify that she is terminally ill and states in fact that he believes she might die within 48-72 hours absent intubation and treatment in the Intensive Care unit. She is profoundly dyspneic and anxious.

The family believes the patient may have been on hospice for about 4 months last year, but she signed off with an exacerbation of her COPD and went to the hospital. Your hospice nurse practitioner is unavailable to go see the patient and hospice physician is very busy covering the inpatient unit. The patient has PPS 30%, is oxygen dependent, cachectic, dyspneic, and is asking to be kept comfortable. She has signed an out of hospital DNR. The family wishes to avoid acute care hospital setting, do not wish intubation nor further treatment other than comfort measures and prefer to take her home to die.

Do you admit this patient to hospice today? Which decision is least optimal from standpoint of patient's needs and hospice regulations?

A. You direct the ED physician to send patient home and you will admit the patient on Monday when NP/MD available, because a face-to-face evaluation has not been done by a hospice physician within the last 30 days.
B. You agree to admit to home crisis care immediately because if the patient dies within 2 days of admission, the face-to-face is considered "completed" and this patient seems to be actively dying.
C. You agree to admit to home crisis care because emergent admissions on weekends and when CMS database are unavailable are acceptable to admit without a F2F first.
D. You offer the hospice inpatient unit for uncontrolled symptoms as a hospice physician is present and can do the face-to-face today prior to her admission assessment.

5. In which situation does the physician bill hospice and the hospice bills Medicare A, reimbursing the physician?

A. The attending physician (who is not the hospice medical director or contract hospice physician) sees the patient for a condition related to the hospice diagnosis.
B. Covering physician for the attending sees the patient for a conditioned related to the hospice diagnosis.
C. Radiation oncologist has a contract with the hospice and performs palliative radiotherapy for a painful bone metastasis.
D. The hospice medical director who visits a hospice patient to determine ongoing hospice eligibility.

6. A local primary care physician has decided it is time to refer his 78-year-old patient Lucille to hospice, as the "family needs help with her care". He has written an order: "Admit to Hospice, Diagnosis Failure to Thrive". The family agrees with this plan. What is the next step in this situation?

A. Request medical records to verify the patient's weight loss and poor functional status in accordance with the Failure to Thrive LCD.
B. Call the physician and tell him that hospice no longer accepts patients with this diagnosis
C. Request medical records and discuss with attending physician Lucille's other medical conditions and trajectory of illness.
D. Refer the patient to a Home Health program.

7. Mr. Rolando Lopez is coming onto hospice service with Stage IV Adenocarcinoma of the Colon, metastatic to the peritoneum. He has a PPS of 50%. He no longer wishes to undergo definitive antineoplastic treatment, but has received paracentesis over the last four months, initially every 4-5 weeks or so, but lately he is requiring taps

more frequently—every three weeks. He becomes very symptomatic with his ascites. His wife wishes to know if he can continue the paracentesis on hospice. Your admit nurse is calling for advice. Your response?

A. Hospice does not cover interventions such as paracentesis. He waived this treatment when he signed on.
B. While hospice does not not cover paracentesis, the family may opt to pay for this when they wish.
C. Mr. Lopez can revoke hospice each time he wants to receive paracentesis and sign on after the procedure is completed.
D. The hospice will pay for his procedure and will be discussing its benefit to Mr. Lopez over time.

8. Gracie Pink is a resident of a local long-term care facility, on hospice for End Stage Dementia. She appears to be close to death. She has not eaten for
six days and is taking only sips of water. She appears comfortable, not short of breath nor in pain on intermittent morphine concentrate. On examination, she has central airway sounds, which have responded well to turning her frequently and small doses of glycopyrrolate. The director of nursing states that her staff is very busy and hasn't time to check in too frequently on Ms. Pink She anticipates that Ms,. Pink's symptoms will escalate. The DON is quite clear that a competitor hospice would do crisis care as the patient is dying and needs around the clock care. What would be an appropriate response?

A. Your hospice initiates Crisis/Continuous care for symptoms of dying.
B. The RNCase manager reviews the pattern of usage for morphine, and glycopyrrolate and schedules them as appropriate, allowing prn medications.
C. Multiple hospice team members increase their frequency of visits to monitor the patient's physical status, and her family's well-being.
D. You advise the Director of Nursing that initiating Continuous Care would be "fraud".
E. B and C are the best answer.

9. During Interdisciplinary Group Meeting, the team discusses the case of Ben Tuttle, a 57-year-old veteran with lung cancer, metastatic to liver and brain. The RN Case manager has noted that he seems more agitated with each visit she has made. His wife states she believes there is a gun in the house. He continues to drink heavily. Last week, he was outside his trailer, naked, brandishing a chainsaw. The Sheriff's Office was able to convince him to relinquish his chainsaw. Everyone is feeling unsafe when visiting this patient and wishes to discharge him. His wife does not wish to take him away from his home and refuses hospitalization.

What actions are required at this point?

A. No specific actions are required. Discharge him immediately based on safety reasons.
B. Discharge him with 5 days' notice, or whatever the State within which he resides requires.
C. If possible, adjust his medications, remove dangerous weapons and machinery, assess for suicidal ideations/desire for harm to self and others.
D. Send him back to the Veterans Administration for evaluation and treatment.

10. A hospice medical director is called about a 75-year-old female patient with a past medical history significant for New York Heart Association class III heart failure, diabetes, pancytopenia, recurrent urinary infections and recently diagnosed with SCC of the skin, who has been hospitalized three times in the last 6 months for sepsis secondary to urinary tract infections. The patient has recently lost 15 pounds, has shortness of breath at rest, and generalized joint pain. She lives with her husband and daughter and spends most of the day in bed needing assistance with her daily activities. The family is interested in pursuing hospice. This patient qualifies for hospice care eligibility because of which of the following factors?

A. Weight loss
B. Clinical judgement as the medical director

C. NYHA Class III heart failure
D. Recurrent urinary infections

11. A 65-year-old patient with a history of hypothyroidism, osteoporosis, hypertension, and renal failure, is currently receiving hospice care for advanced cervical carcinoma. Which of the following medication is not covered by hospice?

    A. Levothyroxine
    B. Oxycodone
    C. Senna
    D. Furosemide

12. A 56-year-old male with advanced pancreatic carcinoma was recently discharged home on home hospice. Patient lives with his wife who is his main caregiver. The wife states that her husband has been complaining of severe sharp abdominal pain since last night. The pain is localized in the epigastric area, radiates to the back and it worsens with vomiting. The patient had at least 7 episodes of emesis since last night. He is not able to tolerate oral foods or medications. The patient seems uncomfortable, and he is in acute distress. The family is requesting to take patient to emergency room. Which of the following is the most appropriate step in the management?

