M_OCNPQ (400+ Questions) - Quiz Questions with Answers

1.

Which of the following is not routinely included as part of a diagnostic work-up for colorectal cancer?

Barium enema

Colonoscopy

Bone marrow biopsy

Carcinoembryonic antigen (CEA)

Explanation:

A bone marrow biopsy is not routinely performed as part of a diagnostic work-up for colorectal cancer. Barium enemas provide a clear picture of the large intestine and are useful in detection of smaller tumors. Colonoscopy provides increased visualization and the ability to biopsy lesions. CEA is elevated in later stages of colorectal cancer and may have prognostic value at diagnosis or disease recurrence.

2.

Which of the following is an example of a “B symptom” associated with lymphoma?

Headache

Painful lymph nodes

Night sweats

Edema

Explanation:

"B symptoms" associated with a lymphoma diagnosis are a key factor in the staging of the disease. The presence of B symptoms is associated with a poorer prognosis. Unexplained fever, drenching night sweats, weight loss and pruritus are all B symptoms associated with lymphoma. Headache, edema, and painful lymph nodes are not classified as B symptoms.

3.

The clinical manifestations of multiple myeloma can by summarized by the acronym CRAB. What does the A in CRAB stand for?

Abdominal pain

Adrenal insufficiency

Anemia

Anorexia

Explanation:

Clinical manifestations of multiple myeloma include hyperkalemia, renal insufficiency, anemia and bone lesions. Lab studies may show anemia, thrombocytopenia, leucopenia, and elevated blood urea nitrogen levels. Anorexia may be present along with weakness, weight loss, and

fatigue. Pain is more likely to be associated with bone lesions and may present as back pain, rather than abdominal pain.

4.

An example of a psychological effect that may occur after a patient completes his cancer treatment is:

Peripheral neuropathy

Ambivalence regarding health care follow up

Employment-related problems including fear of loss of employment

An increased passion or zest for life

Explanation:

The effects of surviving a cancer diagnosis can be categorized as physiologic, psychologic, social, and spiritual. These effects can occur at any point across the survivorship continuum. Ambivalence regarding health care follow up is an example of a psychologic effect that may occur in cancer survivors. Peripheral neuropathy is an example of a physiologic effect that can occur as a result of cancer treatment. Fears regarding employment, including the fear of loss of employment, loss of benefits, and lack of promotion are examples of social effects that may occur. Cancer survivors may experience spiritual effects from having experienced cancer, including an increased passion and zest for life or increased self-acceptance.

5.

Which of the following statements is true regarding the development of secondary cancers in cancer survivors?

Secondary cancer is not likely to be caused by the treatment of the original cancer (i.e. chemotherapy or radiation therapy).

Patients who received a bone marrow transplant are not at risk of developing a secondary malignancy.

Cancer survivors have a 14% higher risk of developing a new cancer.

There are no modifiable risk factors in the development of a secondary cancer.

Explanation:

According to the National Cancer Institute, cancer survivors have a 14% higher risk of developing a new cancer. The development of a secondary cancer is most likely caused by previous cancer treatments including chemotherapy, radiation therapy, and bone marrow and stem cell transplants. Patients should be educated to discuss risk-lowering strategies with their physician and how to watch for signs and symptoms of a secondary malignancy.

6.

You are caring for a 35-year-old female patient who completed treatment for Hodgkin's disease two years ago. Which of the following statements by the patient warrants further follow up by the nurse?

"I have had trouble becoming pregnant since I had my cancer."

"I always get my flu shot every year."

"I often get sick but I make sure that I get to my doctor right away when I think I might have an infection."

"I have been experiencing shortness of breath over the past month when going up and down my stairs at home."

Explanation:

Possible long-term or late side effects can occur in patients treated for cancer. Secondary cancers, fertility issues, and thyroid, heart, and lung problems are among the possible long-term effects a patient may experience after undergoing treatment for Hodgkin's disease. The ABVD regimen, a common treatment for Hodgkin's disease, contains the drug bleomycin, which can cause irreversible damage to the lungs. If the patient received radiation therapy to the chest, lung damage may also occur. The patient complaining of shortness of breath post treatment should be further evaluated to determine the cause.

7.

Pertuzumab is a monoclonal antibody used in combination with which two chemotherapeutic agents to treat metastatic breast cancer with HER-2 expression?

Cisplatin and paclitaxel

Trastuzumab and docetaxel

Lapatinib and trastuzumab

Docetaxel and cisplatin

Explanation:

Pertuzumab is a humanized monoclonal antibody that targets extracellular human epidermal growth factor receptor 2 protein. It is used in combination with trastuzumab and docetaxel for the treatment of metastatic breast cancer in patients who have not received prior anti-HER2 therapy or chemotherapy to treat metastatic disease. When combined with trastuzumab, a more

complete inhibition of HER 2 signaling occurs due to the binding of pertuzumab to a different isotope than trastuzumab.

8.

Mr. Smith is a 55-year-old patient currently undergoing treatment for prostate cancer. He is taking Vicodin as needed for pain and reports that he takes one Vicodin every six hours for pain control. He presents today complaining of abdominal fullness, bloating, and cramping and states his last bowel movement was five days ago. Mr. Smith reports that he has been regularly taking laxatives to help with his constipation but his symptoms have persisted. According to the NCI grading scale, Mr. Smith's constipation would be graded as:

Grade 1

Grade 2

Grade 3

Grade 4

Explanation:

According to the common terminology criteria for adverse effects developed by the National Cancer Institute and National Institute of Health, Mr. Smith's constipation would be classified as a Grade 2. Grade 2 constipation is defined as persistent symptoms with regular use of laxatives or enemas and limiting instrumental activities of daily living. Grade 1 is defined as occasional or intermittent symptoms with occasional use of stool softeners or laxatives. Grade 3 is defined as obstipation with manual evacuation indicated. Grade 4 has life-threatening consequences with urgent intervention needed.

9.

Mrs. Jones is a 63-year-old patient with breast cancer. She is being treated with docetaxel, doxorubicin and cyclophosphamide. Mrs. Jones presents today with numbness and tingling of her

fingers and toes. She reports a worsening of these symptoms over the past two months. She was unable to button her blouse or tie her shoes today due to the numbness in her fingers. She can no longer drive due to the worsening numbness in her feet. Mrs. Jones' peripheral neuropathy would be classified per the NCI grading scale as:

Grade 1

Grade 2

Grade 3

Grade 4

Explanation:

Mrs. Jones' neuropathy would fall into the Grade 3 category, which is defined as severe symptoms that limit self-care activities of daily living. Grade 1 peripheral neuropathy per the NCI grading scale is defined as a loss of deep tendon reflexes or paresthesia with the patient being asymptomatic. Grade 2 neuropathy is defined as moderate symptoms with limitations on instrumental ADL's. Grade 4 is defined as having life-threatening consequences with urgent intervention needed.

10.

Most toxicity-grading criteria scales range from:

0-2

1-5

1-10

1-100

Explanation:

The National Cancer Institute (NCI) created a Common Toxicity Criteria system (CTC v 1.0) in 1983 to aid in the recognition and grading of adverse effects of chemotherapy. This system was most recently revised in 2010 (v 4.03) and represents the first comprehensive, multimodal grading system for reporting both acute and late effects of cancer treatment. The World Health Organization and Cooperative Oncology Groups also offer criteria for grading toxicities. The purpose of grading toxicities is to provide an objective assessment. The grade of toxicity will determine the reason for dosage adjustments or delays. Most toxicity scales range from 1-5, with 1 indicating mild toxicity, 2 meaning indicating toxicity, 3 indicating severe toxicity, 4 indicating severe or life-threatening toxicity, and 5 indicating death.

11.

You are caring for a patient who has elected to stop treatment for his advanced metastatic cancer. He has expressed that he "just wants to be comfortable" and a do-not-resuscitate order has been written based on his wishes. His family expresses concerns while you are discontinuing the patient's intravenous fluids. Which of the following statements is most appropriate in teaching the patient's family about hydration and the end of life?

"If you would like me to turn the fluids back on I will do that."

"The physician wrote the order to discontinue the fluids. If you would like to speak to the physician, I will page him for you."

"Lessening the amount of fluid through the IV can actually help to decrease certain symptoms such as excess congestion.

"We typically do not administer fluids to patients with a do-not-resuscitate order."

Explanation:

Research supports that dehydration in dying patients can actually be beneficial in alleviating symptoms such as pulmonary secretions and congestion, vomiting, edema, and ascites. Families are often troubled by the thought of their loved one experiencing dehydration and feeling thirsty. Providing the family with education regarding the benefits of dehydration in the dying patient may help to alleviate their anxiety.

12.

Mr. Jones is a 50-year-old patient admitted to the oncology unit with complaints of nausea, abdominal pain, fever and fatigue. He states that he has noticed his urine has appeared much darker over the past two days. He was treated for lung cancer one year ago with chemotherapy. Additionally, Mr. Jones states he has noticed "purple splotches" on his lower extremities. His CBC shows a hemoglobin level of 8 g/dL and a platelet count of 30,000/mm^3. Which of the following do you suspect Mr. Jones may be experiencing?

Gastrointestinal bleed

Thrombotic thrombocytopenia purpura (TTP)

Von Willebrand disease

Disseminated intravascular coagulation (DIC)

Explanation:

Thrombotic thrombocytopenia purpura (TTP) is a blood disorder that leads to blood clots forming in small vessels throughout the body. TTP is characterized by thrombocytopenia, hemolytic anemia, and the presence of petechiae or purpura (small red or purple spots caused by hemorrhaging of small blood vessels). Patients with TTP often present with nausea, abdominal pain, fever, and fatigue. Hemoglobinuria may be present as well. Patients with a cancer diagnosis and those treated with chemotherapy may be at risk for developing TTP. Von Willebrand disease affects clotting due to a deficiency of Von Willebrand factor. Disseminated intravascular coagulation (DIC) is a bleeding disorder characterized by an alteration in the blood-clotting mechanism causing an acceleration of the clotting cascade. Hemorrhage occurs due to the depletion of clotting factors.

13.

A 25-year-old female patient newly diagnosed with stage 4 Hodgkin's lymphoma presents to the outpatient oncology unit for her first dose of chemotherapy. You receive orders to administer ABVD. Which of the following would be appropriate to teach the patient regarding her chemotherapy?

"The chemotherapy will be administered intravenously. If you experience any pain or burning at your IV site, notify me right away as some of the medications can cause tissue damage if they leak out of the vein into the tissue."

"Your chemotherapy drugs are considered monoclonal antibodies and may cause an allergic reaction. Please let me know if you experience fever, chills, nausea, or sweating during your infusion."

"The chemotherapy you are receiving can does not affect fertility. You can continue to family plan as usual."

"The chemotherapy you are receiving is not likely to cause hair loss."

Explanation:

Vesicant chemotherapeutic agents such as those utilized in ABVD have the potential to cause severe tissue damage if they leak into the subcutaneous tissue during an extravasation. ABVD can cause infertility as well as birth defects. None of the medications in ABVD are classified as monoclonal antibodies. ABVD will cause hair loss as a side effect.

14.

Thrombocytopenia describes:

A decrease in the circulating platelets below 100,000/mm^3

A decrease in the circulating white blood cells below 1500/mm^3

A decrease in the circulating neutrophils below 1000/mm^3

A decrease in the circulating red blood cells below 1000/mm^3

Explanation:

Thrombocytopenia is defined as a decrease in the number of circulating platelets. Leukopenia is defined as a reduction in white blood cells. Neutropenia is defined as a decrease in the number of circulating neutrophils, usually less than 1000/mm^3. Anemia is defined as a decrease in hemoglobin level or circulating erythrocytes. Pancytopenia is a term used when there is a deficiency of all the cell elements of the blood including erythrocytes, platelets, and all of the components of the white blood cells.

15.

You are caring for a 39-year-old patient who is undergoing treatment for newly-diagnosed breast cancer. During your assessment the patient becomes tearful and states, "I just can't stand the way I look without hair. I'm sure my husband is not going to want to be with me anymore." Which of the following statements by the nurse is most appropriate to address how the patient is coping with her alteration in body image?

"Don't worry, your husband will still want to be with you. Your hair will grow back."

"What you are feeling is a normal response. In time you will accept it."

"It is okay for you to grieve the loss of your hair and to be angry about it. Would it be okay for us to talk about some resources and options you could utilize to help with this loss?"

“I would be happy to see if we can get you a turban or scarf to wear.”

Explanation:

Alteration in body image is a common occurrence among cancer patients due to the actual or perceived changes in their bodies. Nurses should be aware of this risk and assist in providing interventions to minimize the severity. Allowing patients to discuss the changes and how they are affecting them both physically and emotionally is an important aspect in helping patients to cope. False reassurance and minimization of patient feelings should be avoided. Multiple resources exist that can help patients cope with changes. Nurses should support patients through active listening and non-judgmental acceptance while allowing patients to express their feelings and grieve their losses.

16.

You are preparing to provide education to one of your patients prior to discharge. Which of the following should be evaluated prior to initiating the teaching?

