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Radiation Risk

1. The use of medical imaging ___.
   a. Has rapidly increased in the last 20 years
   b. Has improved diagnosis and treatment
   c. Increases estimated cancer risks
   d. All of the above

2. Radiation that carries enough energy to eject electrons from particles is described as ___.
   a. Ionizing
   b. X-Ray
   c. Radiosensitive
   d. All of the above

3. Radiation effects that are measured by probabilities are considered ___.
   a. Deterministic
   b. Radiosensitive
   c. Stochastic
   d. Sieverts

4. Many estimates of radiation-associated cancer risks are based on ___.
   a. Stochastic data
   b. Radiation absorption rate
   c. Atomic bomb data
   d. Size of absorbed dose

5. Cell radiosensitivity is directly proportional to ___.
   a. The degree of cell differentiation
   b. The rate of cell division
   c. The cell maturity level
   d. None of the above

6. If current rates continue, 1.5-2 percent of future US cancers will be caused by ___.
   a. CT scans
   b. Nuclear medicine scans
   c. Embolizations
   d. Coronary angiography

7. Radiographic procedures can be ordered due to ____.
   a. Diagnostic reasons
   b. Miscommunications
   c. Medico-legal reasons
   d. All of the above

8. Deterministic effects do not include ___.
   a. Infertility
   b. Cancer development
   c. Skin erythema
   d. Cataracts

9. By optimizing technique and protocol, radiation exposure may be ___.
   a. Eliminated
   b. Decreased
   c. Accurately measured
   d. Improved

10. Unnecessary radiation and redundant exams can be eliminated through ____.
    a. Technological advances
    b. Patient cooperation
    c. Communication
    d. Proper safety attire
**Total Knee Arthroplasty**

1. The first known total knee implant was made of ___.
   a. Ivory
   b. Plaster of paris
   c. Wood
   d. Acrylic

2. From 1951 through the early 70s, the ___ was the primary replacement system.
   a. Polycentric knee
   b. Condylar knee
   c. Walldius hinge
   d. Geometric prosthesis

3. Universal instrumentation was introduced in ___.
   a. 1975
   b. 1987
   c. 1978
   d. 1971

4. Surgical navigation systems can record ___ intraoperatively.
   a. Joint range-of-motion
   b. Laxity
   c. Kinematics
   d. All of the above

5. The greatest detriment to early robotics systems was ___.
   a. Inaccuracy
   b. Cost and complexity
   c. Training personnel
   d. None of the above

6. A system with dedicated instruments that are compatible with different implant systems is considered ___.
   a. Open platform
   b. Interchangeable
   c. Imageless navigation
   d. Precision 4.0

7. The ___ digitizes bony landmarks, monitored by a camera attached to a computer.
   a. Optical tracking system
   b. Fixation pin
   c. Camera
   d. None of the above

8. The ___ is used to determine a patient’s correct standing anatomy.
   a. Femoral tracker
   b. Femoral rotation axis
   c. Mechanical axis
   d. Reference for resection level

9. Pins are placed with the knee in flexion to reduce ___.
   a. Incidence of fracture
   b. Muscle load
   c. Collisions with the tibial implant
   d. All of the above

10. When setting up for a total knee using navigation, the ST will need ___.
    a. Navigation jigs
    b. Standard jigs
    c. All regular total knee instruments
    d. A & C only
Office-Based Ablations

1. ___ is not a conservative method of treating menorrhagia.
   a. Hysterectomy
   b. Hormone replacement therapy
   c. Oral contraceptives
   d. All are conservative methods

2. Of the 600,000 hysterectomies performed in the United States, ___ percent are from benign causes.
   a. 75
   b. 80
   c. 85
   d. 90

3. ___ is an FDA-approved alternative to hysterectomy.
   a. ThermaChoice®
   b. NovaSure®
   c. Global Endometrial Ablation
   d. All of the above

4. ___ is made up of a fan structure layered with copper mesh.
   a. NovaSure®
   b. ThermaChoice®
   c. Her Option®
   d. All of the above

5. The only GEA method that allows hysteroscopic visualization during the procedure is ___.
   a. ThermaChoice®
   b. Her Option®
   c. Hydrothermal ablation
   d. B & C

6. Producing local anesthesia by localized application of cold is known as ___.
   a. Her Option®
   b. Cryoanesthesia
   c. Refrigeration anesthesia
   d. B & C

7. By keeping pressure to 55 mmHg, HTA avoids ___.
   a. Ionic dissociation
   b. Fluid flow through the fallopian tubes
   c. FDA sanctions
   d. All of the above