    A. Call 911 and take the patient to emergency room
    B. Transfer the patient to an inpatient unit for symptom control
    C. Transfer the patient to a nursing home because you feel the family needs a break
    D. Adjust his medications and follow up in 24 hours

AIDS

Linh Nguyen, MD, Amy Elizabeth Swan, MD, and Patricia Bramati, MD

1. Which of the following statements about the prognosis of patients with HIV is true?

    A. CD4 count and viral load are reliable predictors of prognosis.
    B. Anti-retroviral therapy has diminished the effect of persistent substance abuse and poor psychosocial support on disease progression.
    C. No patients with AIDS should be considered terminally ill until a physician with expertise in the treatment of patients with HIV has completed a thorough evaluation of the patient's condition.

2. A 40-year-old man presents with nausea and abdominal pain. In a response to a rise in his viral load, his infection disease physician started him on abacavir 2 weeks ago. What is the most appropriate action?

    A. Assure the patient these reactions are common. Stop the abacavir and resume it a lower dose in several days.
    B. Discontinue the abacavir immediately and notify the infectious disease physician about the possibility of a hypersensitivity reaction to abacavir.
    C. Prescribe analgesics and antiemetics.

3. A 50-year-old man has been admitted to your hospice unit for advanced HIV disease. His family asks whether they should discontinue his antiretroviral therapy and the prophylaxis for opportunistic infections. What would you advise the patient's family?

    A. The decision to discontinue antiretroviral therapy and prophylaxis for opportunistic infections must be based on the patient's goals of care, prognosis, and benefits and burdens of continued treatment.
    B. Established guidelines for withdrawing antiretroviral therapy and prophylaxis for opportunistic infections should be followed.
    C. An ethics consultation should be obtained before any decisions are made.

4. A 50-year-old woman presents to your office with complaints of odynophagia and dysphagia. Her most recent CD4 count was 85 cells/mm^3. On physical exam, there is no oral thrush. Which of the following statements in patients with HIV is true?

   A. The most common causes of esophagitis in patients with HIV/AIDS include Candida, herpes simplex (HSV), cytomegalovirus (CMV), and idiopathic (aphthous) esophageal ulcers.
   B. Empiric therapy with fluconazole would not be appropriate therapy.
   C. The absence of oral candidiasis rules out the presence of esophageal candidiasis.

5. A 55-year-old man presents to your office for routine evaluation. His family reports a gradual deterioration in cognition over the past 5 months. A recent evaluation by his neurologist could not identify a cause other than HIV. You suspect HIV-associated neurocognitive disorder (HAND). Which if the following statement regarding HAND is true?

   A. Even before the advent of anti-retroviral therapy, HAND was a rare complication of HIV.
   B. Antiretroviral therapy has essentially eliminated the incidence of HAND.
   C. The most commonly reported deficits in HAND are in attention and concentration, psychomotor speed, memory and learning, information processing, and executive function.

6. Which of the following AIDS condition is NOT a criteria eligibility for hospice admission?

   A. CNS lymphoma
   B. Concomitant active substance abuse
   C. Progressive multifocal leukoencephalopathy
   D. CD4 < 50 cells (2 or more assays at least 1 month apart) and viral load > 150,000
   E. Performance status (KPS) < 50 %

7. Which of the following drugs has the higher incidence (risk) of developing peripheral neuropathy?

   A. Zidovudine
   B. Lamivudine
   C. Ritonavir
   D. Indinavir
   E. Didanosine

8. Hospice eligibility criteria for HIV include:

   A. CD4 count < 50 cells/mcL, viral load >150,000 copies/mL
   B. CD4 count < 25 cells/mcL, viral load >100,000 copies/mL
   C. CD4 count < 100 cells/mcL, viral load >50,000 copies/mL

9. With improving treatments for HIV/AIDS, non-AIDS defining cancers account for most of the cancer burden in this population. Which of the following cancers has been shown to have the SAME prognosis for both the HIV population and the general population?

   A. Non-small cell lung cancer
   B. Anal cancer
   C. Hodgkin's Lymphoma
   D. Squamous cell carcinoma of head and neck

Chemotherapy, Targeted Therapy and Radiation: Principles and Common Adverse Effects
Amy Elizabeth Swan, MD

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1. A 45-year-old woman with breast cancer began her weekly chemotherapy treatment 3 weeks ago and now has severe nausea the morning before receiving each next dose of chemotherapy.
   At this point, her nausea is most likely to be alleviated by administration of an antiemetic drug that acts at which of the following anatomic areas?

   A. Cerebral cortex
   B. Chemoreceptor trigger zone
   C. Gastrointestinal tract
   D. Vestibular nucleus

2. A 62-year-old man with colon cancer has good relief of chemotherapy-induced nausea and vomiting with olanzapine.
   The antiemetic effect of this drug is most likely mediated by blocking which of the following receptors?

   A. Dopamine receptors in the chemoreceptor trigger zone
   B. GABA receptors in the medulla
   C. Neurokinin receptors in the chemoreceptor trigger zone and the vena cava
   D. Presynaptic nicotinic receptors in the vena cava
   E. Opioid receptors in the gut

3. A 67-year-old woman with metastatic breast cancer has neuropathic pain that she rates as 4 of 10 on a pain scale, with frequent flares to 7 of 10 that interfere with her daily activities. Her current medications include an opioid, a nonsteroidal anti-inflammatory drug, and gabapentin. She declines any medication changes and asks for a more "holistic" treatment for her pain.
   On the basis of clinical studies of pain relief from complementary therapies, which of the following has the best evidence for efficacy in pain management?

   A. Acupuncture
   B. Aromatherapy
   C. Biofeedback
   D. Guided imagery
   E. Manual lymphatic drainage

4. A 51-year-old woman with end-stage renal disease elected to stop dialysis five days ago. She has become more nauseated each day. The nausea is most likely to be alleviated by administration of an antiemetic drug that acts at which of the following anatomic areas?

   A. Cerebral cortex
   B. Chemoreceptor trigger zone
   C. Gastrointestinal tract
   D. Vestibular nucleus

5. A 53-year-old woman with advanced hepatocellular carcinoma, currently receiving oral chemotherapy, is seen in your outpatient palliative care clinic. Her pain is controlled, but both the patient and her husband are concerned that she has had little appetite and has lost 10 pounds since her last visit. She is still ambulatory and enjoying most of her former activities, but she misses the enjoyment of eating. On physical examination, you find that she is a thin woman with normal vital signs. She has no signs of candida infection or other lesions in her oropharynx. She has normal dentition, minimal ascites, and no lower-extremity edema.
   Of the following medications, which has the best evidence supporting effectiveness in treating her anorexia and helping her gain weight?

A. Dronabinol
B. Dexamethasone
C. Olanzapine
D. Thalidomide
E. Megestrol acetate

6. A 43-year-old woman with metastatic cervical cancer has had external beam radiation and intracavitary radiation. She received cisplatin-based chemotherapy. She presents with dull pain in her lower back with burning and throbbing pain in her rectum and perineum. Her pain is worsened by sitting and lying. She rates the pain as 5/10. Her exam is significant for sphincter incontinence and sensory loss in perineum and perianal area. Radiation changes to the perineum are noted. Her knee and ankle reflexes are normal.

   Which of the following best describes this type of pain?