The patient’s comfort level

The patient’s readiness to learn

The patient’s cognitive ability to learn

All of the above

Explanation:

In order for patient education to be effective, the nurse must evaluate and assess the patient to determine the most appropriate method of providing education. In addition to assessing the patient’s learning style and potential barriers to learning, the nurse must look at factors such as the patient’s readiness and motivation to learn, his cognitive ability, and his comfort level. A person who is experiencing pain or distress will not have the ability to focus on the education provided. It is important for the nurse to ensure that the material provided is appropriate for the

patient's cognitive ability. Asking the patient how they would prefer to learn will provide the nurse with options for individualizing the education plan.

17.

You are caring for a dying patient who is receiving high-dose intravenous morphine for pain management. The family reports that the patient has begun hallucinating and having "muscle twitches." What is the most likely cause of the patient's symptoms?

Accumulation of opioid metabolites

Dehydration

Hypoxemia

Ineffective pain control

Explanation:

High doses of opioids along with impaired renal function can cause the accumulation of opioid metabolites, resulting in hallucinations, myoclonus, and seizures. Myoclonus is defined as the involuntary jerking of a muscle or group of muscles. Myoclonus can be treated with the use of benzodiazepines. Because the dying patient has diminished renal function, less of the opioid may be needed to achieve adequate pain relief. Alteration in renal sufficiency causes less drug clearance and more of the drug and its metabolites to remain in circulation.

18.

The Patient Self-Determination Act, established in 1990, requires that all hospitals receiving federal funds must ask patients at the time of admission if:

They have developmental disabilities.

They have advanced directives.

They wish to release any health information to a 3rd party.

They would like a copy of their bill of rights.

Explanation:

The Patient Self-Determination Act was passed by Congress in 1990 and requires all health care agencies including hospitals, long-term care facilities, and home health agencies that are receiving Medicare and Medicaid reimbursement to recognize living wills and durable power of attorney for health care. In addition, these facilities must ask about the presence of advanced directives at the time of admission and give patients requesting information about advance directives the appropriate information.

19.

You are caring for a patient who has been diagnosed with malignant melanoma and who is being treated with interferon 10 million units/m^2 SQ for 48 weeks. Which of the following clinical findings warrants further follow up by the nurse that may result in discontinuation of treatment?

An oral temperature of 100 degrees

A hemoglobin level of 11.5 g/dL

A platelet count of 60,000/mm^3

A triglyceride level of 1200 mg/dL

Explanation:

Interferon alpha-2 B can cause hepatotoxicity as well as hypertriglyceridemia. A normal triglyceride level is less than 150 mg/dl with levels of 500 mg/dl or higher considered in the very high range. If hypertriglyceridemia remains persistent and severe, treatment with interferon should be discontinued. Other side effects of interferon alpha-2 B include flu-like symptoms such as fever, myalgia and fatigue. Interferon can also cause neutropenia, anemia, and thrombocytopenia. Hematologic effects should be monitored and dosages adjusted or held according to severity.

20.

Vorinostat, a targeted therapy known as a histone deacetylase inhibitor, is FDA approved for the treatment of:

Acute myelogenous leukemia

Multiple myeloma

Cutaneous T-cell lymphoma

Breast cancer

Explanation:

A histone deacetylase inhibitor (HDACi) is a targeted therapy agent that affects cancer cells by arresting the cell cycle and inhibiting angiogenesis and cell apoptosis. Histone deacetylase inhibitors are targeted specifically toward cancer cells and appear to have little effect on normal cells due to the increased expression of HDAC in cancer cells. Currently there are two HDACi that are approved by the FDA: vorinostat and romidepsin. These drugs are approved for the treatment of cutaneous T-cell lymphoma. Romidepsin has an additional FDA approval for the treatment of peripheral T-cell lymphoma.

21.

Which of the following statements is true regarding Totect administration for the treatment of anthracycline extravasation?

Totect infusion should be initiated within two hours of extravasation.

Totect is administered over the course of 48 hours.

Apply ice to area of extravasation prior to Totect administration, but remove ice 15 minutes before the start of the infusion.

Infusion of Totect should be initiated in the same arm as the extravasation.

Explanation:

Totect is FDA approved for the treatment of anthracycline extravasation and has a 98% efficacy rate with minimal toxicities. Totect infusion should be initiated as soon as possible, within six hours of extravasation. Totect is administered as a three-day infusion and is given over 1-2 hours. It should be infused in an area other than the extravasation site. Ice should be applied prior to infusion and removed 15 minutes before the Totect infusion to allow sufficient blood flow to the area to maximize the ability of the drug to reach the extravasation site.

22.

All of the following are risk factors in the development of acute myeloid leukemia (AML) EXCEPT:

Down syndrome

Previous chemotherapy

Exposure to benzene

Female gender

Explanation:

Acute myeloid leukemia (AML) is a cancer of the blood and bone marrow affecting the myeloid cells, which develop into mature blood cells, such as white cells, red cells and platelets. There are several risk factors identified in the development of acute myeloid leukemia including certain genetic disorders such as Down syndrome, Klinefelter's syndrome and Fanconi's anemia. Additionally, previous cancer treatment, exposure to ionizing radiation, increasing age, smoking, and obesity are all believed to increase the risk of AML. Males are more likely to develop AML than females.

23.

You are caring for a patient who was diagnosed with metastatic lung cancer. The patient now has brain metastasis that was discovered after having an MRI earlier in the day. While completing your assessment, the patient begins complaining of a severe headache and nausea. The family states that he has had trouble remembering things and has exhibited some personality changes over the past two days. You notify the physician of the changes in the patient's condition. Which of the following interventions do you expect to see ordered by the physician?

Lumbar puncture

Stat dose of IV dexamethasone

CT scan of the chest and abdomen

P.O. anticonvulsant q 6 hours

Explanation:

The most common cause of increased intracranial pressure is brain metastasis, in which vasogenic cerebral edema allows fluid and protein to leak out of the capillaries into the extracellular space, primarily in the white matter of the brain. If severe, increased intracranial pressure can displace brain tissue from one cranial compartment to another, causing

herniation. Symptoms of increased intracranial pressure include headache, nausea, vomiting, change in level of consciousness, personality changes, ataxia, and seizures. Treatment should focus on the rapid reduction of cerebral edema and reduction of intracranial pressure. Corticosteroids are first line treatment that can rapidly decrease cerebral edema. Lumbar puncture should be avoided due to the risk of exacerbation and herniation. The nausea the patient is experiencing is due to the increased intracranial pressure, so a CT scan of the chest and abdomen is not indicated. Anticonvulsants can be given to manage seizures when appropriate.

24.

Which of the following agents is classified as a tyrosine kinase inhibitor?

Rituximab

Bortezomib

Trastuzumab

Sunitinib

Explanation:

Tyrosine kinase inhibitors are defined as antineoplastic agents that interfere with cell communication and growth through inhibition of the tyrosine kinase enzyme. Sunitinib is a tyrosine kinase inhibitor indicated in the treatment of gastrointestinal stromal tumors. Rituximab and trastuzumab are classified as monoclonal antibodies. Bortezomib is a proteasome inhibitor.

25.

All of the following statements are true regarding mucositis EXCEPT:

Mucositis can occur anywhere along the digestive tract.

Mucositis is the most debilitating symptom reported by cancer patients.

Patients should avoid flossing if mucositis occurs.

Approximately 20-40% of patients receiving chemotherapy develop mucositis.

Explanation:

Mucositis is a biologic response of the gastrointestinal mucosa to chemotherapy, radiation therapy, or bone marrow transplantation that results in inflammation and ulceration of the gastrointestinal mucosa. It can occur anywhere along the digestive tract from the mouth to the anus. It is the most debilitating symptom reported by cancer patients and it occurs in 20-40% of patients receiving chemotherapy. Patients who develop mucositis should be educated to clean their mouths with a soft toothbrush and use fluoride toothpaste. Patients who regularly floss should continue to floss unless they experience uncontrolled bleeding, have a platelet count of less than 20,000/mm^3 or an absolute neutrophil count of less than 1000/mm^3.

26.

Which of the following services are NOT covered under the Hospice Medicare Benefit?

Speech therapy

Short-term inpatient care

Medical equipment

Room and board

Explanation:

Under the Hospice Medicare Benefit, all services provided to manage symptoms related to a terminal illness are covered including: physician care, nursing care, medical equipment and supplies, medications for symptom control, home health and homemaker service; physical, occupational, and speech therapy; social work, dietary counseling, grief and loss counseling, short term inpatient and respite care, and volunteer services. Those services not covered include treatment intended to cure the illness, prescription medications to cure the illness rather than to provide symptom control, and room and board.

27.

You are caring for a patient who was recently diagnosed with advanced cancer. The patient begins asking you questions regarding his prognosis and is expressing difficulty in making decisions about advance directives. Which of the following statements is the best example of effective communication?

"I know that you are feeling afraid to make a decision regarding advance directives. Did your doctor tell you that nothing more can be done to treat your cancer?"

"Your disease has progressed so it is important for you to think about putting advance directives into place."

"It sounds like you are concerned about how to move forward with advance directives. Would it be ok if we discussed some of the goals you have for your care?"

"I will call the social worker to assist you with your decision about advance directives."

Explanation:

Communicating with terminally ill patients regarding prognosis and end of life can be difficult for health care providers. Establishing a trusting relationship with the patient is the key to effective communication. Health care providers often use medical language that can be

confusing or misinterpreted by patients. Statements such as "there is nothing more that can be done" may cause patients to become fearful and feel abandoned. Active listening and responding through encouraging the patient to speak openly, summarizing the patient's message to ensure understanding, and allowing silence so the patient has time to think and respond are all strategies that can be utilized to promote effective communication.

28.

You are caring for a patient who is being treated with capecitabine for metastatic colorectal cancer. Which of the following statements by the patient indicates a lack of understanding of the medication?

"I should take this medication within a half hour after eating."

"I should call my doctor if I experience diarrhea that persists after I take my Imodium."

"I should wear sun screen and avoid sun exposure."

"If I miss a dose of my medication, I will take it with my next scheduled dose."

Explanation:

Capecitabine is an oral antimetabolite used in the treatment of metastatic breast and colorectal cancers. It is converted to 5-flourouracil in the liver and tissues. It is administered in two divided doses 12 hours apart and should be taken within ½ hour after eating. Capecitabine should be taken at the same time each day with prescribed antiemetics. Patients should not double a dose if missed. Acute and potentially life-threatening diarrhea can occur, so patients should be educated to notify the health care team with persistent diarrhea. Capecitabine can also cause photosensitivity, so sun exposure should be avoided.

29.

Which of the following is true regarding the use of quadrivalent human papillomavirus recombinant vaccine (Gardasil) for the prevention of cervical cancer?

Gardasil is a vaccine indicated in the prevention of all gynecological malignancies.

Patients should be between the ages of 16 and 30 years to receive Gardasil.

Gardasil should be administered as an IM injection given in three separate doses.

A pre-treatment complete blood count and basic metabolic panel should be obtained prior to administration of Gardasil.

Explanation:

Quadrivalent human papillomavirus recombinant vaccine (Gardasil) is indicated for the prevention of human papillomavirus-associated diseases including cervical cancer, genital warts, vulvar neoplasia, and vaginal neoplasia. It is not 100% reliable in the prevention of cervical cancer and does not protect against all causes of gynecological malignancies or sexually transmitted infections. Patients must be between the ages of 9 and 26 years of age to receive Gardasil and no pretreatment laboratory tests are required. The drug is administered as an IM injection and given in three separate doses.

30.

Clinical manifestations of hepatic veno-occlusive disease after a hematopoietic stem cell transplant include which of the following?

Hyperbilirubinemia, hepatomegaly, and jaundice

Jaundice, hypotension, and renal failure

Hepatomegaly, weight loss, and fever

Hypotension, fever, and right upper quadrant pain

Explanation:

Veno-occlusive disease of the liver is a life-threatening complication that occurs in 15-20% of hematopoietic stem cell transplant patients. It occurs when fibrous material accumulates, resulting in obstruction of venules in the liver, which in turn causes portal hypertension and destruction of the liver cells. Clinical manifestations include hyperbilirubinemia, weight gain, ascites, right upper quadrant pain, hepatomegaly, splenomegaly, and jaundice. Veno-occlusive disease is treated by maintaining intravascular volume and renal perfusion and minimizing fluid accumulation.

31.

Which of the following statements regarding massage therapy is an appropriate teaching point for patients considering massage as a complementary therapy?

Massage therapy should be avoided in cancer patients due to the risk of metastasis caused by tissue manipulation near a tumor site.

The American Cancer Society does not support the use of massage therapy as a complementary therapy.

Massage therapy can improve muscle tone and mobility and leads to increased circulation.

Reiki therapy is preferred over massage therapy for cancer patients.

Explanation:

Massage therapy has many benefits in improving the health and well-being of cancer patients. The American Cancer Society has recognized the benefits of massage therapy and has recommended it as a complementary therapy for cancer patients due to its physical and psychological benefits. It is recommended that massage near tumor sites be avoided; however, research is needed to determine whether tissue manipulation from massage therapy increases

the risk of metastasis. Massage therapy can improve muscle tone and mobility and can help alleviate muscular pain.