8. The best method for sterilizing scopes in the office is ___.
   a. Steam sterilization
   b. Sterile wipes
   c. Activated dialdehyde
   d. Antimicrobial solution

   a. Paracervical block
   b. Ionic dissociation
   c. Refrigeration anesthetic
   d. None of the above

10. Postoperatively, most patients can expect ____.
    a. Mild, menstrual-like cramps
    b. A few weeks of vaginal discharge
    c. Significant reduction in menstrual cycle
    d. All of the above
Acquired Adult Flatfoot Deformity

1. The talonavicular joint is located ___.
   a. between the talus and navicular
   b. on the anterolateral midfoot
   c. on the dorsal foot, below the ankle
   d. a & c

2. Attaching the posterior tibial tendon to the transferred FDL is called ___.
   a. Midfoot dissection
   b. Tenodesis
   c. Spring ligament repair
   d. Ligament fixation

3. Surgical procedures to correct flatfoot include ___.
   a. Spring ligament reconstruction
   b. Triple arthrodesis
   c. Subtalar arthrodesis
   d. All of the above

4. Weight-bearing radiographs should be taken ___.
   a. Preoperatively
   b. Postoperatively
   c. At the surgeon’s discretion
   d. Only when screws are used

5. The most common cause of adult-acquired flatfoot is ___.
   a. Lateral hindfoot pain
   b. Navicular tuberosity
   c. Posterior tibial tendon dysfunction
   d. Achilles tendonitis

6. The ___ can be used to replace the posterior tibial tendon.
   a. Achilles tendon
   b. FDL tendon
   c. Peroneal tendon
   d. None of the above

7. ___ can be used to lengthen the lateral column in this surgical alternative.
   a. Iliac crest block autograft
   b. Structural allograft
   c. FDL transfer
   d. A & B

8. Varying degrees of flatfoot are present in ___ percent of the population.
   a. 10-25
   b. 15-30
   c. More than 50
   d. Unknown

9. In the lateral column lengthening procedure, the “bump” under the ipsilateral hip provides ___.
   a. Support for the hip
   b. Relief of a bony pressure point
   c. Better access to the lateral side of the foot
   d. Stability for the thigh

10. Patients with painful arthritis or fixed flatfoot with PTTD are usually best served with ___.
    a. Motion-sparing procedures
    b. Subtalar arthrodesis
    c. Triple arthrodesis
    d. B & C
1. The ___ should include the qualitative nature of discomfort, location, onset and history of trauma/developmental abnormality.
   a. Diagnosis
   b. Patient history
   c. Treatment
   d. Rehabilitation

2. Primary portals are placed ___.
   a. Anterior and anterolateral
   b. Anterior and posterior
   c. Anterolateral and posterolateral
   d. Superior and inferior

3. A pincer lesion is located on the ___.
   a. Femoral head
   b. Femoral head neck junction
   c. Acetabular fossa
   d. Acetabular rim

4. The labrum is made up of ___.
   a. Fibrocartilage
   b. Osseous abnormalities
   c. Bone
   d. Hyaline cartilage

5. The ___ is/are located on the femoral head-neck junction.
   a. Cam lesion
   b. Pincer lesion
   c. Labrum
   d. Nerve fibers

6. The anterolateral portal penetrates the ___.
   a. Sartorius
   b. Rectus femoris
   c. Gluteus medius
   d. Greater trochanter

7. The femoral artery and nerve lie ___ to the anterior portal.
   a. Posterior
   b. Medial
   c. Lateral
   d. Superior

8. A type 2 tear is ____.
   a. Detachment or pincer impingement
   b. Detachment or cam impingement
   c. Intrasubstance tear or pincer impingement
   d. Intrasubstance tear or cam impingement

9. The anterior portal penetrates the ___.
   a. Sartorius
   b. Rectus femoris
   c. Gluteus medius
   d. Both a & b

10. Postoperative rehabilitation includes ___.
    a. Walking or light jogging
    b. Rest
    c. Crutches
    d. Continuous passive motion and physical therapy
1. Bronchoesophageal fistulae are categorized into ___ typical presentations.
   a. 1
   b. 2
   c. 3
   d. 4

2. During embryonic development, the lungs begin to form during gestational week ___.
   a. 2
   b. 3
   c. 4
   d. 5

3. Bronchoesophageal fistulae may present secondary to ___.
   a. Hodgkin’s lymphoma
   b. Certain respiratory irritants
   c. Cavitating lesions
   d. All of the above

4. The ___ is made up of stratified squamous epithelial cells.
   a. Mucosal layer
   b. Submucosa
   c. Mainstem bronchus
   d. Muscularis