   A. Radiation-related neuropathy
   B. Carcinomatous lumbosacral plexopathy
   C. Sacral plexopathy
   D. Chemotherapy-related neuropathy
   E. Cauda equina syndrome

7. A 62-year-old patient with underlying prostate cancer returns to the palliative care clinic with New-onset edema with dyspnea, headache, and new nausea with vomiting, myalgias, muscle cramping, and weakness. He has been complaining of increased heart burn for the weeks leading up to this event. He also has had some radiation dermatitis that he has been treating topically. He has not called you with these complaints recently but rather turned to “natural and herbal treatments” that his wife learned about at the local health food store. He has also recently had increased constipation. His medications at home include immediate- and sustained-release oxycodone, senna, colace, and Dexamethasone. He also takes licorice for his heart burn, St. John’s Wort for mild depression, Ginger for nausea, melatonin for insomnia, and uses calendula cream over his radiation site. On exam his heart rate is 90 bpm, and his blood pressure is 184/110. You note crackles on the Lung exam and peripheral edema. Additionally, while noting new generalized muscle weakness with decreased reflexes, some spasms are also present.

   Which of the following herbs that he was using is the likely cause of these symptoms?

   A. Licorice
   B. St. John’s Wort
   C. Calendula
   D. Ginger
   E. Melatonin

8. A 53-year-old male with oropharyngeal cancer develops severe mucositis after receiving radiation therapy. Which of the following has NOT been shown to be a prophylactic measure against mucositis?

   A. Salt and soda rinses
   B. Oral hygiene practices
   C. Honey
   D. Tobramycin

9. A 45-year-old female with metastatic breast cancer presents to your supportive care clinic with right shoulder pain. A review of her chart demonstrates a progressive bone metastasis in the right proximal humerus. Which one of the following is NOT an advantage to use a single dose of radiation versus a multi-fraction radiation treatment for pain control?

   A. Efficacy
   B. Less chance of recurrence
   C. Cost
   D. Convenience

Challenging Conversations in Palliative Care
Daniel Epner, MD, and Amy Elizabeth Swan, MD

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1. A 49-year-old woman was admitted to the intensive care unit 5 days ago because of cerebral hemorrhage. A family conference with the attending physician to determine goals of care is convened by a resident physician and registered nurse who are involved with the patient's care. The patient's husband and two adult children are present, and they are anxious to learn as much as they can about her condition, rehabilitation, and prognosis. The physician provides an overview of the patient's case and answers the family's questions, sometimes deferring to the resident physician and nurse, who have more knowledge of the patient's day-to-day status.
   The family members' satisfaction with the conference is most likely to be associated with which of the following?

   A. Experience of the attending physician
   B. Experience of the resident physician
   C. Length of the meeting
   D. Percentage of time the family members spoke
   E. Percentage of time the nurse spoke

2. An 83-year-old woman who has aspiration pneumonia as a consequence of advanced dementia and enteral tube feedings is admitted to hospice. She is nonverbal during the examination. A religious card is carefully tucked into her gown over her chest. During a discussion about goals of care, the patient's daughter says that it is not appropriate to make any plans because God decides when we die.

   Which of the following interventions is the most appropriate initial step?

   A. Ask the pastoral care service in the hospital to visit with the family.
   B. Clarify the daughter's spiritual beliefs with regard to end-of-life care.
   C. Offer to arrange a meeting with the daughter and the family's priest.
   D. Reassure the daughter that everything that can be done for her mother will be done.

3. While a physician and a hospice nurse are visiting a patient at home, the patient asks the nurse to lead a prayer. The nurse is of the same denomination as the patient, but the physician is not. The nurse asks the physician if he would like to lead the prayer instead.

   Which of the following responses by the physician is most appropriate?

   A. "I am not comfortable praying aloud, but I will be happy to stay here while you pray."
   B. "Thank you for asking, but I thought you knew that you and I are not of the same religious persuasion."
   C. "As a physician, I don't feel well trained in this area, but I would be happy to call the chaplain."
   D. "Thank you for asking, but it really is not appropriate for me, as a physician, to pray with you."
   E. "I see your faith is important. Would you prefer that a physician who shares your faith visit you from now on?"

4. A 73-year-old man with metastatic non-small cell lung cancer is admitted to hospice. You are visiting him at home to assess pain and nausea. You notice numerous crucifixes and other religious items around his house. He seems sad, and by the end of the visit you are concerned that he has clinical depression. When you ask about his

mood, he says “I’m not sure what it all means. All my life I’ve believed in God, and now that I have this disease, I’m not sure if I believe anymore.” You have different religious beliefs than the patient.

What is the best response right now?

A. Tell the patient apologetically that you cannot address his religious questions and ask the hospice chaplain to make a visit.
B. Counsel the patient that God is still present in his life.
C. Ask him to speak more about his concern and provide supportive listening.
D. Offer to pray with the patient.
E. Recommend that the patient speak with clergy from his church.

5. A 40-year-old woman with end-stage recurrent breast cancer and brain metastases has recently enrolled in home hospice and is now somnolent. During what you believe may be a final home visit as her palliative care physician, you are asked by her husband for your advice about how he should address the grief and bereavement needs of the couple’s 4-year-old son.

   Which of the following recommendations is best supported by evidence?

   A. Maintain daily routines to help the child feel secure.
   B. Wait for the child to ask questions, and answer in an age-appropriate manner.
   C. Refer the child to a child psychologist for cognitive-behavioral therapy.
   D. Refer the child to a child play therapy expert.
   E. Seek counseling for depression as a parent.

6. A 70-year-old woman diagnosed with metastatic pancreatic cancer presents to your clinic after deciding not to pursue chemotherapy and to instead focus on quality of life. She hopes to make it to her granddaughter’s wedding in 18 months, but given her poor performance status, you estimate her prognosis to be less than 6 months. She says she has always been a believer in the power of positive thinking and prayer and that “hope is all I have.” At the end of the visit, both the patient and her family ask you for an estimate of her prognosis. After exploring this request, you find that they all want explicit information.

   How can you best meet this request but also support the patient’s hope?

   A. Tell the patient and her family that you do not know what lies ahead but you will support them no matter what happens.
   B. Disclose the bad news about her realistic prognosis in a straightforward but compassionate way to the patient and her family.
   C. Disclose only the most optimistic estimates of prognosis to support hope as her clearly identified adaptive coping mechanism.
   D. Tell the patient that you do not know what lies ahead but you will support her no matter what happens, then discuss prognosis with her family alone so they can help make decisions.

7. A colleague approaches you in the hallway and shares with you the story of his recent disappointment in the death of a long-term patient of his. She had been under his care for the past 8 years, through her initial diagnosis of metastatic breast cancer, a pain crisis that he saw through with your help, and referral to hospice. Her daughter, who was her healthcare proxy and primary caregiver, called 911 a few days ago, leading to the patient’s admission. She was intubated for respiratory support due to a seizure from a new brain metastasis. She died in the ICU.

   The physician compares his tearful reaction to her death with his deep sense of satisfaction in helping other patients through their successes and declines. He said, “I feel that what I learn from their resilience and sense of closure when confronting death enhances my relationship with other patients and even the joy of seeing my children grow up.” He also tells you that a colleague of his expressed concern when seeing him cry at the time of her death, stating he had overstepped his professional relationship.