32.

Which of the following statements is true regarding genetic predisposition in cancer development?

Most hereditary cancers arise from inheriting one mutated gene.

There are over 20 types of inherited cancer syndromes.

Familial cancers are limited to a particular type of cancer.

Inherited cancers account for 20% of all cancers.

Explanation:

Genetic predisposition to cancer is a result of an alteration in a proto-oncogene, tumor suppressor gene, or DNA repair gene that increases a cell's susceptibility to mutate and become cancerous. Inherited cancers account for 1% of all cancers. There are over 20 hereditary cancer syndromes that have been identified including familial adenomatous polyposis, familial melanoma, and familial breast cancer. Familial cancers can be limited to a particular type of cancer or they may cause different types of cancers. Inheriting one mutated gene is usually not enough to cause cancer.

33.

You are caring for a patient with small cell lung cancer who was admitted to the oncology unit for nausea, vomiting, oliguria, and confusion. The patient's wife states that he has become increasingly lethargic over the past three days. His basic metabolic panel shows the following: sodium 121 mEq/L, potassium 3.2 mEq/L, CO2 23 mmol/L, BUN 9 mg/dL, creatinine 0.4 mg/dL, and glucose 110 mg/dl. The physician makes a diagnosis of SIADH. Which of the following do you expect will be ordered for your patient?

Diuresis with furosemide 0.5-1.0mg/kg

Pamidronate 90 mg IV over 2 hours

Restrict fluid to 500 ml per 24 hours

Hydrate with 1-2 L of isotonic saline over 2 hours

Explanation:

Syndrome of inappropriate antidiuretic hormone secretion (SIADH) can occur when excessive amounts of antidiuretic hormone are produced by tumor cells, resulting in excessive water retention and decreased serum sodium. SIADH occurs in 1-2% of cancer patients, with small cell lung cancer accounting for 80% of all cases. Symptoms include thirst, mild nausea and vomiting, weight gain, weakness, lethargy, confusion, and oliguria. For moderately severe hyponatremia, fluid should be restricted to 500 ml/24 hours if serum sodium level is less than 125 mEq/L. For sodium levels less than 115, 3% saline may be given along with furosemide 40-80 mg IV every 6-8 hours. Mild hyponatremia may be treated with isotonic saline or oral salt tablets. It is not recommended to correct sodium levels by more than 12 mEq/L per day.

34.

Which of the following is true regarding screening guidelines for the early detection of colorectal cancer?

Screening should begin at age 60.

A flexible sigmoidoscopy should be performed every two years.

A colonoscopy is recommended every five years.

A fecal occult blood test or fecal immunochemical test should be performed every year.

Explanation:

Beginning at age 50, screening for colorectal cancer should include one of the following examination schedules: a fecal occult blood test or fecal immunochemical test every year, a flexible sigmoidoscopy every five years, a double-contrast barium enema every five years, or a colonoscopy every 10 years. Combined testing is the preferred screening option. High-risk patients may have a different testing schedule and should discuss alternatives with their physician.

35.

One of the most common primary cancers with a high incidence of brain metastasis includes:

Melanoma

Non-Hodgkin's lymphoma

Ovarian cancer

Thyroid cancer

Explanation:

Approximately 170,000 cases of brain metastases are diagnosed in the United States each year. Although any malignancy can lead to metastasis, melanoma and lung, breast, renal, and colon cancers account for the greatest majority of brain metastases. Sixty-five percent of melanomas metastasize to the brain. Lymphoma, ovarian cancer and thyroid cancer are not common cancers with brain metastases.

36.

Which of the following factors have the potential to influence the grieving process?

Characteristics of the deceased

History of coping

Level of support

All of the above

Explanation:

There are multiple factors that influence the grieving process. It is important as a health care provider to assess these factors and to be able to identify when the grieving individual presents with risk factors for a poor outcome. Determinants of grief include the relationship with the deceased and characteristics of the deceased, the type and length of illness as well as the mode of death, history of coping, psychological history of functioning, number and type of previous losses; social, cultural, religious, and spiritual factors; level of support, concurrent crises, and physiologic factors.

37.

You are caring for a patient at the end of life who is experiencing terminal agitation. Which of the following is a potential treatable cause of terminal agitation?

Diarrhea

Dyspnea

Hypocalcemia

Prognosis

Explanation:

Terminal agitation is a form of delirium characterized by restlessness, anguish, and cognitive failure. Terminal agitation can be caused by an array of factors including constipation, urinary retention, high dose opioid treatment, dyspnea, hypercalcemia, medication side effects, pain, hypoglycemia, fever, anxiety, environmental stimuli, metabolic abnormalities and liver or renal failure. Terminal agitation can be further compounded by multisystem failure, poly-pharmacy; and physical, emotional, spiritual, and psychological factors. Assessment should include identification of the underlying cause and subsequent treatment.

38.

Which of the following characteristics are typical of the pre-active phase of the dying process?

Increased sleep

No interest in food or fluid

Abnormal respiratory pattern

Terminal congestion

Explanation:

The pre-active phase of dying occurs 7-14 days prior to death. Characteristics that patients may exhibit in this phase include progressive weakness and lethargy, increased dependence on caregivers, bedbound status in a patient who was formerly active, increased sleep, progressive disorientation, limited attention span or withdrawal, restlessness, decreased interest in food or fluid, difficulty swallowing, and loss of bladder or bowel control in previously continent patients.

The active phase of dying occurs 2-3 days prior to death. Patients in this phase may experience decreased responsiveness to external stimuli, no interest in food or fluids, abnormal respiratory patterns, hypotension, progressive cooling and mottling of the extremities, and terminal congestion.

39.

Which of the following is NOT a recommended non-pharmacologic treatment choice for a patient experiencing dyspnea at the end of life?

Speaking in a soothing, calm voice

Using a fan to promote air circulation

Being present as a caregiver

Increasing the room temperature

Explanation:

Dyspnea occurs in up to 70% of dying patients, with the highest incidence occurring in patients with lung cancer, head and neck cancer, and degenerative neurologic disease. Several non-pharmacologic treatment options exist to help alleviate and manage the associated symptoms. Presence of a caregiver, use of a soothing voice, gentle touch, relaxation techniques, circulation of air through the use of a fan or open window, and repositioning the patient to an upright position are all interventions that may help minimize the symptoms and provide patient comfort.

40.

Which of the following should be included in an education plan designed for a patient diagnosed with head and neck cancer who is about to receive radiation therapy?

Dysgeusia will be temporary and should resolve in 2-4 weeks after treatment.

Steroid creams or rinses can be used to moisten the lips if xerostomia occurs.

Rinse the mouth with commercial-brand mouthwash daily.

If xerostomia occurs, food may be moistened with gravies and sauces.

Explanation:

Mucositis, xerostomia, radiation dental caries, and osteoradionecrosis are all potential complications of radiation therapy for head and neck cancer patients. Dysgeusia may resolve within 4-12 months of treatment, however some patients may experience a permanent alteration. Patients experiencing xerostomia should drink plenty of water and sugar-free beverages throughout the day and may moisten food with gravies and sauces. Synthetic saliva may be used for palliation of xerostomia and lips may be moistened with lanolin or cocoa butter. Steroid creams or rinses should be avoided due to the potential to encourage oral fungal growth. Alcohol-based commercial-brand mouthwashes should be avoided due to the potential to irritate mucous membranes.

41.

Which of the following is a risk factor associated with epithelial ovarian cancer?

African American race

Late menarche

Early menopause

Nulliparity

Explanation:

Ovarian cancer accounts for approximately 23% of all gynecologic cancers, with the majority of ovarian tumors being epithelial neoplasms. Research shows that endocrine, environmental, and genetic factors may all play a role in the development of epithelial ovarian cancer. Risk factors include nulliparity, family history, genetic mutations including BRCA1, BRCA II, and hereditary non-polyposis colon cancer; early menarche, late menopause, white race, increasing age, and residence in Western industrialized countries.

42.

Which of the following is true regarding the use of pegfilgrastim?

Pegfilgrastim has increased renal clearance compared with filgrastim.

Pegfilgrastim should not be administered within 14 days before chemotherapy.

Pegfilgrastim is administered 12 hours after chemotherapy.

Pegfilgrastim is administered as a subcutaneous injection over the course of five days post-chemotherapy.

Explanation:

Pegfilgrastim is a granulocyte colony stimulating factor used in reducing the incidence of febrile neutropenia for cancer patients receiving marrow toxic chemotherapeutic regimens. Pegfilgrastim is the pegylated form of filgrastim. A glycol molecule bound to filgrastim allows for reduced renal clearance of the drug, resulting in an increased half-life and single dose administration. Due to the prolonged half-life, pegfilgrastim should not be administered within the 14 days leading up to chemotherapy administration.

43.

Which of the following statements is FALSE regarding dietary supplements in cancer treatment?

Patients should be educated to consult their physician prior to starting a dietary supplement while undergoing cancer treatment.

Ginger may be helpful in managing nausea and vomiting associated with chemotherapy.

A diet high in antioxidants is recommended for patients undergoing chemotherapy.

Flaxseed is an herbal supplement that may enhance immune function..

Explanation:

Dietary supplements may be helpful as a supportive measure for patients undergoing cancer treatment. Caution should be used with some dietary supplements, as many have untoward side effects and may interact with conventional therapies. Patients should always be advised to consult their physician prior to starting a supplement. Antioxidants have the potential to interfere with cancer treatment by blocking the therapeutic effects of cancer treatment. Research indicates that antioxidants may protect tumor cells in addition to protecting normal cells. Flaxseed is an herbal supplement that has been found to lower cholesterol, enhance the immune system, and prevent cancer. Ginger is an herbal supplement that has found to be useful in treating nausea and vomiting associated with chemotherapy.

44.

Sodium thiosulfate is the recommended antidote for the extravasation of which class of chemotherapeutic agents?

Anti-tumor antibiotics

Vinca alkaloids

Taxanes

Alkylating agents

Explanation:

Sodium thiosulfate is an antidote used in the management of extravasation of alkylating agents. Sodium thiosulfate prevents alkylation and tissue destruction and is administered subcutaneously into the affected tissue. Hyaluronidase is known to be an effective antidote for Vinca alkaloids along with application of warm packs and elevation of the affected site. Totect is the antidote of choice for extravasation of anthracyclines. Cold compresses and topical DMSO are useful in extravasation of anti-tumor antibiotics. Ice is indicated in management of taxane extravasation.

45.

All of the following are true regarding fatigue in cancer patients EXCEPT:

Fatigue is the most common symptom cancer patient experience.

The prevalence of severe fatigue in patients with advanced cancer is approximately 75%.

Cancer fatigue is usually relieved by sleep or rest.

Fatigue often presents with pain, insomnia, and depression or anxiety.

Explanation:

Fatigue in cancer patients is not only the most common symptom experienced but also the most distressing. Severe fatigue in patients with advanced cancer is quite prevalent, with approximately 75% of patients experiencing it. Fatigue is often accompanied by pain, insomnia, and depression or anxiety. There are many factors that contribute to fatigue including the underlying disease, treatment, anemia, malnutrition, sleep disorders, metabolic disturbances, and depression. Fatigue is subjective and is reported by patients as a tiredness affecting the whole body, impacting the ability to perform basic tasks. It is not relieved by sleep or rest.

46.

The malignancies most associated with cardiac tamponade include all of the following EXCEPT:

Breast cancer

Lymphoma

Leukemia

Thyroid cancer

Explanation:

Breast cancer, lymphoma, and leukemia all pose the greatest risk for the development of cardiac tamponade. This condition is an oncologic emergency with the severity dependent upon the amount of fluid in the pericardium, the rate of fluid accumulation, and the level of pericardial compromise caused by the cancer.

47.

Which of the following is an example of a metabolic change caused by a malignancy?

Increased protein degradation

Decreased rate of gluconeogenesis

Hyperalbuminemia

Positive nitrogen balance

Explanation:

Increased protein degradation may occur as a metabolic change caused by malignancy. Gluconeogenesis is increased in malignancy, with an estimated 10% increase in energy expenditure. Alterations in protein metabolism occur, resulting in utilization of muscle to meet increased metabolic demands. This may cause hypoalbuminemia, an increased uptake in amino acids by tumor cells, increased protein degradation, protein loss, and a negative nitrogen balance. Patients may become cachectic despite food intake due to the loss of protein and depletion of muscle mass. Weight loss may be further enhanced by loss of appetite, alteration in taste and smell, and nausea and vomiting.

48.

Which of the following statistics is true regarding cancer survivors?

The majority of cancer survivors are younger than age 65.

Men make up the largest proportion of cancer survivors.

Breast cancer survivors are the largest group of cancer survivors.

The number of cancer survivors has decreased over the past decade.

Explanation:

There are approximately 13.7 million cancer survivors living in the United States today, with projected growth to 18 million by the year 2020. Women make up the largest proportion of cancer survivors. Breast cancer survivors are the largest group, followed by prostate cancer and lung cancer. The majority of cancer survivors are age 65 or older. It is predicted that by the year 2020, two-thirds of cancer survivors will be over the age of 65.

49.