5. The most common type of fistula is ___.
   a. Type 1
   b. H-type
   c. Sequestered parenchyma
   d. None of the above

6. ___ has been proven as an effective surgical method in fistula closure.
   a. Endotracheostomy
   b. Open thoracotomy
   c. Video-assisted thoracotomy
   d. B & C

7. According to ease of access to the fistula, the typical patient is preoperatively positioned in either ___ or ___ position.
   a. Lateral/Trendelenburg
   b. Supine/Fowler’s
   c. Supine/Lateral
   d. No proper combination

8. An “H-type fistula” refers to a direct connection between the esophagus and the ___.
   a. Tracheal lumen
   b. Bronchus
   c. Parenchymal tissue
   d. None of the above

9. Postoperative swallowing evaluations may include ___.
   a. Speech therapy
   b. Barium swallow
   c. Contrast radiography
   d. B & C

10. Postoperative complications may include ___.
    a. Hemorrhage
    b. Pneumothorax
    c. Nosocomial infection
    d. All of the above
1. The ___ covers the external jugular vein in the neck.
   a. Platysma
   b. Deltoideus
   c. Superior part of the pectoralis major
   d. None of the above

2. A ___ is used to separate the subcutaneous layer form the platysma muscle.
   a. Army/Navy retractor
   b. Adson forceps
   c. #15 blade
   d. Straight Metzenbaum scissor

3. Patients must cease drinking and smoking ___ prior to the procedure.
   a. 24 hours
   b. One week
   c. Two weeks
   d. One month

4. Patients should wear an elastic bandage around the head and neck for ___.
   a. 24 hours postoperatively
   b. 48-72 hours postoperatively
   c. Up to five days postoperatively
   d. All of the above

5. Platysmaplasty can be performed using ___ anesthesia.
   a. General
   b. IV sedation
   c. Local
   d. All of the above

6. The method of suturing for this procedure is based on ___.
   a. Surgeon’s preference
   b. The amount of fat removed
   c. The type of suture
   d. A & B

7. ___ is administered preoperatively to help prevent infection.
   a. Cleocin
   b. Cephalexin
   c. Azithromycin
   d. Penicillin

8. To prevent bleeding, ___ are not allowed during the first week following surgery.
   a. Vitamin D
   b. Aspirin
   c. Acetaminophen
   d. A & B

9. Which item is not laid out on the Mayo stand?
   a. DeBakey tissue forceps
   b. Elastic bandage
   c. Head light source
   d. Surgeon’s magnified intense glasses

10. Possible complications from platysmaplasty include ___.
    a. Hematoma
    b. Infection
    c. Seroma
    d. All of the above
Emergency Cesarean Delivery

1. Early practice of Cesarean section often resulted in ___.
   a. Fetal bradycardia
   b. Shoulder dystocia
   c. Cardiac arrest
   d. All of the above

2. What important innovation helped make the Cesarean delivery safer in the mid-1800s?
   a. Anesthesia
   b. Blood bank
   c. ESU
   d. Oxytocin

3. The ___ must be present in the LDR during a Code Blue.
   a. Patient’s next of kin
   b. Anesthesiologist
   c. Blood bank
   d. In-house obstetric attending physician

4. The rarest presentation of a breech birth ___.
   a. Kneeling breech
   b. Complete breech
   c. Frank breech
   d. Footling breech

5. The ___ is placed in charge of obtaining additional supplies in emergency situations.
   a. Nurse manager
   b. Assistant nurse manager
   c. Patient’s primary nurse
   d. Runner

6. During the delivery, the ___ is delivered first.
   a. Bottom
   b. Head
   c. Feet
   d. Umbilical cord

7. Breech birth risks include ___.
   a. Umbilical cord prolapse
   b. Head entrapment
   c. Oxygen deprivation
   d. All of the above

8. What size blade does the surgical technologist need to incise the patient’s skin?
   a. #20
   b. #11
   c. #15
   d. #10

9. Which of the following factors is not influential in the occurrence of a breech birth?
   a. The sex of the baby
   b. Multiple fetuses
   c. Premature labor
   d. Uterine abnormalities

10. Who determines if the patient should be moved to the OR for further patient management and/or closure?
    a. Team leader
    b. Physician
    c. Medication nurse
    d. None of the above
Birmingham Hip Resurfacing

1. A polyethylene component is used in the ___ system.
   a. Total hip replacement
   b. Birmingham Hip Resurfacing
   c. Corin Cormet Hip Resurfacing
   d. CONSERVE® Plus Total Hip Resurfacing