   How should you respond to his reflection?

A. Encourage his exploration of self-awareness regarding empathic connection with his patients.
B. Recommend that he seek support to address his concerns with overstepping professional boundaries.
C. Assess his risk for burnout affecting professional relationships and effectiveness.
D. Suggest he speak with his rabbi for spiritual support through this recent loss and job stress.
E. Refer him to a bereavement counselor from the local hospice to address his grief.

8. A 70-year-old Chinese woman has had worsening weakness on the right side for the past month. Her daughter-in-law is her primary caregiver and durable power of attorney. The patient's understanding of English is limited, and her family members, who speak to her in Mandarin, say that she appears to be intermittently confused. She tells them that she has no pain, but her facial expressions and whispered grunts suggest otherwise. Last week an MRI of the brain showed a large mass in the left hemisphere, but her family would like to withhold this information from her because 3 years ago, after a suspicious hilar mass tested negative for cancer, she confided to them, "I can deal with anything, as long as I know it isn't cancer." Accordingly, they tell her that she has had a stroke and they decline further testing and radiotherapy.

   What is the best next step to take in the care of this patient?

   A. Speak to the patient without the family present using a Mandarin interpreter.
   B. Evaluate the patient's decision-making capacity with a family member translating.
   C. Read up on Chinese cultural issues related to communication and end of life.
   D. Discuss the process of decision making with the patient and family using an interpreter.

9. A 4-year-old girl's brother (age 6) was enrolled in home hospice for management of symptoms related to a medulloblastoma. She has witnessed not only her brother's pain increase and his physical and cognitive aspects decline but also the great stress and sorrow in her parents. Her parents ask for advice about how to "handle" their daughter now that her brother is nearing death.

   What is the best recommendation for her parents?

   A. Discourage the sister from seeing her brother in his last days.
   B. Use euphemisms to describe death.
   C. Encourage her to attend the funeral.
   D. Make sure she is present when her brother dies.

10. You have just been promoted to serve as a medical director for a large hospice consisting of three doctors, twenty-two nurses, seven social workers, and two chaplains. The hospice consists of three teams that have not always worked well with the other teams. You feel the agency has the potential to be a great hospice but is stuck in "the way we always do things." Given your new role, you want to become the most effective leader. You review the business leadership literature to try to better understand the factors that have been shown to most significantly correlate with successful leadership.

    After reviewing this literature, what leadership style would you most likely adopt?

    A. A therapeutic person who helps his team work on the areas in which they are the weakest.
    B. A charismatic person who leads by exciting her team.
    C. A humble person who demonstrates determination to achieve team goals.
    D. A role model who shows the team how to utilize hard work and organizational skills to accomplish the team's goal.
    E. A catalyst who focuses on organizing people and resources to achieve predetermined objectives.

11. A 70-year-old Chinese woman who is a practicing Buddhist has had worsening weakness on her right side for the past month. The primary caregiver and durable power of attorney is her daughter-in-law. The patient's understanding of English is limited, and her family members, who speak to her in Chinese, say that she appears to be intermittently confused. She says that she has no pain, but her facial expressions and whispered grunts suggest otherwise. Last week, an MRI of the brain showed a large mass in the left hemisphere, but her family would like to withhold this information from her because 3 years ago, after a suspicious hilar mass tested negative

for cancer, she confided to them, "I can deal with anything, as long as I know it isn't cancer." Accordingly, they tell her that she has had a stroke and they decline further testing and radiotherapy. The family is concerned that the patient will ask the hospice team whether she has cancer.

Which of the following options is the best response to this concern?

A. Agree to support the family's request to not tell the patient about her diagnosis.
B. Discuss with the family their concerns about disclosing the diagnosis to the patient.
C. Help the members of the interdisciplinary team prepare responses that avoid the term "cancer."
D. Reassure the family that although the hospice team must tell the patient her diagnosis, the news will be delivered gently.

12. A 71-year-old woman with end-stage lung disease dies while in hospice. While enrolled in hospice, she required the services of the medical social worker. She was visited every other week by a music therapist who played folk guitar to induce relaxation and help her breath more comfortably.
An occupational therapist came once to address methods of maneuvering in her apartment while using a canister of supplemental oxygen. A respiratory therapist twice evaluated her response to the oxygen treatments. A home health aide assisted her with her medications. A bereavement counselor has been assigned to visit with her disabled spouse.

    Which of these professionals is required as part of the core hospice team as defined under the Medicare hospice benefit?

    A. Bereavement counselor
    B. Music therapist
    C. Occupational therapist
    D. Respiratory therapist
    E. Home health aide

13. A precocious 4-year-old boy with an irreversible cancer diagnosis has not been told he will die. While playing with the child-life therapist, he builds a "hospital" and an emergency entrance, noting that the little boy inside is very sick and dying and needs help. He has never before acknowledged concerns about being sick. After the child-life therapist explores his thoughts and concerns further, she shares them with the palliative medicine physician.

    What should the physician and child-life therapist do with this information?

    A. Keep it to themselves, because it was a confidential conversation.
    B. Immediately find the parents and coach them to speak to the boy more openly.
    C. Tell the social worker to make him her next priority visit.
    D. Inform the interdisciplinary team that he is aware of his situation.

14. An 83-year-old woman who has aspiration pneumonia as a consequence of advanced dementia and enteral tube feedings is admitted to hospice. She is nonverbal during the examination. A religious card is carefully tucked into her gown over her chest. During a discussion about goals of care, the patient's daughter says that it is not appropriate to make any plans because God decides when we die.

    Which of the following interventions is the most appropriate initial step?

    A. Ask the pastoral care service in the hospital to visit with the family.
    B. Clarify the daughter's spiritual beliefs with regard to end-of-life care.
    C. Offer to arrange a meeting with the daughter and the family's priest.
    D. Reassure the daughter that everything that can be done for her mother will be done.

15. A 70-year-old woman diagnosed with metastatic pancreatic cancer presents to your clinic after deciding not to pursue chemotherapy and to instead focus on quality of life. She hopes to make it to her granddaughter's wedding in 18 months, but given her poor performance status, you estimate her prognosis to be less than 6 months. She says she has always been a believer in the power of positive thinking and prayer and that "hope is

all I have." At the end of the visit, both the patient and her family ask you for an estimate of her prognosis. After exploring this request, you find that they all want explicit information.

How can you best meet this request but also support the patient's hope?

A. Tell the patient and her family that you do not know what lies ahead but you will support them no matter what happens.
B. Disclose the bad news about her realistic prognosis in a straightforward but compassionate way to the patient and her family.
C. Disclose only the most optimistic estimates of prognosis to support hope as her clearly identified adaptive coping mechanism.
D. Tell the patient that you do not know what lies ahead but you will support her no matter what happens, then discuss prognosis with her family alone so they can help make decisions.