Which of the following ethnic groups has the lowest overall cancer incidence and mortality?

African American

Asian/Pacific Islander

Native American

Hispanic

Explanation:

Cultural competence and sensitivity is essential for all healthcare providers to possess. Understanding how culture affects health care practices and adapting the care provided to meet the cultural needs of the patient is vitally important. Specific cultural and ethnic populations carry different cancer risks, lifestyle risk factors, and barriers to prevention. Native Americans carry the lowest overall cancer incidence and mortality of all the U.S. populations.

50.

All of the following statements should be included when teaching a patient about how to get health information from an Internet source EXCEPT:

Verify when the website was posted to ensure the information is current.

Verify who created the website and ensure it is from a reputable institution.

Assume that most information posted on websites is screened for accuracy before it is posted.

Ensure the website has sources or references posted from reputable studies.

Explanation:

With more and more patients accessing the Internet for health information, it is important for healthcare providers to provide guidance for navigating the Web. The most important thing to emphasize for patients seeking health information online is that not everything on the Internet is true. Patients seeking information online should verify that the creator of the website is reputable with appropriate sources or references listed. Additionally, not all websites are well maintained so ensuring the site is current is important as well. Many healthcare institutions provide a list of reputable sites for patients to access information.

51.

Which of the following best describes systemic inflammatory response syndrome (SIRS) manifestation?

Heart rate greater than 120 beats per minute and respiratory rate greater than 28 breaths per minute

Temperature greater than 38.5 degrees Celsius and more than 20% bands

White blood cell count greater than 15,000 and $PaCO_2$ less than 32 mm Hg

Temperature greater than 38 degrees Celsius and heart rate greater than 90 beats per minute

Explanation:

Systemic inflammatory response syndrome (SIRS) is defined as the body's response to an inflammatory process. To diagnose SIRS, two or more of the following criteria must be present: temperature greater than 38 degrees or less than 36 degrees Celsius, heart rate greater than 90 beats per minute, respiratory rate greater than 20 breaths per minute, PaCO2 less than 32 mmHg, white blood cell count greater than 12,000 or less than 4,000, or greater than 10% bands.

52.

Which of the following groups of chemotherapeutic agents has the highest potential for neurotoxicity?

Ifosfamide, vinblastine, vincristine

Cisplatin, thiotepa, mitomycin C

Cyclophosphamide, melphalan, vinblastine

Paclitaxel, 5-fluorouracil, cytarabine

Explanation:

Chemotherapy can be neurotoxic, causing symptoms of weakness, neuropathies, alteration in mental status, hallucinations, decreased or absent deep tendon reflexes, footdrop, severe constipation, and paralytic ileus. The drugs most commonly associated with neurotoxicity include ifosfamide, vinblastine, vincristine, etoposide, 5-fluorouracil, high-dose and/or intrathecal administration of cytarabine, carboplatin, cisplatin and methotrexate.

53.

The two classes of chemotherapeutic agents that are most likely to cause arthralgias and myalgias are:

Alkylating agents and anti-metabolites

Anti-hormonal agents and nitrosoureas

Anti-tumor antibiotics and monoclonal antibodies

Vinca plant alkaloids and taxanes

Explanation:

Vinca plant alkaloids and taxanes. Although the exact mechanism on how chemotherapeutic agents cause joint and muscle pain is uncertain, there is an association with agents that inhibit microtubular function (the vinca plant alkaloids and the taxanes) and arthralgias and myalgias. Microtubules play a vital role in both cell division and mitosis. With both vinca alkaloids and taxanes, arthalgias and myalgias can be reduced by decreasing the dose.

54.

Which of the following could be utilized as a preventive strategy in the management of cancer-related pain?

Instruct the patient to only take prescribed analgesics when their pain level is moderate to severe to prevent narcotic dependency.

The use of bone-modifying agents to prevent skeletal events including fractures and bone pain caused by bone metastases.

Avoid the use of adjuvant agents or coanalgesics.

The pharmacologic management of pain should begin with mild opioids.

Explanation:

The use of bone-modifying agents to prevent skeletal events including fractures and bone pain caused by bone metastases. The use of bone-modifying agents are considered standard treatment in patients with lytic bone lesions. The use of these agents can prevent skeletal fractures and bone pain caused by metastasis. Bisphosphonates inhibit osteoclast-mediated bone resorption. Patients should be educated on taking analgesics around the clock to prevent pain. According to the World Health Organization three-step analgesic ladder, adjuvant agents should be used to treat symptoms associated with pain such as anxiety or depression. Pharmacologic management of pain should begin with non-opioid therapy and progress to the use of opioids when pain persists or increases.

55.

An example of an antibody-drug conjugate (ADC) monoclonal antibody is:

Ibritumomab tiuxetan (Zevalin)

Ado-trastuzumab emtansine (Kadcyla or TDM-1)

Alemtuzumab (Campath)

Cetuximab (Erbitux)

Explanation:

Ado-trastuzumab emtansine (Kadcyla or TDM-1). Antibody drug conjugates (ADCs), otherwise known as chemolabeled antibodies, are monoclonal antibodies with an attached chemotherapeutic agent. There are 2 chemolabeled antibodies currently approved by the FDA to treat cancer. They are brentuximab vedotin (Adcetris) and ado-trastuzumab emtansine (Kadcyla or TDM-1). Ibritumomab tiuxetan is a radiolabeled monoclonal antibody. Alemtuzumab is a naked monoclonal antibody; neither drug nor radioactive material is attached to alemtuzumab.

Cetuximab is a monoclonal antibody that targets the cell protein epidermal growth factor receptor.

56.

You are caring for a patient with chronic lymphocytic leukemia (CLL) who arrives at the outpatient infusion center for her first dose of ofatumumab. Approximately 30 minutes into the infusion, the patient begins to complain of nausea, flushing, and chills. You check the patient's vital signs and note the patient's blood pressure to be 80/42. Which type of infusion reaction best describes the reaction the patient is experiencing?

Cytokine-release reaction

Cytotoxic

IgE-mediated

Adverse drug reaction

Explanation:

Cytokine-release reaction. Cytokine-release reactions are caused by stimulation of the immune system. Cytokine-release reactions occur more often with the first infusion when tumor burden is at its highest. About 44% of patients receiving their first infusion of ofatumumab will have an infusion reaction. Cytotoxic reactions are either IgG or IgM mediated and are considered to be relatively rare. Hematopoietic cells are the most commonly affected. IgE-mediated reactions occur within minutes to hours of drug exposure and require a previous exposure to the drug. Adverse drug reaction is a broad term that describes any expected or unexpected negative response to a pharmacologic agent.

57.

Which of the following is the preferred route for pharmacologic prophylactic treatment of nausea and vomiting?

Oral

Intravenous

Subcutaneous

Intramuscular

Explanation:

Several anti-emetic agents are available for use as either single agents or in combination for nausea and vomiting associated with chemotherapy administration. The oral route is the preferred route for the prophylactic treatment of nausea and vomiting. Parenteral or rectal routes are recommended if the patient is unable to keep oral medications down.

58.

You are caring for a patient who experienced an infusion reaction during her first dose of ofatumumab. The patient experienced nausea, flushing, chills, and hypotension. You initiated a rapid response team. Initially, the patient appeared to be doing better with the administration of antihistamines and IV fluids; however, the patient is now experiencing a recurrence of symptoms, including shortness of breath and hypotension. The patient is going to be admitted to the intensive care unit. Which of the following classifications according to the National Cancer Institute Common Terminology Criteria for Adverse Events (CTCAE) for cytokine-release syndrome best describes the patient's presentation?

Grade I

Grade II

Grade III

Grade IV

Explanation:

Grade III. A grade I reaction is defined as a mild reaction where an interruption in the infusion is not indicated, nor is intervention. A grade II reaction is defined as a need to interrupt therapy but the patient responds promptly to symptomatic treatment. Prophylactic medications are indicated for 24 hours or less. A grade III reaction is defined as a prolonged reaction that does not rapidly respond to symptomatic medication and/or a brief interruption of infusion; a recurrence of symptoms following initial improvement; hospitalization is indicated for clinical sequelae. A grade IV reaction is life-threatening and may require life-sustaining measures such as pressors or ventilation. A grade V reaction is death.

59.

Which of the following is true regarding cancer survivorship?

A cancer survivor is defined as anyone who has received cancer treatment and is considered to be in remission.

Approximately one-third of people diagnosed with cancer are expected to live 5 years or more after diagnosis.

In 2006, the Institute of Medicine (IOM) recommended that cancer survivors receive an individualized survivorship care plan.

Survivorship begins at the end of treatment and continues until recurrence.

Explanation:

In 2006, the IOM recommended that cancer survivors receive an individualized survivorship care plan that includes guidelines for monitoring and maintaining their health. A cancer survivor is defined as anyone who has been diagnosed with cancer. Survivorship begins at diagnosis and continues for the lifetime of the patient. There are three phases of survivorship: living through,

living with, and living beyond cancer. Approximately two-thirds of patients who are diagnosed with cancer are expected to live at least 5 years after diagnosis.

60.

Certain viruses and bacteria have been linked in the development of various cancers. Which of the following is NOT a true statement regarding the link between viral infection and cancer development?

Helicobacter pylori has been shown to increase the risk of gastric cancer.

Hepatitis B and C increase the risk for liver cancer.

Human papillomavirus (HPV) increases the risk for cervical cancer.

Cytomegalovirus increases the risk of renal cell carcinoma.

Explanation:

Cytomegalovirus does not increase the risk of renal cell carcinoma. Colonization of the stomach with Helicobacter pylori is a cause of gastric cancer and gastric mucosa-associated lymphoid (MALT) lymphoma. The most common risk factor for liver cancer is chronic infection with hepatitis B or C. High-risk human papillomaviruses (HPVs) account for 5% of cancers worldwide. HPV is associated with cervical, vaginal, vulvar, penile, and anal cancers. It has been hypothesized that cytomegalovirus may be associated with breast cancer and brain cancer progression; however, a confirmed link has not been established. There is no correlation between cytomegalovirus and renal cell carcinoma.

61.

Which of the following malignancies carries a high probability for hemorrhage?

Acute promyelocytic leukemia (APL)

Chronic lymphocytic leukemia (CLL)

Glioblastoma

Choriocarcinoma

Explanation:

Acute promyelocytic leukemia (APL). Hemorrhage can occur in as high as 90% of patients with APL. Hematologic cancers (including the leukemias) carry a higher risk of bleeding, with thrombocytopenia as the primary hematologic risk factor. The incidence of bleeding is much lower in solid tumors. Other risk factors include sepsis, infection, medications, low albumin, anemia, and recent bone marrow transplant.

62.

You are caring for a patient with mantle cell lymphoma who is receiving Ibrutinib (Imbruvica). When teaching the patient about common adverse effects of the medication, you include all of the following EXCEPT:

Thrombocytopenia

Diarrhea

Hypokalemia

Musculoskeletal pain

Explanation:

Hypokalemia is not a common adverse effect of Ibrutinib. Ibrutinib is a kinase inhibitor used in the treatment of mantle cell lymphoma. Common adverse reactions with the administration of ibrutinib for mantle cell lymphoma include thrombocytopenia (57% of patients in a clinical trial), diarrhea (51% in a clinical trial), and musculoskeletal pain (37% in a clinical trial). Electrolyte disturbances, including hypokalemia, are not commonly seen with the administration of ibrutinib.

63.

According to the National Comprehensive Cancer Network (NCCN), febrile neutropenia is defined as:

An absolute neutrophil count of less than 500 cells/mm^3 or an absolute neutrophil count of 1,000 cells/mm^3 predicted to decline to less than 500 cells/mm^3 over the next 48 hours

An absolute neutrophil count of less than 1,500 cells/mm^3

An absolute neutrophil count of less than 1,000 cells/mm^3

An absolute neutrophil count of less than 200 cells/mm^3 or an absolute neutrophil count of 500 cells/mm^3 predicted to decline to less than 200 cells/mm^3 over the next 24 hours

Explanation:

An absolute neutrophil count of less than 500 cells/mm^3 or an absolute neutrophil count of 1,000 cells/mm^3 predicted to decline to less than 500 cells/mm^3 over the next 48 hours. Both the Infectious Diseases Society of America (IDSA) and the National Comprehensive Cancer Network (NCCN) define febrile neutropenia as an absolute neutrophil count of less than 500 cells/mm^3 or an absolute neutrophil count of 1,000 cells/mm^3 predicted to decline to less than 500 cells/mm^3 over the next 48 hours. Fever is defined as an oral temperature in neutropenic

patients of greater than 38 degrees Celsius sustained for 1 hour or an occurrence of an oral temperature greater than 38.3 degrees Celsius.

64.

Which of the following is true regarding screening for cervical cancer?

Screening should begin at age 16, regardless of the age of onset of sexual activity.

Women who have received the HPV vaccination should be screened less frequently than women who have not received the vaccination.

Screening should be performed annually.

Screening for women 21-29 years of age is recommended every 3 years.