2. The acetabular cup should be seated at ___ degrees of inclination and ___ degrees of anteversion.
   a. 40/20
   b. 20/40
   c. 44/46
   d. 46/44

3. A ___ is placed around the femoral head to protect soft tissues from being contaminated by bony reaming during the femoral preparation.
   a. Continuous flow of irrigation
   b. Sterile 4x4 pad
   c. Urology drape
   d. Drain cannula

4. Indications for hip resurfacing include ___.
   a. Impaired or disrupted blood supply
   b. Rheumatoid arthritis
   c. Bone-on-bone articulation
   d. All of the above

5. Why is an X-ray-detectable 4x4 placed in the acetabular cup after it is set?
   a. To prevent impingement
   b. To protect the cup during the next process
   c. To take X-ray measurements
   d. All of the above

6. There are currently ___ FDA-approved hip resurfacing systems
   a. 1
   b. 2
   c. 3
   d. 4

7. A/an ___ is used to remove the peripheral ring of femoral head bone.
   a. Osteotome
   b. Cannulated rod
   c. Rongeur
   d. Cylindrical reamer

8. The best candidates for hip resurfacing are ___.
   a. Elderly, inactive patients
   b. Younger, active patients
   c. Elderly, moderately-active patients
   d. Young, relatively inactive patients

9. Rehabilitation can begin ___ after surgery.
   a. One day
   b. Three to five days
   c. One week
   d. 10-15 days

10. “If loading on a particular bone increases, the bone will remodel itself over time to become stronger and resist that sort of loading,” is a principle of ___.
    a. Science
    b. Medical theory
    c. Wolff’s Law
    d. Birmingham Hip Resurfacing
Radical Neck Dissection

1. How many modifications to the radical neck dissection are there?
   a. 1
   b. 2
   c. 3
   d. 4

2. The ___ is isolated and divided immediately after the external jugular vein.
   a. Anterior trapezius muscle
   b. Omohyoid muscle
   c. Internal jugular vein
   d. Thyrocervical artery

3. The first radical neck dissection was performed by ___.
   a. George Crile
   b. Hayes Martin
   c. Oswaldo Suarez
   d. Ettore Bocca

4. A ___ is used to protect the carotid artery in the event the patient has undergone previous radiation therapy.
   a. Sterile towel
   b. Dermal skin graft
   c. Sterile plastic adhesive
   d. Fenestrated sheet

5. The lymph node groups and additional structures not included in the classic neck dissection are resected in the ___.
   a. Type I modification
   b. Type II modification
   c. Type III modification
   d. Extended radical neck dissection

6. Surgical and anesthesia times increase significantly when ___ are used.
   a. Radial forearm flaps
   b. Rectus abdominis flaps
   c. Microvascular flaps
   d. Nerve grafts

7. Which medical advancement allowed surgery to become the primary treatment for cancers of the head and neck?
   a. Radical neck dissection
   b. Preservation of the spinal accessory nerve
   c. Antibiotics
   d. All of the above

8. Cadaveric tissue grafts may be successful in radical neck dissections because ___.
   a. It can reduce surgical time
   b. It can reduce time under anesthetic
   c. A previously-irradiated field does not affect its integration
   d. All of the above

9. After the thyrocervical artery is clamped, divided and ligated, the ___ is/are dissected.
   a. Posterior triangle
   b. Cervical and suprascapular arteries
   c. Omohyoid muscle
   d. None of the above

10. A radical neck dissection will generally keep a patient in the hospital for ___.
    a. 3-5 days
    b. 5-7 days
    c. 7-12 days
    d. 13-15 days
Pectus Carinatum: Pigeon Chest

1. Pectus Carinatum is characterized by a/an ___ of the sternum.
   a. Protrusion
   b. Indentation
   c. Fracture
   d. A & C

2. Effects of pigeon chest include ____.
   a. Fatigue
   b. Dyspnea
   c. Psychological issues
   d. All of the above

3. The surgical procedure can take anywhere from ____.
   a. 2-4 hours
   b. 2-6 hours
   c. 4-6 hours
   d. None of the above

4. The Ravitch procedure has a ___ percent of satisfaction rate among patients.
   a. 97
   b. 87
   c. 79
   d. 92

5. Patient’s cardiopulmonary function can be affected by ____.
   a. Mitral valve prolapsed
   b. Decreased lung capacity
   c. Impaired gas exchange in cardiopulmonary system
   d. All of the above

6. The Ravitch procedure does not involve ____.
   a. Cutting the costal cartilage
   b. Using a stabilization bar
   c. External pressure brace
   d. Removal of some costal cartilage