16. A 70-year-old Chinese woman has had worsening weakness on the right side for the past month. Her daughter-in-law is her primary caregiver and durable power of attorney. The patient's understanding of English is limited, and her family members, who speak to her in Mandarin, say that she appears to be intermittently confused. She tells them that she has no pain, but her facial expressions and whispered grunts suggest otherwise. Last week an MRI of the brain showed a large mass in the left hemisphere, but her family would like to withhold this information from her because 3 years ago, after a suspicious hilar mass tested negative for cancer, she confided to them, "I can deal with anything, as long as I know it isn't cancer." Accordingly, they tell her that she has had a stroke and they decline further testing and radiotherapy.

What is the best next step to take in the care of this patient?

A. Speak to the patient without the family present using a Mandarin interpreter.
B. Evaluate the patient's decision-making capacity with a family member translating.
C. Read up on Chinese cultural issues related to communication and end of life.
D. Discuss the process of decision making with the patient and family using an interpreter.

17. A 4-year-old girl's brother (age 6) was enrolled in home hospice for management of symptoms related to a medulloblastoma. She has witnessed not only her brother's pain increase and his physical and cognitive aspects decline but also the great stress and sorrow in her parents. Her parents ask for advice about how to "handle" their daughter now that her brother is nearing death.

What is the best recommendation for her parents?

A. Discourage the sister from seeing her brother in his last days.
B. Use euphemisms to describe death.
C. Encourage her to attend the funeral.
D. Make sure she is present when her brother dies.

18. A 60-year-old man with metastatic pancreatic cancer who has progressed through multiple regimens of chemotherapy is admitted with a small bowel obstruction. CT scan shows carcinomatosis, and, based on this scan, the surgeons believe he is inoperable, and that hospice is the best plan. The surgery team has told the patient that surgery is not an option, but they feel uncomfortable telling him that there is no further curative therapy and that it is time to consider hospice. You are consulted to have this conversation. You call the patient's oncologist but find that he is out of the country for the month. The covering oncologist reviews the notes and scans and agrees with hospice. In your meeting with the patient and his wife, you start by introducing yourself as one of the palliative care physicians and state that his surgeons asked you to come see him to help with his pain and to help figure out where to go from here. After discussing his pain, you find out that he is quite comfortable at the moment and that he really wants to talk about next steps. He wants to know everything and wants his wife present, but no one else.

Which of the following is the best next step in the conversation?

A. Ask the patient for his understanding of the current situation.

B. Explain the differences between palliative care and hospice.
C. Ask the patient to tell you more about his pain so you can get a full history and make sure it is well controlled.
D. Tell him simply and kindly that curative therapy is no longer an option.
E. Begin with a warning remark, such as, “Unfortunately, I have some bad news.”

19. You are caring for an 83-year-old male with pancreatic cancer, who has suffered multiple complications and is now delirious and in the ICU. You believe he is nearing death and he is full code. He is a widower with an adult son Adam, who is his MPOA, and who lives far away and is a nurse practitioner. You have contacted him on various occasions during the patient’s prolonged illness and have picked up on some history of conflict between the father and son. So far in your discussions, Adam has been resistant to your attempts to change his father’s code status to DNR. Which of the following statements to the son is most likely to help you make the progress you need in this attempt?

    A. I’d like to understand more about your dad and what he values. Tell me about what it was like to grow up with him as your dad.
    B. It seems that as a medical professional you would understand the futility of performing CPR on your dad.
    C. Tell me what you believe happens during CPR.
    D. I’m sorry you have to make this decision. What can I do to make it easier on you?

20. You are called to see a 69-year-old female with end stage hepatocellular carcinoma who is entering terminal delirium. The family is at bedside and after discussing with them, they make it clear that they want all information that is available. They ask you how much longer you think she has. What’s the best response?

    A. There are many factors at this time that could influence that. We will have to wait until we get more information.
    B. This news may be very difficult for you to hear, but I think she will die in a matter of days to weeks.
    C. We don’t really know but we are here to support you.
    D. We are doing everything in our power to provide her every hope of fighting this.

Common Pharmacological Interactions in Palliative Care

Holly Holmes, MD, and Amy Elizabeth Swan, MD

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1. Which of the following is NOT an inducer of cytochrome P450 enzymes?

    A. Primidone
    B. Phenytoin
    C. Methadone
    D. Phenobarbital

2. A 68-year-old woman with a history of non-small cell lung cancer with bone and CNS metastases is admitted to the palliative care unit with uncontrolled pain for the past week. Previously her pain was well controlled with methadone at a stable dose over the previous several weeks. If no other medications have changed, and no new clinical events have occurred, what is a likely cause for her uncontrolled pain?

    A. Tolerance to methadone’s analgesic effect
    B. Auto-inhibition of methadone metabolism
    C. Auto-induction of methadone metabolism
    D. Non-adherence to methadone

3. The patient from question #2 was treated for a urinary tract infection one week ago and subsequently required an antifungal medication for vaginal candidiasis. She has been treated for a seizure disorder for the past 2 months, with changes in the dose of her anti-epileptic medication one week ago. Which one of the following medications interacting with methadone is the most likely cause of her uncontrolled pain?

    A. Phenytoin

B. Ciprofloxacin
C. Levetiracetam
D. Fluconazole

4. Up to 10% of Caucasians are poor metabolizers of medications primarily metabolized by the cytochrome P450 2D6 enzyme. As a result, such persons will have significantly reduced analgesic effect from which opiate medication?

   A. Codeine
   B. Hydrocodone
   C. Oxycodone
   D. Morphine

5. Which one of the following statements are TRUE?

   A. Grapefruit juice is an inducer of P450 enzymes and interacts with many medications.
   B. Increased body fat percentage, seen in older persons, results in decreased deposition of fat-soluble medications, such as benzodiazepines.
   C. Induction of cytochrome P450 enzymes usually occurs within 24 hours.
   D. Most drug interactions in patients receiving chemotherapy are among non-chemotherapy medications, such as warfarin and anti-epileptic drugs.

6. You are evaluating a 44-year-old female with breast cancer who has undergone surgery and radiation therapy and is now on tamoxifen. She is sent to you for depressive symptoms and you decide to put her on an antidepressant. Which of the following is the best option?

   A. Fluoxetine
   B. Paroxetine
   C. Sertraline
   D. Mirtazapine

7. The daughter of a 68-year-old female patient of yours calls your office with reports of her mom having increased sedation and lethargy for the last few days. You review her medications and she is on morphine IR TID, metoprolol daily, sertraline daily and alprazolam BID. Her PCP added diltiazem 2 days ago for better control of hypertension. The patient has no other worrisome complaints – no headache, dizziness, falls, or signs of infection. You suspect medication interaction. Which of the following is the most likely culprit?
   A. Morphine
   B. Metoprolol
   C. Sertraline
   D. Alprazolam

Ethical and Legal Decision Making

Larry Driver, MD and Amy Elizabeth Swan, MD

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1. Ms. PT is a 53-year-old African American elementary school teacher with widespread metastatic breast cancer involving liver, lung, brain and bone. She has been told that she is not a candidate for additional chemotherapy and that her life expectancy is limited. You have discussed goals of care with her and have recommended hospice care and “do not resuscitate” (DNR) status”, as cardiopulmonary resuscitation almost never restores people to life in medical situations similar to hers. She indicates that she wants to continue with chemotherapy at all costs and indicates she does not want her code status to be DNR. She does not have and has declined to complete a medical power of attorney, stating that she is going to beat this and does not want anyone interfering with her business. Both of her parents are dead. She has not lived with her husband for 20 years and has three children who live overseas and have not been involved in her care. She is close to most of her 7 siblings, who often accompany her to medical visits. Ms. PT is now admitted to the hospital for management of severe pain and rapidly develops an agitated delirium.