Explanation:

Screening for women 21-29 years of age is recommended every 3 years. According to the American Cancer Society, the American Society for Colposcopy and Cervical Pathology (ASCCP), and the American Society for Clinical Pathology (ASCP), screening for cervical cancer (using cytology, either conventional or liquid based) for women 21-29 years of age is recommended every 3 years. Screening should begin at age 21, regardless of the age of onset of sexual activity. Recommendations for screening of women who have received the HPV vaccination are the same as those for women who have not received the vaccination.

65.

You working in an outpatient clinic and about to provide a patient with education on colon cancer screening. Which of the following statements by the patient indicates a need for further education regarding colon cancer screening recommendations?

"I should begin getting screened at age 50."

"My physician may order a colonoscopy or a test that detects blood in my stool as part of the screening process."

"Since my brother has colorectal polyps, my physician may want to screen me sooner than age 50."

"I will have a colonoscopy every 3 years as part of my screening for colon cancer."

Explanation:

"I will have a colonoscopy every 3 years as part of my screening for colon cancer." According to the U.S Preventive Services Task Force (USPSTF) recommendations, colon cancer screening should begin at age 50. For patients with a close relative with colorectal polyps or colorectal cancer, patients with inflammatory bowel disease, or patients with a familial adenomatous polyposis (FAP), screening may be recommended at an earlier age. Screening can be performed using high-sensitivity fecal occult blood testing (recommend yearly testing), sigmoidoscopy (recommend every 5 years or if performed in combination with high-sensitivity fecal occult blood testing every 3 years), or colonoscopy (recommend every 10 years).

66.

Ramucirumab (Cyramza) is a recombinant monoclonal antibody that was approved by the FDA in 2014 for the treatment of:

Advanced or metastatic gastric or gastroesophageal junction adenocarcinoma

Advanced or metastatic renal cell carcinoma

Previously treated advanced or metastatic lung cancer

Previously untreated chronic lymphocytic leukemia

Explanation:

Ramucirumab (Cyramza) was approved by the FDA in April 2014 for the treatment of advanced or metastatic gastric or gastroesophageal junction adenocarcinoma. Ramucirumab is a recombinant monoclonal antibody that binds to vascular endothelial growth factor receptor 2 (VEGFR2) and blocks the activation of the receptor. Ramucirumab is not indicated for the treatment of renal cell carcinoma, lung cancer, or chronic lymphocytic leukemia.

67.

You are working with a new registered nurse on the oncology unit. Her patient is receiving fluorouracil and she is preparing to educate her on oral hygiene care. Which of the following teaching points should she include in her teaching?

Avoid toothpastes containing fluoride.

Use an electric toothbrush 3-4 times daily.

Use a toothpaste with a neutral taste that contains fluoride.

Avoid flossing.

Explanation:

Use a toothpaste with a neutral taste that contains fluoride. Soft nylon-bristled toothbrushes are recommended for use. The patient should frequently rinse his/her mouth with water or a bland rinse (saline or sodium bicarbonate solution may be used). Electric toothbrushes should only be used if they do not cause trauma. Toothpastes containing fluoride are recommended. Flossing is recommended once daily using a technique that minimizes trauma. Neutral-tasting toothpaste is recommended because flavoring can cause irritation to the oral cavity.

68.

The most common presenting symptom of bladder cancer is:

A urinary tract infection

Bladder spasm

Gross hematuria

Flank pain

Explanation:

Bladder cancer is the most common malignancy of the urinary tract with a higher incidence in males versus females. Risk factors include chemical carcinogenic exposure, tobacco use, a diet high in fat, and recurrent urinary tract infections. Although all of the above symptoms may be present, gross hematuria is the most common presenting sign of bladder cancer.

69.

Which of the following interventions could be utilized in the management of xerostomia?

Instruct the patient to choose soft foods to minimize chewing.

Encourage the patient to chew gum or consume hard candy.

Consider the use of a sialogogue to increase salivary flow.

Avoid toothpastes or oral care products containing fluoride.

Explanation:

Consider the use of a sialogogue to increase salivary flow. A reduction in chewing or mastication contributes to the atrophy of salivary glands and can worsen xerostomia. Gum or hard candy can help to stimulate saliva production; however, sugar-free gums and candies should be used to prevent destruction of dental enamel and dental cavity formation. Fluoride toothpastes should be used to minimize the formation of dental cavities. Sialogogues contain the cholinergic drug pilocarpine that stimulates salivary flow.

70.

Pembrolizumab (Keytruda) is a monoclonal antibody recently approved for the treatment of advanced melanoma. Pembrolizumab is a:

Recombinant, chimeric monoclonal antibody directed against the epidermal growth factor (EGFR)

Recombinant, DNA-derived humanized monoclonal antibody directed against the cell surface glycoprotein CD52

Humanized monoclonal IgG4 antibody directed against human cell surface receptor PD-1 (programmed cell death)

Recombinant humanized monoclonal antibody directed against the human epidermal growth factor receptor 2 (HER-2)

Explanation:

Humanized monoclonal IgG4 antibody directed against human cell surface receptor PD-1 (programmed cell death). Pembrolizumab (Keytruda) is a humanized monoclonal IgG4 antibody directed against human cell surface receptor PD-1 (programmed cell death). It is the first PD-1 inhibitor to be granted FDA approval in the United States. Cetuximab is an example of a recombinant, chimeric monoclonal antibody directed against the epidermal growth factor

(EGFR). Trastuzumab is an example of a recombinant humanized monoclonal antibody directed against the human epidermal growth factor receptor 2 (HER2). Alemtuzumab is an example of a recombinant DNA derived humanized monoclonal antibody directed against the cell surface glycoprotein CD52.

71.

Aprepitant is an antiemetic agent used in the treatment of chemotherapy-induced nausea and vomiting (CINV). Aprepitant is classified as a:

5HT3 receptor antagonist

NK1 receptor antagonist

Dopamine receptor antagonist

Corticosteroid

Explanation:

NK1 receptor antagonist. Aprepitant is a NK1 (neurokinin 1) receptor antagonist used in combination with other antiemetic agents for the prevention of acute and delayed nausea and vomiting associated with highly emetogenic cancer chemotherapy. 5HT3 receptor antagonists used to treat CINV include ondansetron, granisetron, dolasetron, and palonosetron. Dopamine receptor antagonists used to treat CINV include metoclopramide, prochlorperazine, and haloperidol. Dexamethasone is a corticosteroid that may be used to treat CINV.

72.

You are caring for a patient in the outpatient infusion center who has been receiving irinotecan. During your assessment of the patient, he states that he has been experiencing an increase in liquid stools. He had been having approximately 3 bowel movements per day and now he has been having upwards of 7-9 diarrhea stools per day. According the National Cancer Institute's Common Terminology Criteria for Adverse Events (CTCAE), the patient's diarrhea would be graded as a:

Grade 1

Grade 2

Grade 3

Grade 4

Explanation:

Grade 2. According to the National Cancer Institute's Common Terminology Criteria for Adverse Events (CTCAE), the patient's diarrhea would be classified as a grade 2. Grade 2 diarrhea is defined as an increase of 4-6 stools/day over baseline. Grade 1 is defined as an increase of less than 4 stools per day over baseline. Grade 3 diarrhea is defined as an increase of greater than or equal to 7 stools/day over baseline. Grade 4 diarrhea is defined as life-threatening consequence; urgent intervention is needed.

73.

Sensory symptoms of chemotherapy-induced peripheral neuropathy may include all of the following EXCEPT:

Pain

Loss of sensation

Difficulty distinguishing hot and cold

Ringing in the ears

Explanation:

Ringing in the ears. Chemotherapy-induced peripheral neuropathy can manifest in the form of sensory symptoms, motor symptoms, cranial symptoms, and autonomic symptoms. Pain, loss of sensation, numbness/tingling, burning, tripping and falling, and difficultly walking and placing feet are all sensory symptoms that a patient may experience with chemotherapy-induced peripheral neuropathy. Ringing in the ears and hoarseness are cranial symptoms that may occur with chemotherapy-induced peripheral neuropathy.

74.

Which of the following chemotherapeutic agents is not likely to cause chemotherapy-induced peripheral neuropathy?

Vincristine

Cisplatin

Bortezomib

5-Fluorouracil

Explanation:

5-Fluorouracil. Certain chemotherapeutic agents have a higher propensity for the development of peripheral neuropathy. Chemotherapeutic agents that are linked to the development of chemotherapy-induced peripheral neuropathy include platinum drugs (such as cisplatin), taxanes, epothilones, plant alkaloids (such as vincristine), thalidomide, bortezomib, and eribulin. The incidence of chemotherapy-induced peripheral neuropathy with 5-fluorouracil is low and considered rare.

75.

A 60-year-old male patient recently diagnosed with stage 2 bladder cancer presents to the outpatient infusion center for his first dose of bacille Calmette-Guerin (BCG). Which of the following is NOT appropriate to teach the patient about his BCG treatment?

"We will collect a urine specimen prior to your procedure to ensure that you do not have any signs of infection. If an infection is present, we will need to reschedule your treatment."

"We will place a catheter in your bladder to instill the medication. The catheter will be clamped to keep the medication inside the bladder and we will reposition you frequently to ensure the medication is dispersed throughout the bladder."

"Burning, frequency, and urgency are abnormal side effects. You should notify your physician right away if any of these side effects occur."

"After we remove the catheter from your bladder, we will have you urinate to ensure that you are able to void and to dispose of contaminated urine."

Explanation:

Burning, frequency and urgency are common side effects from BCG treatment, therefore the answer is C. Urinalysis is performed prior to BCG treatment to look for signs of infection. The urinary catheter is clamped to hold the medication in the bladder and the patient is turned to ensure maximal bladder tissue exposure. A patient is instructed to void after catheter removal to ensure that he is able to void post-catheterization and that the urine is disposed of in a proper manner prior to the patient going home.

76.

The standard treatment for a bladder tumor that invades surrounding muscle is:

Chemotherapy

Radiation therapy

Surgical intervention by radical cystectomy

Laser treatment

Explanation:

Radical cystectomy is the treatment of choice for bladder tumors that have invaded the surrounding muscle. Chemotherapy and radiation therapy may be viable treatment options after a surgical resection. Neither chemotherapy nor radiation therapy alone are options for invasive bladder cancer. Laser treatment would be indicated for a patient with recurrent localized disease.

77.

Which of the following conditions are NOT associated with renal cell carcinomas?

Hypertension

Cushing's syndrome

Non-metastatic hepatopathy

Plummer-Vinson syndrome

Explanation:

Hypertension, Cushing's syndrome and non-metastatic hepatopathy are all paraneoplastic conditions associated with renal carcinomas. Additional conditions include hypercalcemia, erythrocytosis, pyrexia, galactorrhea, gynecomastia and serum glucose abnormalities. Plummer-Vinson syndrome is associated with gastric carcinomas and is characterized by weakness and difficulty swallowing due to small growths of tissue that form in the esophagus.

78.

You are a registered nurse working in an outpatient infusion center and have begun administration of paclitaxel on a newly-diagnosed breast cancer patient. The patient mentions that she is feeling flushed and shows you a small hive on her left cheek. Your next course of action is to:

Reassure the patient that this is a normal side effect of paclitaxel.

Give the patient 50mg of IV Benadryl.

Immediately stop the infusion and notify the oncologist.

Decrease the rate of paclitaxel by 50%.

Explanation:

The patient is experiencing signs of an infusion reaction with the potential for anaphylaxis. The nurse must be alert to recognize signs and symptoms of an early infusion reaction to avoid an anaphylactic response. The first step in addressing an infusion reaction is to immediately stop the infusion and notify the physician.

79.

The most common metastatic sites of renal cell carcinoma include all of the following EXCEPT:

Lung

Brain

Bone

Liver

Explanation:

Renal cell carcinoma accounts for 3% of all tumors diagnosed in the United States each year. It is more prevalent in males and the etiology is unknown. Renal cell carcinomas metastasize most often to the lung (75%), soft tissues (36%), bones (20%) and liver (18%). Approximately one-third of all patients diagnosed with renal cell carcinoma have metastasis at the time of diagnosis.

80.

Which type of malignancy is most frequently diagnosed in the United States?

Prostate cancer

Breast cancer

Lung cancer

Melanoma

Explanation:

The most common malignancy diagnosed in the United States is breast cancer, with an estimated 255,000 new cases expected in 2017, outnumbering prostate cancer, which was previously the most common diagnosed malignancy in the United States. This is likely due to enhanced screening efforts and education regarding breast cancer. Second to breast cancer are lung (222,500 cases expected in 2017) and prostate cancer (161,360 cases expected in 2017).

81.

Which of the following is a risk factor for prostate cancer?

Increased intake of foods containing lycopene

Increased intake of dietary fat

Increased intake of dietary fiber

Increased number of sexual partners

Explanation:

Strong correlations have been found between a high fat diet and the risk of prostate cancer. Dietary consumption of foods containing lycopene may decrease the risk of prostate cancer. Increasing dietary fiber may help decrease the risk by helping to lower circulating testosterone and estradiol levels. There has been no evidence to support the effect of multiple sexual partners on the development of prostate cancer.

82.