7. The ratio of males to females that develop pectus carinatum is ____.
   a. 3:1
   b. 7:2
   c. 6:2
   d. 5:1

8. The principal organs of respiration and circulation are protected by the ____.
   a. Thorax
   b. Pectoral muscles
   c. Sternum
   d. Thoracic vertebrae

9. The human body has ____ false ribs.
   a. Ten
   b. Six
   c. Three
   d. Two

10. A chest deformity characterized by an inverted sternum is ____.
    a. Pectus carinatum
    b. Pigeon chest
    c. Pectus excavatum
    d. All of the above
11. The intercostal spaces are located between the ___.
   a. Lungs  
   b. Ribs  
   c. Vertebral bodies  
   d. Costal cartilages

12. Pectus carinatum can present at which phase of a patient’s life?
   a. At birth  
   b. Post surgically  
   c. During growth spurts  
   d. All of the above

13. Which genetic disorder is not considered a possible cause of pectus carinatum?
   a. Trisomy 21  
   b. Morquio syndrome  
   c. Brittle bone disease  
   d. Scoliosis

14. One percent lidocaine with epinephrine, 1:200, 000 describes ___.
   a. Sterile solution  
   b. General anesthetic  
   c. Local anesthetic  
   d. Anxiety medication

15. In the case presented, the patient is in the ___ position for surgery.
   a. Reverse Trendelenburg  
   b. Supine  
   c. Trendelenburg  
   d. None of the above

16. ___ is/are performed preoperatively to rule out genetic disorders.
   a. Blood tests  
   b. Urine analysis  
   c. X-ray  
   d. ECG

17. The average hospital stay for this procedure is ___.
   a. 1-5 days  
   b. 3-5 days  
   c. 3-7 days  
   d. 5-9 days

18. Preoperative diagnostic tests include ___.
   a. Pulmonary function  
   b. CT scan  
   c. Urine analysis  
   d. All of the above

19. ___ is a genetic disorder in which the body cannot metabolize methionine.
   a. Homocystinuria  
   b. Morquio syndrome  
   c. Trisomy 18  
   d. Marfan syndrome

20. Twisting movement or rapid elevation of the arms is restricted for ___.
   a. Two months  
   b. Four months  
   c. Six weeks  
   d. Until postoperative checkup
Vertical Sleeve Gastrectomy

1. What separates the VSG from a banding procedure?
   a. VSG is permanent
   b. VSG does not implant a foreign body
   c. VSG removes most of the stomach
   d. All of the above

2. ___ is a comorbid condition that can qualify a patient for a bariatric procedure.
   a. Diabetes
   b. Obesity
   c. Elevated BMI
   d. All of the above

3. Sleeve gastrectomy is contraindicated for patients with a history of ___.
   a. Diabetes
   b. GERD
   c. Gastric cancer
   d. Sleep apnea

4. VSG has a/an ___ risk of re-operation as compared to alternative bariatric procedures.
   a. Higher
   b. Lower
   c. Equal
   d. Insufficient data to determine

5. One possible complication of VSG is a leak at the esophageal-gastric junction, which can cause ___.
   a. Fistulae
   b. Pleural effusion
   c. Infections
   d. All of the above

6. Which of these screening processes is not required for all bariatric patients?
   a. Blood chemistries
   b. Comprehensive metabolic panel
   c. Serum pregnancy test
   d. All processes are required

7. Preoperative education with a ___ is required for VSG patients.
   a. Nutritionist
   b. Physical therapist
   c. Psychologist
   d. Personal Trainer

8. A total of ___ 12 mm trocars are placed during this procedure.
   a. 1
   b. 2
   c. 3
   d. 4

9. The sleeve is checked for air leakage by ___.
   a. Submersion in saline solution
   b. Carbon dioxide pneumoperitoneum
   c. Surgeon’s visual examination
   d. None of the above

10. Wounds are irrigated with triple-antibiotic solution, which does not include ___.
    a. Bacitracin
    b. Neomycin
    c. Polymyxin
    d. Saline
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Radiation Risk

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Mark one box next to each number. Only one correct or best answer will be selected for each question.

Total Knee Arthroplasty

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Office-Based Ablations

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### Acquired Adult Flatfoot Deformity

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### Hip Arthroscopy: Femoroacetabular Impingement

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### Open Thoractomy Approach Bronchoesophageal Fistula Repair

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### Platysmaplasty: A Surgical Resolution for the Turkey Neck

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### Emergency Cesarean Delivery

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### Birmingham Hip Resurfacing

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### Radical Neck Dissection

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### Pectus Carinatum: Pigeon Chest

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### Vertical Sleeve Gastrectomy

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