By legal criteria in the state of Texas and many other states, who is the surrogate decision maker for this patient regarding her medical care?

A. The patient's reasonably available adult children.
B. The sibling with whom she lives.
C. Her oldest child.
D. Her husband
E. No one, since she refused to appoint a medical power of attorney.

2. The patient's husband and children cannot be located after multiple attempts to find them. The patient's sister believes that the patient is in pain, due to the agitation associated with her delirium and demands that her sister be administered high doses of morphine for pain control. She and most of her siblings decline DNR status, stating their sister would never want to give up. The nurses are concerned about administering morphine because of concerns of inducing respiratory depression in someone they perceive to be at high risk for death while still full code, but do not want to see her suffer. They do not know what to do and are quite distressed. You call a family meeting and:

   A. Tell the family that her sister is agitated because of the delirium and not pain.
   B. Tell the family that you cannot administer morphine IV unless they agree to DNR status.
   C. Ask the family to explain what they know about their sister's medical situation.
   D. Tell the family they are interfering with their sister's care and comfort.
   E. Ask the family to vote on if their sister should get morphine.

3. By the conclusion of the family conference, the patient's siblings and the health care team agree that the patient should receive medications for comfort, as well as aggressive medical management for complications of the cancer. The family now concurs with the medical recommendation for DNR status and you place a DNR order in the patient's record. At your order, the patient is to be started on morphine 0.5 mg/hour by continuous infusion, with 2 mg IV q1hr prn pain, after a loading of 2 mg IV. Five minutes after the loading dose is administered, the patient's sister comes running out of the room, stating that her sister has stopped breathing. You go into the room and see that the patient has died. This situation represents:

   A. Physician assisted suicide
   B. Euthanasia
   C. The principle of double effect
   D. Terminal sedation of refractory symptoms

4. KL is 36-year-old mother of four children ranging in age from 9 months to 5 years old. She has breast cancer metastatic to bone and peritoneum, diagnosed shortly after the birth of her youngest child. She has been receiving TPN for short bowel syndrome related to Crohn's disease for the past 5 years. She now has multi-level malignant bowel obstruction, with an albumin level of 1.9. She has been advised to discontinue TPN due to lack of efficacy and because she has recently had multiple hospital admissions for sepsis related to her TPN line. She states, "I can't give up TPN-it is my source of life."

   You:

   A. Agree with her and continue TPN.
   B. Discuss the changing burdens and benefits of TPN for her in the context of her current medical situation.
   C. Discuss with her what would be her most important goals are over the next few weeks to months, given the recent decline in her medical condition.
   D. Both B and C

5. On further discussion with KL, you learn that she wants to live to see her daughter's kindergarten graduation next month. Together you decide that you will continue the TPN until her daughter's graduation unless she develops another infection. The decision to discontinue TPN before the daughter's graduation if the patient gets another episode of sepsis is an example of:

A. Withholding/withdrawing care
B. Shared decision making
C. Advance care planning
D. Physician assisted suicide
E. B and C

6. BL is a 64-year-old high school football coach with a history of acute leukemia. He is separated from his wife and has not seen her or communicated with her in 15 years. He initially received cytotoxic chemotherapy which failed to put him into remission. He left your care to pursue megavitamin therapy. He now returns, seeking additional help, due to fever and rapidly develops respiratory failure and a mixed delirium. His resuscitation status is full code. With head shakes and nods, he indicates that he is short of breath and has pain in his chest. His wife, who was called to the hospital by their youngest daughter, is reluctant to let the nurses administer haloperidol for management of the delirium or morphine for the amelioration of pain and dyspnea because she thinks they will make his symptoms worse. His oldest son states he does not want his father to suffer and wants him to receive whatever medications are necessary for comfort. The patient does not have a medical power of attorney. In many states, the person with legal authority for medical decision making in this situation is:

A. The patient's partner with whom he has lived for the past ten years.
B. The patient's oldest son
C. The majority of the patient's reasonably available children
D. The patient's wife
E. A judge, since the patient is delirious

7. With the help of the ethics consultant, you have now clarified that Mrs. BL has legal authority for medical decision-making for Coach BL. He continues to indicate that he is in pain and short of breath and appears to be very uncomfortable. There is considerable tension in the room between the spouse, partner and children regarding the administration of medications for his comfort. Your next steps may include:

A. Meet with the wife to better understand her reasons for declining comfort-oriented medications
B. Convene a family meeting with all involved family members and the patient's partner
C. Inform the wife that as health care clinicians, we are obligated to treat pain and other symptoms, unless the patient declines.
D. Meet with the patient's partner to develop a better understanding of the patient's goals and values
E. A, B, C and D

8. Mr. PT is a 44-year-old high school physics teacher who suddenly collapses while teaching class. He is rushed to the local emergency room where CT scan reveals a massive subdural hematoma from an aneurismal bleed. Four weeks later, he still shows no sign of recognizing family or friends does not have intelligible speech and cannot follow simple command. He intermittently opens his eyes and appears to be awake but does not consistently track environmental stimuli. He does not withdraw in response to painful stimuli. The attending neurologist performs a comprehensive evaluation and concludes that the patient has brainstem function. The findings in this patient are consistent with a diagnosis of:

A. Locked in syndrome
B. Brain death
C. Persistent vegetative state
D. Minimally conscious state
E. Coma

9. Ms. TP is a 79-year-old widow with advanced dementia. She has become cachectic, does not recognize her family members and needs assistance with feeding, bathing and dressing. Please indicate which of the following statements are true.

A. Tube feedings are medically futile in her current situation.
B. She should receive tube feedings to counteract weight loss.
C. Cardiopulmonary resuscitation (CPR) is futile in her current situation and the family should be strongly encouraged to consider Do Not Resuscitate (DNR) status for her.

D. A and C
E. None

10. Ms. TP's daughter and son meet with you and tell you that they want their mother to have tube feedings. You discuss their understanding of her medical situation and find that they believe she has years to live. You offer your medical opinion that her dementia is more advanced than they perceive and provide your medical opinion that her life expectancy is in the order of months, given that she has been admitted to hospital twice within the past 4 months with aspiration pneumonia. You offer that hand feeding nutritionally has been found to be just as beneficial as tube feeds for people in her condition and that individuals receiving tube feeds often find the tube to be uncomfortable, develop bloating and diarrhea and are still at risk for aspiration. They remain insistent in their request for tube feeds. You then:

    A. Agree to provide tube feeds, as they are the legally appointed surrogates in their mother's medical power of attorney.
    B. Further elucidate what they see as the benefits and burdens of tube feedings for their mother.
    C. Further elucidate what they know of their mother's previously expressed wishes regarding tube feeding.
    D. Show them their mother's most recent living will in which she requested she not be provided with artificial nutrition and hydration in the event that she was in a terminal condition, with a life expectancy of 6 months or less.
    E. B, C and D

11. A patient in your outpatient clinic asks for you to help them commit suicide. How do you respond?

    A. Let them know you understand their pain and write the prescription for PAS.
    B. Talk to your psychosocial team to help address any underlying spiritual, emotional or existential distress.
    C. Explore with the patient their reasons for this request.
    D. Seek consult/2nd opinion regarding confirmation of diagnosis and treatment options, ethical/legal obligations
    E. B, C, and D

12. Which of the following are reasons that a patient might request physician assisted suicide?

    A. Uncontrolled pain
    B. Loss of dignity
    C. Depression
    D. A and B
    E. All of the above

Geriatric Palliative Care, Dementia, Delirium, Palliative Sedation and End-stage Neurological Diseases

Maxine de la Cruz, MD

Dementia

1. Mrs. M is a 95-year-old lady diagnosed with end-stage dementia was recently admitted to hospice. The past few weeks had been very challenging as she had worsening of her agitation and is now better controlled with adjustments of her medications. Her primary caregiver is her 70-year-old daughter who likewise has her own medical issues. You discuss about caregiver burnout and recommend for her mother to be admitted for inpatient respite care. Which would be the most appropriate goal for the admission?

    A. Provide rest for the patient
    B. Streamline the patient's drug regimen to make it less complicated
    C. Provide rest for the caregivers
    D. Provide rest for the hospice home care team

2. A 77-year-old lady who is residing in a nursing home has progressive dementia. Since your last evaluation, the patient has lost 10lbs and the daughter is very concerned that her mother is going to starve to death. The nurses report that the patient sometimes chokes on her food. The daughter asks about placing a feeding tube. Which is the most appropriate next step for this patient?

A. Tell the daughter that a feeding tube is inappropriate because it will not prevent weight loss in a patient with dementia
B. Get a nutritionist involved by measuring the patient's daily caloric intake
C. Explain to the daughter that decrease in food intake is part of the natural process of dying
D. Request for a swallowing evaluation

3. Patients with Dementia may be eligible for hospice if the meet which of the following criteria in the Functional Assessment Scale (FAST)

A. Inability to handle the mechanics of toileting
B. Cannot sit up without assistance
C. Decreased ability to perform complex tasks
D. Urinary incontinence

4. You evaluated a patient which moderate dementia with some history of wandering and paranoia. The family reports that it has been difficult to cope with her delusions that they are all trying to harm her. She had called the police several times to report that one of her sons, who lives in Australia, is trying to kill her. Which of the following pharmacologic interventions are appropriate for this patient?

A. Valproic acid
B. Seroquel
C. Lorazepam
D. Citalopram

5. A 77-year-old lady with advanced dementia has been refusing her food and sometimes chokes. She has had significant weight loss and the daughter is concerned about starvation. So she discusses the appropriateness of a feeding tube with you. In patients with advanced dementia, which of the following outcomes have been shown to be present?

A. Increase in life expectancy
B. Improved healing of decubitus ulcers
C. Reduced risk of aspiration
D. Increased use of restraints

6. Your 70-year-old patient with advanced dementia has been reported to be more agitated over the last few days. Her daughter, who is her primary caregiver, reported that she has refused to eat and has become very combative as well. She used to ambulate with the help of an aide but has not been up to it the past few days. When you examine the patient, you note that the right knee is warm with moderate effusion. The patient grimaces when you palpate the area. What is the most appropriate next step?

A. Give the patient Tylenol as needed for her pain
B. Send the patient to a rheumatologist for a diagnostic and therapeutic tap of the knee joint
C. Recommend bed rest
D. Proceed to get more details in the history from caregivers

Delirium

7. A 69-year-old lady was brought into the emergency room by her daughter because the patient was observed to have developed confusion over the last 7 days. The daughter reports that her mom has a diagnosis of mild dementia and had been on donepezil 10mg daily. She had been doing fine and was functioning independently until about a week ago when she first noticed the patient becoming more irritable during the day and restless at night. What would be the best next best step in the management of this patient?

A. Start haloperidol at 1mg PO Q6H
B. Evaluate using the confusion assessment method questionnaire
C. Increase the dose of donepezil to 20mg daily

D. Call a neurology consult

8. A 63-year-old lady with metastatic pancreatic cancer was admitted to the hospital for failure to thrive. Laboratory findings with consistent with acute renal injury most likely secondary pre-renal in nature. The nurse reports that the patient has been moaning and appeared very restless. When asked, the patient complained of "pain all over" and then went back to sleep. The patient was started on morphine, which did not improve the patient's symptoms. She had been reported to be lethargic, but once tried to get up in bed screaming someone is trying to hurt her. A palliative consult was called to evaluate the patient's condition. Which is the most appropriate approach for this patient?

   A. Recommend starting an anti-depressant
   B. Initiate palliative sedation
   C. Recognize the presence of delirium
   D. Restrain the patient to avoid injury

9. A 66-year-old gentleman with prostate cancer metastatic to bone was admitted for intractable pain. His wife reports that for the past week, his pain has been worsening and his sustained release morphine was increased from 120mg every 12 hours to 120mg every 8 hours. The patient continued to deteriorate and became very agitated. He was started on haloperidol and continuous-infusion hydromorphone was substituted for morphine at equianalgesic dosing. Pain seems to have improved, but the patient's agitation worsens, and he was started on chlorpromazine. He is still agitated and delirious and the family asks you if there is anything else that can be done to make him more comfortable. Which of the following intervention can most likely provide relief of his symptoms?

   A. Opioid rotate from hydromorphone to IV fentanyl continuous infusion
   B. Continue to titrate hydromorphone and chlorpromazine
   C. Initiate palliative sedation
   D. Titrate the hydromorphone to lower levels

Palliative Sedation

10. A 77-year-old patient with a diagnosis of metastatic non-small cell lung cancer was admitted to the palliative care unit for delirium. The patient was initially found to have hypercalcemia and dehydration. She was also found to have pneumonia. The patient was given IV fluids, antibiotics and bisphosphonates. After the 3 days, the patient's delirium has worsened. She is more agitated and has required more opioids for pain and dyspnea. Subsequent medical management included rotation of opioids, anti-psychotics such as haloperidol and thorazine. The family is asking if there is something that could be done to make her comfortable. What would be the next best step?

    A. Initiate palliative sedation
    B. Increase the dose of opioid
    C. Tell the family that there is nothing else that can be done
    D. Continue the current management

11. A medical student doing a palliative care rotation was visibly disturbed after consideration for palliative sedation for a patient with refractory dyspnea and delirium seen on rounds. He wanted clarification on the difference between euthanasia and palliative sedation. Which of the following is the most appropriate response?

    A. They are the same as both involves sedation and consequently death of the patient
    B. Palliative sedation is done when conventional treatment in the relief of symptoms prove refractory
    C. Euthanasia is only done if there is no more hope of clinical improvement

12. Consideration for palliative sedation would be most appropriate for which of the following individuals?

    A. 48-year-old cachectic, bedbound female with sacral plexopathy due to metastatic colon cancer refractory to multiple aggressive pain management strategies
    B. 24-year-old male with C-7 incomplete quadriplegia who tells you that he has no meaning or dignity left in his life and just wants to end it all

C. 64-year-old obese woman with chronic pancreatitis causing severe pain refractory to opioid therapy and celiac plexus block
D. 73-year-old male with a palliative performance score of 20 in the context of metastatic prostate cancer, admitted for pain crisis

Palliative Care in End Stage Neurological Disease

13. A 64-year-old man who was given a diagnosis of amyotrophic lateral sclerosis (ALS) two years ago is becoming increasingly debilitated. He is still able to work on a part-time basis, but he knows that at some point he will become completely dependent and unable to care for himself. He confides to his physician that he anxious about becoming a burden to his wife and two adult children. Which of the following responses by the physician is most appropriate?

    A. Arrange for a visit from a hospice nurse to discuss hospice admission
    B. Explore his priorities and implement appropriate advance-care planning
    C. Give him a prescription for an antidepressant
    D. Give him a prescription for a benzodiazepine and instruct him about its proper usage
    E. Refer him to a local ALS support group

Psychosocial and Spiritual Issues

Marvin Delgado-Guay, MD

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1. Mrs. PT is a 54-year-old woman with advanced myelodysplastic syndrome and is bedbound with increasing fatigue. What question by Mrs. PT most suggests spiritual suffering?

    A. “Why is this happening to me?”
    B. “How will I pay for my care?”
    C. “What is likely to happen next?”
    D. “Will I suffocate?”

2. Mrs. TY is a 72-year-old former cleaning woman with Rai Stage IV chronic lymphocytic leukemia, poorly controlled diabetes mellitus and consequent peripheral neuropathy, renal insufficiency, and coronary artery disease. She has advanced congestive heart failure that is not responding well to medical therapy. Her daughter asks you not to talk to her about the cancer because it “would take away all hope.” She wants you to give chemotherapy but tell the patient it is “strong antibiotics.”

    Your best next response is to:

    A. Agree and wait for a future opportune time
    B. Ask the daughter more about what kind of hope she would like her mother to have
    C. Disagree and tell the patient the truth
    D. Tell the daughter you must tell the patient the truth

3. Mr. AS 55 y/o man with advanced colon carcinoma s/p chemotherapy. He presents to you with a complaint of feeling “bummed out” for the last 3 months. His wife died 4 months ago. He is not working anymore. He does not have anxiety or a change in appetite or psychomotor retardation. Mild change in sleep habits. His colostomy has been working well. He expressed some meaning in his life.

    Which of the following is the most likely diagnosis?

    A. Schizophrenia
    B. Anxiety disorder
    C. Manic-depressive disorder
    D. Adjustment disorder with depressed mood

E. Major depressive episode

4. Mr. AJ is a 45-year-old man who has advanced AIDS and Kaposi's sarcoma. He has been non-adherent with HAART and has a multiple resistance strain of HIV. He has lost weight and reports a poor appetite. He sleeps poorly. He reports a lack of energy and spends most of his time at home. During a visit to his physician, he reports feeling not having interest in anything in his life. He is comfortable talking about the fact that he will die. A clinical suspicion of major depression is most supported by:

   A. changes in appetite and sleep patterns
   B. feelings of hopelessness and helplessness
   C. lack of energy
   D. comfort in talking about the prospect of death

5. Mr. BT is a 52-year-old man with metastatic renal cell carcinoma, s/p nephrectomy and chemotherapy. He has a postoperative pain syndrome with formation of a neuroma with neuropathic pain. Although he is an airline pilot, he has been unable to work for the past year. He might be expected to be suffering in which sphere?

   A. emotional
   B. practical
   C. spiritual
   D. all of the above
   E. none of the above

6. Mr. OC is a 61-year-old farmer with non-small-cell lung cancer metastatic to liver and bone. In talking about the future course of his illness, he begins to cry. His wife is also tearful. Besides having facial tissues available, the next best approach is to:

   A. continue with the discussion
   B. reassure him
   C. be silent
   D. tell them to stop crying

7. Dr. WW III is a 74-year-old obstetrician/gynecologist with chronic myelogenous leukemia that recurred after treatment with imatinib and interferon. His counts are controlled with cyclophosphamide. After an office visit, he asks you to help him commit suicide. You should respond next by saying:

   A. "Tell me more about what you have in mind."
   B. "I would never do that."
   C. "Are you having trouble sleeping?"
   D. "Where do you have pain?"

8. A 42 y/o man has a history of suicide attempts and now diagnosed with advanced melanoma. Today when you see him in your office, he seems more depressed than usual. He recently lost his job and has been having marital problems. You ask him if he has suicidal thoughts, and he says that he has one occasion in the last few days. He says he is "OK" right now, but yesterday he had planned to shoot himself. Based on the history, which of the following should you do at this point?

   A. Voluntary hospitalization unless he refuses, then institute involuntary commitment
   B. Keep him at your office for 3-4 hours and observe; if he is ok then send him home with close follow-up
   C. Since he is not acutely suicidal in your office, arrange for visiting nurse to check on him
   D. Since he is not acutely suicidal in your office, arrange for outpatient follow up tomorrow
   E. Voluntary hospitalization, if he refuses, then arrange appropriate follow-up tomorrow

9. Ms. AS 28 y/o woman with advanced breast cancer s/p chemotherapy is brought in by her husband. He says that she has become a worrywart. She is always worried about her job. She worries about her parents who live 50 miles away. She worries sometimes about her marriage and that her husband doesn't love her. She worries that they don't have enough money to make it through the month. She has had some episodes of hyperventilation.

She does not relate any sleep disturbances or appetite changes. She says she has been worried “all her life”. You diagnose her with generalized anxiety disorder.

In addition to behavioral therapy, which of the following is the best treatment for this disorder?

A. Haloperidol
B. Lithium
C. Clonazepam
D. MAO inhibitor
E. Buspirone or similar agent

10. Ms. LR 36 y/o woman with advanced breast cancer presents with an attack of severe shortness of breath, palpitations, shaking, diffuse numbness, and an intense fear of dying. These attacks are not precipitated by any known factor or event. She is not on any medications and does not drink alcohol. Additionally, she is particularly scared to leave her house unless she can go with someone. Her physical examination is completely normal. A whole “battery” of tests, including thyroid functions, electrolytes, ECG, CT chest, and Holter monitoring has been normal. Besides cognitive behavioral therapy, which of the following is the best initial therapy for this woman?

A. Diazepam
B. Lithium
C. Flurazepam
D. Fluphenazine
E. Paroxetine