You are working in an oncology office as a registered nurse and have a male patient who was recently diagnosed with prostate cancer. The oncologist identified a suspicious area in the prostate. The patient also has a PSA level that is markedly elevated. The patient asks you what the next steps will be. The most appropriate response would be:

"We will need to make an appointment in the outpatient infusion center for your first dose of chemotherapy."

"We will need to schedule a needle biopsy. This is an outpatient procedure and will give the oncologist more information to establish a diagnosis."

"We will need to schedule your next follow-up appointment to see the oncologist in six months."

"We will need to schedule an appointment with our research team to have you enroll in a clinical trial."

Explanation:

An official diagnosis of prostate cancer has not been made; therefore, the next step would be confirmation via needle biopsy. Once a diagnosis is made, treatment options can be established. Careful observation may be indicated for those with stage 1 disease. Chemotherapy and clinical trials may be options for those with advanced disease.

83.

Which of the following is NOT a viable treatment element for a patient diagnosed with stage 4 prostate cancer?

Radical prostatectomy

Palliative pain management

Hormonal therapy

External beam radiation therapy

Explanation:

Radical prostatectomy is typically reserved for patients without evidence of metastatic disease. Pain management, hormonal therapy and external beam radiation therapy are all viable treatment options for patients with advanced disease or for those who are not appropriate surgical candidates.

84.

Which of the following is NOT true regarding prostatic intraepithelial neoplasia (PIN)?

PIN can be characterized as high or low grade.

PIN is considered a premalignant lesion.

Low-grade PIN is correlated with a lower incidence of a subsequent carcinoma of the prostate.

Diagnosis of PIN is indicative of a clinically palpable tumor confined to the prostate.

Explanation:

A clinically palpable tumor confined to the prostate is indicative of a stage T2 prostate cancer per TNM staging. PIN involves ductal acinar dysplasia of the prostate and is considered a premalignancy that can be high or low grade. Low grade PIN is associated with a lower risk of development of prostate carcinoma.

85.

Which of the following is a clinical sign of neoplastic cardiac tamponade?

Bradycardia

Vasodilation

Increased central venous pressure

Hypertension

Explanation:

Clinical signs of neoplastic cardiac tamponade include: tachycardia, low systolic blood pressure, vasoconstriction and increased central venous pressure (CVP). As a result of increased central venous pressure, patients often experience pulsus paradoxus and jugular venous distension. A hallmark of cardiac tamponade known as Beck's triad includes an elevated CVP, distant or muffled heart sounds and arterial hypotension.

86.

Which of the following instructions would you give to a 60-year-old male patient who recently began external beam radiation therapy for stage 3 prostate cancer?

"Radiation therapy will have no effect on erectile function."

"You should follow a low-residue diet and drink plenty of fluids throughout the course of your therapy."

"You should not take a bath or use any topical steroids if you develop rectal irritation."

"There are certain side effects related to external beam radiation therapy, but fatigue is not one of them."

Explanation:

Eating a low-residue diet and maintaining adequate fluid intake may help to prevent or reduce symptoms caused by pelvic radiation therapy for prostate cancer. Radiation therapy may or may not cause erectile dysfunction, and the effects may be delayed. Sitz baths and topical hydrocortisone may be used for rectal irritation. Treatment-related side effects may involve fatigue, as well as more frequent bowel movements, urinary frequency, and mucosal bleeding.

87.

Which of the following is an example of a taxane derivative indicated for the treatment of hormone-refractory metastatic prostate cancer in patients previously treated with a docetaxel-containing regimen?

Cabazitaxel

Paclitaxel

Sipuleucel-T

Leuprolide acetate

Explanation:

Cabazitaxel is a taxane derivative indicated for treatment of hormone-refractory metastatic prostate cancer. Paclitaxel is not approved for this type of treatment. Sipuleucel-T is classified as an immunotherapeutic drug. Leuprolide-acetate is a gonadotropin-releasing hormone used for palliative treatment of advanced prostate cancer.

88.

Which of the following is an example of a non-modifiable risk factor in the development of testicular cancer?

Testicular trauma

Viral infection

Cryptorchidism

Exposure to DES before birth

Explanation:

Cryptorchidism is associated with a five times greater than normal risk of testicular cancer. Research has not supported that testicular trauma, viral infections, or DES exposure before birth increase the risk of testicular cancer development.

89.

A 62-year-old male patient diagnosed with stage 3 small cell lung cancer is admitted to the oncology unit with somnolence, weakness, nausea, vomiting, and diffuse abdominal pain. His wife reports that he has become increasingly weak over the past three days and has exhibited a change in mental status. She reports that he has not had a bowel movement in five days. Which of the following oncologic complications is a likely explanation for the patient's clinical presentation?

Superior vena cava syndrome

Septic shock

Liver metastasis

Hypercalcemia

Explanation:

Hypercalcemia is the oncologic complication that presents with symptoms of mental status change, weakness, nausea, vomiting, constipation, and abdominal pain. Small cell lung cancer is a malignancy commonly associated with hypercalcemia. Superior vena cava syndrome presents as edema of the face, neck, and upper extremities; respiratory compromise, chest pain, headache, dizziness and a feeling of facial fullness. The clinical features of septic shock include tachypnea, nausea, diarrhea, confusion, and ultimately oliguria and metabolic acidosis. The patient may experience some of these same symptoms with liver metastasis as well.

90.

All of the following are clinical features of testicular cancer EXCEPT:

Abdominal aching

Low back pain

Gynecomastia

Hematuria

Explanation:

Hematuria is a clinical feature of carcinoma of the bladder and kidneys and late stage cervical cancer. Abdominal aching, low back pain, and gynecomastia are all clinical features of testicular cancer. Patients may present with non-tender and enlarged testicles or diffuse pain and testicular swelling.

91.

Which of the following chemotherapeutic agents may have a side effect of dose-limiting diarrhea either early (within 24 hours of administration) or late (over 24 hours after administration)?

Paclitaxel

Methotrexate

Irinotecan

Cisplatin

Explanation:

Irinotecan is indicated in the treatment of metastatic colorectal cancer. Side effects include myelosuppression, nausea, vomiting, dyspnea, and alopecia in addition to severe and potentially life-threatening diarrhea. Although the other chemotherapeutic agents listed can cause diarrhea as a side effect, dose-limiting diarrhea is a specific toxicity associated with irinotecan.

92.

You are a registered nurse who has just begun working in an outpatient infusion center. You have learned that the required personal protective equipment that should be worn when administering chemotherapy is:

A disposable long sleeved gown, disposable nitrile or neoprene non-powdered gloves, and a plastic face shield when splashes, sprays or aerosols may occur

Disposable gloves only

A disposable long-sleeved gown, N95 respirator mask, and disposable nitrile or neoprene gloves

A reusable gown and disposable nitrile or neoprene gloves

Explanation:

The Occupational Safety and Health Administration (OSHA) recommends the use of a disposable, long-sleeved gown, disposable gloves (non-powdered made of surgical latex, nitrile, polyurethane or neoprene), and a plastic face shield when splashes, sprays or aerosols may be generated. N95 masks are not indicated for administration. Gowns should never be reused.

93.

Which of the following interventions are NOT recommended to minimize exposure to hazardous drugs during administration?

Double gloving for administration of hazardous drugs

Inspecting gloves for visible defects prior to use

Changing gloves after each use, tear, puncture, or contamination, or after 30 minutes of use

Spiking and priming the bag in a utility room over a sink

Explanation:

Appropriate personal protective equipment is critically important in the administration of chemotherapy. Spiking and priming of hazardous drugs should be done in a biologic safety cabinet or by using a dry spike extension and backflow technique to minimize exposure.

94.

Which of the following are risk factors for malignant melanoma?

Blond or red hair and marked freckling on the upper back

A prior human papillomavirus infection

A history of excessive alcohol intake

Obesity, diabetes, and hypertension

Explanation:

Malignant melanoma is the deadliest form of skin cancer, accounting for 3% of all cancers diagnosed in the United States each year. Risk factors for the development of melanoma include: history of multiple blistering sun burns, blond or red hair and marked freckling, a familial history of melanoma, the presence of atypical moles, and fair skin that burns easily. Human papillomavirus infection and excessive alcohol intake are risk factors for the development of head and neck cancers. Obesity, diabetes, and hypertension are risk factors in the development of endometrial cancer.

95.

You are taking care of a patient who has been recently diagnosed with non-Hodgkin's lymphoma and who is receiving his first cycle of chemotherapy. You read in the patient's medical record that he has a large tumor burden and a significantly elevated LDH level. About one-hour post-chemotherapy, your patient begins vomiting and is becoming somewhat lethargic. You notice elevated T-waves on the patient's telemetry. You review the patient's lab work post- chemotherapy and find the following values: sodium: 135, potassium: 6.8, calcium 7.5, and phosphorus 5.0. Which of the following is the most likely cause of this patient's symptoms?

Syndrome of inappropriate antidiuretic hormone secretion (SIADH)

Tumor lysis syndrome

An anaphylactic reaction to chemotherapy

Septic shock

Explanation:

This patient demonstrates signs of tumor lysis syndrome as evidenced by hyperphosphatemia, hypocalcemia, and hyperkalemia. Tumor lysis syndrome is an oncologic emergency that occurs when cancer cells are rapidly killed and intracellular contents are released into the bloodstream.

The patient is at risk for tumor lysis due to his diagnosis of a hematologic tumor and a large tumor burden and elevated LDH.

96.

You are caring for a patient with acute leukemia who has now developed disseminated intravascular coagulation (DIC). In DIC, the platelet count is:

Increased

Unaffected

Decreased

Dependent on the fibrinogen level

Explanation:

Disseminated intravascular coagulation is a bleeding disorder characterized by an alteration in the body's ability to clot, resulting in an abnormal acceleration of the clotting cascade and subsequent thrombosis. In DIC, excess thrombin results in multiple fibrin clots in the circulation, which trap platelets, thereby disrupting normal coagulation and decreasing the platelet count.

97.

You are caring for a patient diagnosed with breast cancer who received chemotherapy ten days ago. At the start of your shift, you assess the patient and find the following:

T 102.5, HR 142, BP 80/40, RR 32 breaths/minute

The patient's husband states that she has had "shaking chills" for approximately 30 minutes and has become increasingly lethargic over the past two hours. The nurse on the prior shift administered two 500 ml Normal Saline fluid boluses per physician orders for the patient's hypotension. The patient's blood pressure is 80/40 mmHg after the fluid boluses. You suspect the patient may be experiencing which of the following?

Tumor lysis syndrome

Anaphylaxis

Septic shock

Hypercalcemia

Explanation:

Septic shock is characterized by fever, chills, tachycardia, tachypnea, mental status changes and hypotension despite aggressive fluid challenge to correct the situation. The patient is not exhibiting signs of anaphylaxis or tumor lysis syndrome. Her chemotherapy was administered 10 days ago. Although the patient may be at risk for hypercalcemia, she is not exhibiting signs and symptoms of this condition either.

98.

Which of the following interventions is NOT appropriate for teaching a patient about the prevention of lymphedema?

Never allow an injection or a blood draw in the affected extremity.

Do not wear tight jewelry or elastic bands around the affected extremity.

Ensure that nails are manicured regularly, including cutting the cuticles.

Use an electric razor to remove hair from under the arms and on the lower extremities.

Explanation:

The cutting of cuticles is not recommended in the prevention of lymphedema. Removal of lymph nodes increases the risk for infection and lymphedema. Maintaining skin integrity helps to minimize the risk of both. Recommended interventions from the National Lymphedema Network include avoiding heavy sun exposure and burns, wearing gloves while gardening; using only the unaffected arm for injections, blood samples, intravenous access, or blood pressure readings; and promptly treating cuts.

99.

The presence of epidermal growth factor receptor (EGFR) has been associated with which of the following?

Less-aggressive tumors

A worse prognosis

Receptiveness to endocrine therapy

Decreased rate of cancer recurrence

Explanation:

Epidermal growth factor receptor is a protein that influences cancer growth in different types of cancers. It is found in abnormally high levels on the surface of many types of cancer cells, causing them to excessively divide in its presence. Increased EGFR is associated with more aggressive tumors, recurrence, poorer prognosis, and resistance to endocrine therapy.

100.

Which of the following chemotherapeutic agents is classified as a Vinca alkaloid?

Docetaxel

Topotecan

Oxaliplatin

Vinblastine

Explanation:

Vinca alkaloids are a subset of chemotherapeutic drugs derived from the Madagascar periwinkle plant that exert their cytotoxic effects by halting cell division and causing cell death. Vinblastine is a plant alkaloid, and more specifically, a Vinca alkaloid. Docetaxel is also a plant alkaloid, derived from Taxanes. Topotecan is also plant alkaloid but is more specifically classified as a Camptothecin analog. Oxaliplatin is not a plant alkaloid; it is an alkylating agent known as a 'metal salt'.

101.

Which of the following agents is an example of an EGFR inhibitor?

Bevacizumab

Imatinib

Lapatinib

Gemtuzumab

Explanation:

Epidermal growth factor receptor inhibitors work by blocking the epidermal growth factor receptor protein present on the surface of the cancer cell that causes excessive cell division and subsequent tumor growth. Lapatinib is an epidermal growth factor receptor inhibitor used in the treatment of metastatic breast cancer. Bevacizumab is a VEGF inhibitor. Imatinib is a tyrosine kinase inhibitor. Gemtuzumab is a monoclonal antibody.

102.

An example of an unconjugated MAb approved for therapeutic use in oncology is:

Trastuzumab

Gemtuzumab

Ibritumomab

Iodine-131 tositumomab

Explanation:

Monoclonal antibodies can be divided into two types: unconjugated and conjugated. Unconjugated monoclonal antibodies are those not bound to a drug, toxin, or radioactive substance. Unconjugated MAbs may also be referred to as naked MAbs and are the most commonly used monoclonal antibodies. Trastuzumab is an example of an unconjugated MAb. Gemtuzumab, ibritumomab, and iodine-131 tositumomab are all examples of conjugated MAbs.

103.

All of the following are examples of anticancer agents that might be attached to conjugated MAbs EXCEPT:

Radioactive isotopes

Chemotherapeutic agents

Toxins

Hormones

Explanation:

Conjugated MAbs are joined to radioactive isotopes, chemotherapeutic agents, or toxins to poison the cancer cells they are targeting. Conjugated MAbs work by transporting the associated anticancer agents directly to the cancer cells. Conjugated MAbs do not attach to hormones.

104.

A conjugated MAb with a radioactive isotope component used in combination with rituximab for the treatment of B-cell lymphoma is:

Gemtuzumab

Ibritumomab

Iodine-131 tositumomab

Alemtuzumab

Explanation:

Ibritumomab is indicated in combination with rituximab in the treatment of relapsed or refractory low-grade, follicular or transformed B-cell NHL. Gemtuzumab is indicated for the treatment of CD33 positive acute myeloid leukemia. Iodine-131 tositumomab is indicated for the treatment of CD20 positive, follicular NHL (not used in combination with rituximab). Alemtuzumab is indicated for the treatment of B-cell chronic lymphocytic leukemia.

105.

All of the following are true regarding estrogen receptor (ER) positive tumors EXCEPT:

They are well differentiated.

They tend to have a prolonged overall survival compared to ER-negative tumors.

They are more likely to respond to and benefit from endocrine therapy.

They are more likely to respond to and benefit from chemotherapy.

Explanation:

Estrogen receptor-positive tumors are less likely to respond to and benefit from treatment with chemotherapy when it is used as an isolated treatment. Estrogen receptive-positive tumors are well differentiated and are more likely to respond to and benefit from endocrine therapy. Additionally, they tend to have a prolonged overall survival rate in comparison with ER-negative tumors.

106.

The leading cause of cancer deaths among women is from:

Breast cancer

Lung cancer

Melanoma

Ovarian cancer

Explanation:

Lung cancer continues to be the leading cause of cancer deaths among women (and men), with breast cancer being the second most common, and colorectal cancer as the third. Historically, lung cancer was more prevalent in men; however, in recent years, that gap has narrowed. Tobacco use continues to account for a large proportion of lung cancers.

107.

All of the following are potential physiologic causes for anxiety in patients diagnosed with advanced cancer EXCEPT:

Hormone-secreting tumors

Hypoxia

Poorly-controlled pain

Hypercalcemia

Explanation:

Anxiety occurs often in cancer patients and may be related to disease stage, treatment regimens, financial concerns, family issues, or physiological causes. It can be rated as mild,

moderate or severe. Hormone-secreting tumors, hypoxia, and poorly-controlled pain are all physiologic states that can cause anxiety in patients with advanced disease.

108.

You are caring for a patient with advanced lung cancer who has been experiencing bouts of anxiety throughout the course of his hospitalization. All of the following statements regarding anxiety are true EXCEPT:

Serious anxiety reactions occur in approximately 35% of patients with advanced cancer.

Physical signs and symptoms of anxiety may include tachycardia, tachypnea and hypertension.

Prior to initiating pharmacologic intervention, the nurse should teach the patient relaxation techniques to cope with his anxiety.

If the patient is experiencing pain, ensure that the pain is controlled before properly evaluating anxiety.

Explanation:

Rapid relief of anxiety by pharmacologic intervention establishes credibility and enables the patient to discuss fears calmly. Drug therapy can be discontinued if other non-pharmacologic measures that are added afterward are successful in controlling anxiety. Relaxation techniques can be introduced once the patient's anxiety has lessened and should not be introduced while the patient is experiencing moderate or severe anxiety.

109.

All of the following medications are useful in the treatment of anxiety EXCEPT:

Lorazepam 0.5-2mg every 3-6 hours

Haloperidol 0.5-1.5mg every 4-6 hours

Midazolam 2-10mg SQ or IM once daily

Dicyclomine 20mg every 6 hours

Explanation:

Benzodiazepines (lorazepam and midazolam) are first-line agents utilized for the treatment of anxiety and panic. Other agents, including neuroleptics (haloperidol) or anti-depressants may also be used in the treatment of anxiety. Dicyclomine is an anticholinergic agent that may produce symptoms of anxiety and is not indicated for its treatment.

110.

Which of the following statements is true regarding the pharmacologic treatment of insomnia in cancer patients?

Administer the highest dose of the hypnotic medication and then reduce the dose by 30-50% as insomnia resolves.

Do not abruptly discontinue hypnotic drugs. Instead, taper the doses over several days.

Instruct the patient to use the hypnotic medication every night until his symptoms resolve.

Hypnotic medications need to be prescribed for at least 4-6 weeks before the patient will begin to see their effectiveness.

Explanation:

Hypnotic medications prescribed in the treatment of insomnia should only be taken for short periods (less than three weeks). The lowest effective dose should be given and the patient should only use the hypnotic intermittently (2-4 times per week). Hypnotic medications should not be stopped abruptly; instead, the doses should be tapered over several days.

111.

Which of the following treatment examples best describes adjuvant therapy?

A 53-year-old patient receives chemotherapy and radiation for a diagnosis of stage 3 breast cancer

A 64-year-old patient diagnosed with stage 3 ovarian cancer receives chemotherapy after undergoing a total abdominal hysterectomy and bilateral salpingo-oophorectomy

A 42-year-old patient diagnosed with stage 1 breast cancer undergoes a lumpectomy with lymph node biopsy

An 80-year-old patient diagnosed with chronic leukemia receives oral chemotherapy with regular monitoring by her oncologist

Explanation:

Adjuvant therapy is an additional cancer treatment given after the primary treatment to minimize the risk of cancer recurrence. In example B, the patient underwent surgery as a primary treatment with chemotherapy given as adjuvant therapy. Primary treatment is defined as the first treatment given and is also referred to as first line treatment, induction treatment, or primary therapy.

112.

Which of the following are the most common sources of bone metastases?

Breast, prostate and lung cancers

Prostate, colon and ovarian cancers

Lung, renal and thyroid cancers

Breast, lung and colon cancers

Explanation:

Approximately 85% of patients with bony metastases have a primary tumor in the breast or the prostate, and 44 % have a primary lung tumor. Patients experiencing widespread bone metastasis are likely to have a decreased survival time.

113.

The most painful site of metastasis in breast or prostate cancer is the:

Liver

Lungs

Femur

Brain

Explanation:

Both breast and prostate cancers have the potential to metastasize to almost anywhere in the body; however, the most common metastatic sites are the liver, lungs, brain, and bones. Skeletal metastasis commonly occurs in the vertebra, pelvis, femur and skull. Bone metastasis can be extremely painful for patients, and pain is often an initial symptom that detects when metastasis has occurred. Pain control is critical for patients with painful bone metastasis. Bone metastasis is a significant contributory factor in cancer morbidity.

114.

Osteolytic bone lesions are most commonly associated with which type of cancer?

Gastrointestinal cancer

Multiple myeloma

Thyroid cancer

Prostate cancer

Explanation:

Bone lesions can be classified as osteolytic, osteoblastic, or mixed. Osteolytic bone lesions are primarily associated with non-small cell lung cancer and multiple myeloma. Osteoblastic bone lesions are often associated with small cell lung cancer, prostate cancer, thyroid cancer, and Hodgkin's disease. Mixed osteolytic and osteoblastic lesions are associated with breast cancer, gastrointestinal cancers, and squamous cancers.

115.

The treatment of choice for the pain associated with localized bone metastases is:

Cox-2 inhibitors

Chemotherapy

External beam radiation therapy

Kyphoplasty

Explanation:

The treatment of choice for localized bone metastasis is external beam radiation therapy. Cox-2 inhibitors provide pain relief to patients suffering from arthritis. Chemotherapy might be used as tumor treatment, but pain control may not appear until after the tumor has been managed. Kyphoplasty can be used to treat painful compression fractures.

116.

Which of the following statements is true regarding the use of bisphosphonates in the management of bone metastases?

Bisphosphonates can only be given intravenously.

Bisphosphonates are only effective in alleviating bone pain associated with osteoblastic types of lesions.

Bisphosphonates should be given as a preventive measure to patients with bone metastases from breast cancer or multiple myeloma.

Bisphosphonates are indicated in the treatment of hypocalcemia.

Explanation:

Bisphosphonates are often used as a preventive measure in patients with bone metastases from breast cancer or multiple myeloma. They can be given either orally or intravenously, and are effective in alleviating bone pain in both types of lesions: osteolytic and osteoblastic. Bisphosphonates are also indicated in the treatment of hypercalcemia.

117.

Which of the following tumors are rarely or never associated with hypercalcemia?

Breast cancer

Multiple myeloma

Thyroid cancer

Prostate cancer

Explanation:

Hypercalcemia is a common complication associated with malignancy and metastasis. It is considered an oncologic complication that has the potential to be life-threatening if left untreated. Breast cancer, multiple myeloma and thyroid cancer are all cancers most often associated with hypercalcemia. Prostate cancer is rarely or never associated with hypercalcemia despite a high frequency of bone metastases.

118.

You are taking care of a 45-year-old patient who was recently diagnosed with acute myeloid leukemia. She has been febrile for the last two nights with a temperature of 100.5. Several diagnostic tests have been performed to rule out infection. The resident physician on duty tells you the patient has "a fever of unknown origin." The most likely cause for the patient's febrile state is:

A febrile drug reaction

Neutropenia

Neoplastic fever

A side effect of chemotherapy

Explanation:

Neoplastic fever is defined as a fever caused by the cancer itself and is believed to be cytokine mediated. Cytokines stimulate the production of prostaglandins that act on the hypothalamus, creating a rise in body temperature. Neoplastic fever is the most common cause of fever of unknown origin in cancer patients.

119.

Which of the following statements is true regarding pruritus in cancer patients?

The incidence and severity of pruritus are related to the bilirubin level in patients with obstructive hepatobiliary disease.

Pruritus is a B symptom that is often present in Hodgkin's disease.

Pruritus is often associated with hypothyroidism in cancer patients.

Pruritus occurs in approximately 25% of dialysis patients.

Explanation:

Pruritus is associated with chronic renal failure, obstructive hepatobiliary disease, Hodgkin's disease, cutaneous infiltration of malignancy, hyperthyroidism, polycythemia vera and iron deficiency. It is a "B" symptom present in Hodgkin's disease. Pruritus occurs in 90% of dialysis patients and is not dose-related to the bilirubin level in obstructive hepatobiliary disease.

120.

You are caring for a 63-year-old female patient who has been diagnosed with stage 3 pancreatic cancer. Approximately four months ago, she underwent an endoscopic retrograde cholangiopancreatography (ERCP) and was diagnosed with obstructive jaundice. The patient had a biliary stent placed to alleviate the obstruction. You are performing a clinical assessment and find that the patient is febrile with an oral temperature of 102.5. She is experiencing shaking chills and is diaphoretic. She complains of severe abdominal pain and pruritus, her urine is dark tea colored, and she appears jaundiced. The most likely cause of this patient's symptoms is:

Liver metastasis

A small bowel obstruction

A failure of the biliary stent

Sepsis

Explanation:

Biliary stent failure most often occurs around 4.5 months after stent placement. Fever, chills, sweating, pruritus, return of jaundice, abdominal pain, dark urine, and pale stools are all signs of stent failure. If stent failure is suspected, it must be properly managed as sepsis may occur if the blocked stent is not promptly replaced.

121.

Persistent or intractable hiccups in terminally ill patients are most likely to be caused by all of the following EXCEPT:

Irritation of the vagus nerve due to tumors of the neck, lung, or mediastinum.

Pharmacologic agents such as IV corticosteroids, barbiturates, or benzodiazepines.

Gastric distension caused by impaired gastric motility.

Hyponatremia related to polydipsia

Explanation:

Persistent or intractable hiccups may be caused by irritation of the vagus or phrenic nerves due to tumors of the neck, lung, or mediastinum. Pharmacologic agents such as IV corticosteroids, barbiturates, or benzodiazepines can also cause intractable hiccups. Gastric distension due to impaired gastric motility is a potential cause as well. Hyponatremia may develop when a patient with polydipsia attempts to relieve hiccups, however, hyponatremia itself will not cause intractable hiccups.

122.

A 60-year-old male patient newly diagnosed with small cell carcinoma of the right lung is admitted to the oncology unit with a chief complaint of facial and neck swelling as well as a cough. A diagnosis of superior vena cava syndrome is made. Which of the following treatment options would you expect to see ordered for this patient?

Thoracentesis under local anesthesia

Chemotherapy with adjuvant radiation therapy

Transfusion of two units of packed red blood cells

Surgical consultation to place a chest tube

Explanation:

The correct answer is chemotherapy with adjuvant radiation therapy to shrink the tumor and to elevate the obstruction that is causing the syndrome. Thoracentesis and chest tube placement would be viable treatment options for a pleural effusion. Transfusion of packed red blood cells would not be a suitable treatment option for superior vena cava syndrome.

123.

Which of the following statements is true regarding nausea and vomiting in cancer patients?

Nausea and vomiting occur in up to 60% of patients receiving opioids, especially at the initiation of treatment.

Nausea and vomiting are rare in a terminal patient's last week of life.

Nausea and vomiting are particularly prevalent in patients with leukemia and lymphomas.

Drug therapy for nausea and vomiting is less effective if given prophylactically.

Explanation:

Nausea and vomiting occur in up to 60% of patients receiving opioids, especially at the initiation of treatment. Nausea and vomiting occur in approximately 40% of patients during their last week of life, and tend to be more prevalent in patients with breast, stomach, and gynecologic cancers. Drug therapy is more likely to succeed if given prophylactically.

124.

After a certain dose has been given of non-opioid analgesics, further increases in dosage will not provide more analgesia. This is called a(n) ____ effect.

Synergistic

Ceiling

Analgesic

Antagonistic

Explanation:

A ceiling effect occurs when, after a certain dosage of medication is given, increasing the dosage will not produce further analgesia. This is true of all non-opioid medications. A synergistic effect of a medication is defined as enhancing the action of another medication. An analgesic effect is defined as relieving pain. An antagonistic effect is defined as having an opposite effect on the body when two drugs are given in combination.

125.

_____ pain is the type of pain usually associated with damage to bones, soft tissues, or internal organs.

Neuropathic

Breakthrough

Nociceptive

Idiopathic

Explanation:

Nociceptive or somatic pain is defined as pain resulting from stimulation of afferent nerves, connective tissue, muscles, joints, or bones. It is usually localized and described as throbbing, sharp, or aching. Neuropathic pain is related to damage to the nervous system (i.e. peripheral neuropathy). Breakthrough pain occurs intermittently, is of rapid onset, and greater in intensity than baseline pain. Idiopathic pain is defined as pain that has no apparent underlying cause.

126.

An example of a nociceptive pain syndrome might be:

Diabetic neuropathy

Bone metastases

Fibromyalgia

Complex regional pain syndrome

Explanation:

Bone metastases are examples of nociceptive pain. Diabetic neuropathy and complex regional pain syndrome are examples of neuropathic pain. Fibromyalgia is an example of idiopathic pain. Nociceptive pain is the type of pain related to bone, soft tissue, or internal organ damage and usually presents as a throbbing, sharp, or aching pain.

127.

The principle of double effect is defined as:

The difference between providing analgesic medications that might inadvertently hasten death versus providing medication to intentionally cause death

The difference between developing a state of tolerance to a medication versus forming a psychological dependence on a medication

An outcome occurring between two or more medications that produce effects that are greater than the sum of the two

Tolerance to a drug that develops through continued use of another drug with similar pharmacologic actions

Explanation:

Double effect is defined as the difference between providing analgesic medication with the intent to relieve pain that might inadvertently hasten death versus providing medication to intentionally cause death. An effect arising between two or more medications that produce an effect greater than the sum of the two is a synergistic effect. Tolerance or resistance to a drug that develops through continued use of another drug with similar pharmacologic action is defined as cross-tolerance.

128.

The World Health Organization (WHO) has summarized the principles of pain management in cancer patients by all of the following methods EXCEPT by:

Mouth

The clock

Analgesic ladder

The diagnosis

Explanation:

The World Health Organization has defined the principles of managing pain in cancer patients as the following: By mouth: the oral route is the choice route of administration. By the clock: analgesics for moderate to severe pain should be given on a fixed dose schedule around the clock and not on an "as needed" basis. By the ladder: the WHO has developed a three-step analgesic ladder to guide the sequential use of drugs in treating cancer pain. By the diagnosis is not a principle included in the WHO definition of pain management principles.

129.

Which of the following medications may be useful in the treatment of neuropathic pain?

Codeine 60 mg q 4 hours with an NSAID

Dexamethasone 16 mg daily

An opioid plus carbamazepine 200 mg twice daily

Diazepam 10 mg at bedtime q hs

Explanation:

Carbamazepine used in combination with an opioid is useful in the treatment of neuropathic pain. Codeine, in combination with a non-steroid anti-inflammatory agent, may be useful for visceral pain. Dexamethasone in higher doses is useful in the treatment of increased intracranial pressure. Diazepam may be utilized in treating muscle spasms.

130.

You are taking care of a patient with advanced cancer who is having a significant amount of pain. Which of the following statements from the patient indicate that he has an understanding of his morphine prescription?

"I am hesitant to take my morphine because I am afraid I will stop breathing."

"I prefer not to take narcotics. I do not have much time left and I feel that if I take narcotics it will hasten my death."

"Morphine makes me nauseated, so I know I am allergic to it."

"I know that I need more morphine because my disease has progressed, not because I have a psychological dependence."

Explanation:

Many patients have misconceptions regarding morphine and other narcotics. Fear that morphine causes significant respiratory depression is common. When morphine is titrated according to a patient's pain, the pain antagonizes morphine's depressant effects. Significant respiratory depression is not commonly seen in cancer patients when the medication is appropriately titrated. Common side effects such as nausea, dizziness, and sleepiness are often misinterpreted by patients as an allergic response. There is no evidence suggesting that dose-appropriate morphine either hastens death or prolongs life. The patient recognizing that he may require more morphine as his disease progresses demonstrates an understanding of the medication. Additionally, morphine has no analgesic ceiling; therefore, a dose adjustment based on the patient's pain may be beneficial.

131.

Which of the following statements is true regarding how opioids affect gastrointestinal function?

Opioids cause decreased muscle tone in the gastric antrum, the small intestine, and the colon.

Opioids decrease segmental contractions of the bowel.

Opioids increase stool frequency and volume.

Opioids increase water and electrolyte absorption from the gut lumen.

Explanation:

The effect of opioids on the GI system include a decrease in intestinal secretions and peristalsis. Opioids affect GI function by increasing muscle tone in the gastric antrum, small intestine, and colon; increasing segmental contractions of the bowel, decreasing stool volume and frequency, and increasing water and electrolyte absorption from the gut lumen.

132.

Ascites occurs most commonly in patients with which type of primary malignancy?

Ovarian cancer

Colon cancer

Pancreatic cancer

Endometrial cancer

Explanation:

Ascites is defined as an excessive accumulation of fluid between the abdominal lining and the peritoneal cavity. Ascites can affect comfort level, mobility, respiratory effort, and activities of

daily living. Ovarian cancer is the most common malignancy associated with ascites, and 35% of patients will have ascites upon diagnosis. Sixty percent will have ascites at the time of death.

133.

Which of the following would you include as part of discharge instructions for a patient diagnosed with head and neck cancer and who has received radiation therapy?

Apply soothing ointments to the lips for dryness and cracking.

Use a soft, nylon toothbrush when brushing teeth.

Rinse the mouth several times per day with a baking soda and warm water solution.

All of the above

Explanation:

Patients diagnosed with head and neck cancer who are being treated with radiation therapy are at risk for oral mucositis. Application of soothing ointments for dryness of the lips, using a soft nylon toothbrush, oral baking soda rinses and moistening food with sauces or gravies are all appropriate teaching points for patients undergoing radiation therapy to the head and neck.

134.

Which of the following statements is true related to ascites in the cancer patient?

Ascites primarily affects patients with liver cancer because of tumor invasion in the liver parenchyma.

Bulging flanks may become apparent in a clinical assessment when there is more than 250 ml of fluid in the abdomen.

Peritoneal carcinomatosis is the most common cause of ascites in cancer patients.

Patients with ascites rarely respond to diuretics and often require paracentesis.

Explanation:

Peritoneal carcinomatosis is the most common cause of ascites in cancer patients. Tumor invasion of liver parenchyma only accounts for around 15% of ascites cases. Bulging flanks may become apparent when there is more than 500-1000 ml of fluid in the abdomen. Up to 65% of patients will respond to diuretics. Paracentesis may be considered in those patients with tense ascites or ascites that causes distressing symptoms.

135.

Which of the following statements is true regarding brain metastases?

Brain metastases occur in 25-35% of all cancer patients.

Brain metastases most commonly occur in patients with a primary gastrointestinal cancer diagnosis.

Brain metastases are less common than primary brain tumors.

Brain metastases are more likely to be multiple as opposed to solitary.

Explanation:

Brain metastases occur in 25-35% of all cancer patients. They most commonly occur in patients with lung cancer, followed by breast cancer and melanoma. Brain metastases are more common than primary brain tumors and are multiple in 60% of cases.

136.

The most common presenting symptom in brain metastasis is:

A seizure

Ataxia

Focal weakness

A headache

Explanation:

Clinical features of patients with brain metastases may include headache, weakness, seizures, blurred vision, gait disturbance, altered sensation, and changes in personality. The most common presenting symptom is a headache. Ataxia is often seen with cerebellar metastases, occurring in 24% of diagnosed patients. Seizures occur in 15% of patients and focal weakness in 40%.

137.

Excluding brain metastasis, which of the following may cause seizures in patients with advanced cancer?

Hyponatremia

Hypoxemia

Sepsis

All of the above

Explanation:

Seizure activity is seen in 20-50% of all patients with brain tumors; however, seizures may occur in patients with advanced cancer as a result of stroke, pre-existing seizure disorder, hypoxemia, hypoglycemia, uremia, hyponatremia, sepsis, or withdrawal from drugs or alcohol. Increased intracranial pressure may also result in seizure activity in cancer patients.

138.

Which of the following statements is true regarding the Karnofsky Performance Scale?

The higher the Karnofsky score, the worse prognosis for most serious illnesses.

The Karnofsky Performance Scale allows patients to be classified according to their functional impairment.

The Karnofsky Performance Scale is ineffective when comparing different therapies and assessing the prognosis of individual patients.

All of the above

Explanation:

Different performance scales exist that assess patient well-being and quality of life. The Karnofsky Performance Scale allows patients to be classified as to their functional impairment.

The lower the Karnofsky score, the worse the survival for most serious illnesses. It is an effective means of comparing different therapies and assessing the prognosis of individual patients.

139.

Which of the following symptoms is the most accurate marker of depression in a patient with advanced cancer?

Weight loss

Diminished concentration

Feelings of worthlessness

Insomnia

Explanation:

It may be difficult to diagnose depression in the patient with advanced cancer, as many physical signs of depression are similar to those caused by the cancer itself. Weight loss, insomnia, and diminished concentration are all somatic symptoms of depression that may also be present because of cancer. Feelings of worthlessness are psychological symptoms of depression that may aid in diagnosis when present.

140.

Which of the following factors should be considered when performing a sexual health assessment?

Obtain the sexual health assessment after you have had time to get to know the patient.

Begin with more sensitive topics and move to less sensitive topics throughout the assessment.

Include the patient's goals for treatment in your assessment.

All of the above

Explanation:

A sexual health assessment should be obtained early in the nurse-patient relationship to set the expectation that sexuality is an important component of good health. The assessment should begin with less-sensitive topics and move to more sensitive issues throughout the assessment. It is important to assess the patient's goals for treatment as well as the impact treatment could have on the patient's sexuality. Once goals of treatment are assessed, the nurse can explore any sexuality concerns that the patient may have in regard to his treatment.

141.

The PLISSIT model is frequently used for sexuality assessments and counseling. The "P" in PLISSIT stands for:

Permission

Plan of care

Preparation

Potential concerns

Explanation:

In the PLISSIT model often utilized for sexuality counseling, the "P" stands for permission. Obtaining permission as a first step in the process promotes discussion and allowance of the patient and his/her partner to speak openly without embarrassment. The PLISSIT model can be utilized to guide the nurse in performing a sexuality assessment as well as a means to incorporate nursing interventions based on the nurse's knowledge and comfort level.

142.

You are caring for a patient recently diagnosed with advanced cancer who is struggling to find meaning in his diagnosis. He states, "I just don't understand why this is happening to me." Which of the following is a suitable response to facilitate discussion around the meaning of his illness?

"A lot of people are diagnosed with cancer so it is not only you experiencing these types of feelings."

"How often do you talk with your family about your illness and how it has impacted your lives?"

"Have you ever known anyone with advanced cancer? How did they cope?"

"You are probably feeling this way because you have never struggled with an illness before."

Explanation:

Asking the patient how he is able to discuss his illness with his support system is a suitable way to help facilitate discussion and assist the patient in finding meaning in his illness. Comparing the patient to other cancer patients or making assumptions as to why the patient feels the way he does are not therapeutic communication options that would allow the patient to feel comfortable discussing his feelings.

143.

All of the following are types of allogeneic bone marrow transplants EXCPECT: