

NBSTSA CST - Quiz Questions with Answers

I. Perioperative Care

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1.

During preoperative preparation for a total knee arthroplasty, which equipment should the surgical technologist prioritize to reserve?

Bone cement mixer

High-frequency ventilator

Microsurgical needle holder

Fiberoptic bronchoscope

Correct answer: Bone cement mixer

Bone cement is often used in total knee arthroplasty to adhere the artificial joint to the bone, making the bone cement mixer crucial for this surgery.

High-frequency ventilators are critical in specific respiratory treatments, not typically required for a total knee arthroplasty.

Microsurgical needle holders are used in procedures requiring fine suturing, such as microvascular surgery, not typically in knee arthroplasty.

Fiberoptic bronchoscopes are used for examining the airways and are not relevant equipment for a knee arthroplasty procedure.

2.

When choosing a waterless surgical scrub product, what is the MOST important factor to consider?

The product's efficacy in reducing microbial flora

The product's efficacy in eliminating all microbial flora

The duration of the scrub process needed

The moisturizing properties of the product to ensure the skin barrier remains intact

Correct answer: The product's efficacy in reducing microbial flora

The most important factor is the product's ability to effectively reduce microbial flora on the skin.

Eliminating all microbial flora is not something that can be achieved using any surgical scrub product or handwashing technique.

While the duration of the scrub process is important, the primary consideration should be the product's efficacy.

Moisturizing properties are secondary to the product's antimicrobial effectiveness.

3.

Before starting an x-ray during a surgical procedure, what is the MOST important safety device to apply to the patient to minimize radiation exposure?

Lead apron or shields

Reflective blanket

Thermal insulation pad

Gel padding to prevent pressure ulcers

Correct answer: Lead apron or shields

Lead aprons or shields are specifically designed to protect patients (and staff) from unnecessary radiation exposure, making them the most important safety device in this context.

Reflective blankets are used for temperature regulation, not radiation protection.

Thermal insulation pads are also used for maintaining body temperature, not for radiation shielding.

Gel padding may help prevent pressure ulcers but does not offer protection against radiation exposure.

4.

In preparing a specimen obtained during a thyroidectomy, what is the MOST appropriate preparation to ensure its preservation until analysis?

Placement in a formalin-filled container

Immediate freezing at -20°C

Submersion in a saline solution

Air drying on a sterile surface

Correct answer: Placement in a formalin-filled container

Formalin fixation is standard for preserving tissue specimens, ensuring cellular detail is maintained for accurate pathology.

Immediate freezing is not typically required for thyroid specimens and could damage tissue integrity. Saline keeps the specimen moist but does not preserve tissue for histological examination. Air drying could lead to desiccation and tissue distortion, compromising histological evaluation.

5.

Before the start of a surgical procedure, the surgical technologist notices that the patient's consent form is missing. What is the MOST appropriate action?

Inform the surgeon, so they can ensure the consent form is signed before proceeding

Recognize that obtaining consent is the role of the surgeon and that it is ultimately their responsibility

Have the patient complete the consent form prior to proceeding

Document the absence of the consent form and proceed with the setup

Correct answer: Inform the surgeon, so they can ensure the consent form is signed before proceeding

Ensuring that all necessary documentation, especially the consent form, is in place before surgery is crucial. It is a legal requirement and critical for patient safety and autonomy.

While obtaining consent is the role of the surgeon, the surgical technologist should still address this deficiency in documentation.

Obtaining consent is the role of the surgeon and having the patient complete the consent form without the surgeon's involvement is incorrect.

Merely documenting the absence of the consent form without taking action to rectify the situation is not adequate to meet legal and ethical standards. Proceeding with surgery without written consent is against legal and ethical standards.

6.

Which of the following patient positions is most appropriate for a posterior surgery?

Prone position on chest rolls

Supine position

Spinal position

Fowler's position

Correct answer: Prone position on chest rolls

The prone position on chest rolls allows for optimal exposure of the lumbar spine while ensuring adequate ventilation and reducing abdominal pressure.

The supine position is primarily for anterior access surgeries, not suitable for posterior lumbar spine surgery.

The spinal position is not the name of a recognized surgical position.

Fowler's position, where the patient is seated in a semi-upright position, is primarily used for procedures involving the head, neck, and shoulders, not the lumbar spine.

7.

When assisting with the application of a plaster cast for a fractured forearm, which of the following steps is MOST important to prevent thermal injury to the patient?

Dipping the plaster rolls in lukewarm water before application

Applying the cast as tightly as possible to immobilize the fracture

Using minimal padding under the plaster to ensure firm support

Ensuring the patient's forearm is positioned above heart level

Correct answer: Dipping the plaster rolls in lukewarm water before application

Dipping plaster rolls in lukewarm water controls and slows the exothermic reaction during setting, minimizing the risk of thermal injury. This precaution is important for patient safety, ensuring the setting process does not cause discomfort or burns to the skin.

Applying the cast too tightly can cause circulatory and nerve compression; it does not reduce the risk of thermal injury. Insufficient padding can lead to pressure sores and discomfort but does not directly relate to thermal injury. Positioning the forearm above heart level helps reduce swelling but is unrelated to preventing thermal injury.

8.

During a lengthy procedure, how should a surgical technologist manage skin-edge retractors to minimize the risk of tissue necrosis?

By frequently releasing and reapplying the retractors

By applying constant pressure throughout the procedure

By using additional padding under the retractor edges

There is no risk of tissue necrosis when using skin-edge retractors

Correct answer: By frequently releasing and reapplying the retractors

Periodically releasing and reapplying retractors helps to maintain blood flow and minimize pressure necrosis.

Constant pressure can impair blood flow, increasing the risk of tissue necrosis. While padding may reduce direct pressure, it does not address the underlying issue of impaired blood flow due to constant tension. There is a risk of tissue necrosis when using skin-edge retractors for a lengthy procedure.

9.

When transferring a patient from the operating table to a stretcher, what is the MOST important factor to consider for patient safety?

Coordination among team members during the transfer

Having a smooth, fast transfer to minimize the time the patient is exposed to risks during transfer

Ensuring the patient is fully awake before transferring

The type of operating table and stretcher

Correct answer: Coordination among team members during the transfer

Effective coordination among team members ensures that the patient is supported adequately and securely during the transfer, minimizing the risk of falls or injury, which is crucial for patient safety.

While minimizing the time of exposure to risks is theoretically important, haste can lead to mishandling and increased risk of accidents.

Ensuring the patient is fully awake before transferring may not always be applicable or the most critical factor, especially in cases where the patient needs to remain sedated or requires immediate postoperative care that does not allow for awakening.

Although the compatibility and functionality of the operating table and stretcher are important to facilitate a smooth transfer, the key factor for patient safety is the coordination and communication among the healthcare professionals involved in the transfer.

10.

During a laparoscopic cholecystectomy, the surgeon requests irrigation to clear the operative site of small gallstones and debris. Which solution is MOST appropriate for this procedure?

Sterile saline solution

Hydrogen peroxide

Povidone-iodine solution

Distilled water

Correct answer: Sterile saline solution

Sterile saline solution is isotonic and safe for irrigation in a laparoscopic cholecystectomy, as it does not provoke tissue reaction and effectively clears the site.

Hydrogen peroxide can cause air embolisms when used in laparoscopic procedures and is cytotoxic, making it inappropriate for this use.

Povidone-iodine solution is antiseptic and may be toxic if introduced into the peritoneal cavity, leading to complications.

Distilled water is hypotonic and can cause cell lysis if used for irrigation in the abdominal cavity.

11.

When monitoring the use of irrigating solutions during an abdominal surgery, which solution is PREFERRED to minimize cellular swelling?

0.9% saline

Distilled water

Dextrose 5% in water

0.45% saline

Correct answer: 0.9% saline

0.9% saline is isotonic, meaning it has the same osmolality as body fluids, thus minimizing the risk of cellular swelling or shrinking during its use in abdominal surgery.

Distilled water is hypotonic compared to body fluids, which can lead to cellular swelling as water moves into cells to balance the osmotic pressure.

Dextrose 5% in water is initially isotonic, but once dextrose is metabolized, it effectively becomes hypotonic, potentially leading to cellular swelling.

0.45% saline is hypotonic compared to body fluids, increasing the risk of cellular swelling, as it causes water to move into cells to equalize osmotic differences.

12.

Which action is MOST appropriate when labeling a specimen container for a segment of bowel resected for obstruction?

Labeling with the patient's name and site of the specimen

Labeling with the surgeon's name

Labeling with the patient's diagnosis

Labeling with the patient's name and type of surgery being performed

Correct answer: Labeling with the patient's name and site of the specimen

Labeling the specimen container with the patient's name and the specific site of the specimen ensures accurate identification and correlation with the patient's medical records.

Labeling with the surgeon's name does not provide specific information about the patient or the specimen.

Labeling with the patient's diagnosis is not specific enough for identifying the specimen, especially in cases where a patient might have multiple issues or a diagnosis might not be fully established before the examination of the specimen.

Labeling with the patient's name and type of surgery being performed does not provide specific information about the exact site of the specimen.

13.

What is the PRIMARY reason for using a synthetic graft in vascular surgery?

To reduce the risk of disease transmission

To promote osteogenesis

To provide immediate structural support

To encourage angiogenesis

Correct answer: To reduce the risk of disease transmission

Synthetic grafts eliminate the risk of disease transmission associated with biological grafts, making them a safer alternative in many cases.

Synthetic grafts are not used for osteogenesis, as they do not contain biological components necessary for bone growth. While synthetic grafts can provide structural support, it's not the primary reason for their use in vascular surgery. Angiogenesis is more closely associated with biological grafts; synthetic grafts do not inherently encourage new blood vessel formation.

14.

When is the INITIAL count of instruments and sponges typically performed?

Before the surgery begins

After the first incision is made

As they are used during surgery

Prior to closing the surgical site

Correct answer: Before the surgery begins

The initial count of instruments and sponges is typically performed before the surgery begins to ensure all items are accounted for, which helps prevent the retention of foreign objects in the patient. This is a critical step in maintaining patient safety and adhering to standard operating procedures in the surgical setting.

Waiting until after the first incision is made to perform the initial count could compromise patient safety by increasing the risk of leaving items inside the surgical site, as it bypasses the opportunity to establish a baseline count before the procedure starts.

Counting instruments and sponges for the first time as they are used during surgery is impractical and does not provide a reliable method for tracking items, potentially leading to inaccuracies and increased risk of retained surgical items.

While counts are also performed prior to closing the surgical site, the initial count must occur before the surgery begins to establish a baseline, ensuring all items are accounted for from the start of the procedure.

15.

A surgical technologist notices that the sterile field has been compromised during a procedure. What is the MOST appropriate immediate action?

Notify the surgeon and the rest of the team about the breach

Continue the procedure until given further direction by the surgeon

Cover the compromised area with sterile drapes

Replace all instruments and supplies with new sterile items

Correct answer: Notify the surgeon and the rest of the team about the breach

Notifying the team allows for a collective decision on how to proceed, whether that involves reinforcing the sterile field, replacing compromised items, or taking other corrective actions.

Ignoring a breach in sterility can lead to infection and compromises patient safety; the surgical technologist is responsible for notifying the team.

Simply covering the compromised area may not address the underlying issue; the rest of the team should be notified prior to determining the next steps.

While replacing compromised items may be necessary, the first step is to notify the team to assess the situation and decide on the appropriate response.

16.

Which hemostasis method is preferred for controlling capillary bleeding in a highly vascularized tissue during a thyroidectomy?

Bipolar electrocautery

Application of a hemostatic agent

Suture ligation

Direct pressure with a surgical sponge

Correct answer: Bipolar electrocautery

Bipolar electrocautery allows for precise application of energy, minimizing thermal spread and damage to surrounding tissues, making it ideal for controlling bleeding in delicate areas like the thyroid gland.

While hemostatic agents can be useful for managing capillary bleeding, they may not provide the immediate and targeted control required in a highly vascularized area.

Suture ligation is more suited for larger vessels and may not be practical or effective for widespread capillary bleeding.

Direct pressure can help control bleeding but may not be sufficient alone for the diffuse capillary bleeding seen in thyroid surgery.

17.

Which of the following outcomes is the PRIMARY focus of a postoperative debrief session?

Identifying opportunities for improving surgical efficiency

Allocating blame for any complications that occurred during surgery

Planning the next day's surgical schedule

Reviewing the financial cost of the surgery

Correct answer: Identifying opportunities for improving surgical efficiency

The primary focus of a postoperative debrief is to identify opportunities for improving surgical efficiency, enhancing team performance, and ensuring patient safety.

Allocating blame is counterproductive and does not foster a culture of safety or continuous improvement. Planning the next day's surgical schedule is not the purpose of a postoperative debrief session. Reviewing the financial cost of the surgery is not the primary focus of a debrief, which centers on clinical outcomes and process improvement.

18.

After a surgical procedure, which of the following steps should be taken **FIRST** in the process of room cleanup?

Disposing of all sharps in the designated sharps container

Mopping the floor with an approved disinfectant

Disposing of any drapes or materials contaminated with biohazardous materials

Wiping down the operating table with a sterilizing agent

Correct answer: Disposing of all sharps in the designated sharps container

Ensuring that all sharps are immediately disposed of in the designated sharps container minimizes the risk of needle-stick injuries and the potential spread of infection.

Mopping the floor with an approved disinfectant, while important for infection control, is not the first step in the cleanup process. Addressing sharps and contaminated materials directly impacting staff safety takes precedence.

Disposing of any drapes or materials contaminated with biohazardous materials is crucial for infection prevention but follows the disposal of sharps to first eliminate this risk.

Wiping down the operating table with a sterilizing agent is an important step in room cleanup for the next procedure but is not the first step, as the immediate management of sharps and biohazardous waste takes priority for staff and patient safety.

19.

During an abdominal surgery, the surgeon asks for suture material that minimizes the risk of infection. Which suture feature should the surgical technologist prioritize?

Monofilament structure

Braided structure

Color-coded structure

Coated structure

Correct answer: Monofilament structure

Monofilament sutures are less likely to harbor bacteria than braided sutures, making them a better choice for minimizing the risk of infection.

Braided sutures have interstices that can harbor bacteria, potentially increasing the risk of infection. The color-coding of sutures is used for identification and has no impact on the risk of infection. While coating can reduce tissue drag, it does not primarily affect the suture's ability to minimize infection risk compared to the structural difference of being monofilament.

20.

When preparing an arterial line for insertion, what is the MOST important step to prevent complications?

Calibrating the pressure transducer system

Wrapping the line with a heating pad to prevent coagulation

Ensuring the flush bag under pressure exceeds the patient's diastolic blood pressure

Applying a topical vasoconstrictor to the insertion site

Correct answer: Calibrating the pressure transducer system

Calibrating the pressure transducer system is crucial, as it ensures accurate blood pressure readings, which is essential for monitoring the patient accurately and preventing complications associated with inaccurate blood pressure monitoring.

Wrapping the line with a heating pad is not the most critical step for preventing complications during arterial line insertion.

The flush bag should be under pressure exceeding the patient's systolic blood pressure, not their diastolic blood pressure, to ensure that the bag will flush into the patient's arteries when used.

Applying a topical vasoconstrictor to the insertion site is not a step in preventing complications associated with the arterial line.

21.

When disassembling a surgical microscope after use, what is the FIRST step to ensure safety and maintenance?

Turning off the power and unplugging the microscope

Wiping the lenses with an approved cleaning solution

Removing the microscope from the sterile field

Documenting the usage in the equipment log

Correct answer: Turning off the power and unplugging the microscope

Turning off and unplugging the microscope is the first step to ensure electrical safety and to prepare for safe disassembly.

While cleaning the lenses is important, it should not precede ensuring the equipment is powered down for safety.

Removing the microscope from the sterile field is important but is not as important for safety as ensuring the device is powered down.

Documentation is crucial but is a post-procedural step following physical disassembly and safety checks.

22.

When preparing for a laparoscopic procedure, which step is MOST crucial in ensuring the endoscopic equipment is functioning correctly before surgery?

Verifying the video monitor displays a clear image

Confirming the availability of backup surgical instruments

Ensuring a grounding pad is available

Ensuring there is an adequate supply of surgical sutures

Correct answer: Verifying the video monitor displays a clear image

Ensuring the video monitor displays a clear and accurate image is crucial for laparoscopic procedures because it provides the surgeon with a visual of the patient's internal structures, which is essential for guiding the surgery.

While confirming the availability of backup surgical instruments is important for preparedness, it does not directly impact the ability to perform the laparoscopic procedure or the functionality of the endoscopic equipment.

Ensuring a grounding pad is available is important for patient safety to prevent electrical injuries, but it is not directly related to the endoscopic equipment's functionality.

Having an adequate supply of surgical sutures is necessary for the completion of the surgery, but it is not the most crucial step in ensuring the endoscopic equipment, specifically, is functioning correctly before surgery.

23.

For a surgical incision that is expected to have minimal drainage and is located in an area of high mobility, such as the knee, which of the following dressing choices is the MOST appropriate?

A flexible, thin film dressing to accommodate movement

A rigid, non-flexible dressing for strong protection while kneeling

A hydrocolloid dressing to maintain a moist environment

An alginate dressing with high absorbency properties

Correct answer: A flexible, thin film dressing to accommodate movement

Flexible, thin film dressings can move with the body and provide a barrier to external contaminants, making them ideal for areas of high mobility with minimal drainage.

A rigid, non-flexible dressing could restrict movement and may not adhere well to areas of high mobility like the knee. While hydrocolloid dressings maintain a moist healing environment, their bulkiness might limit movement in areas like the knee. Alginate dressings are used for wounds with heavy exudate, which is not expected in this situation.

24.

A surgeon needs to perform a procedure that requires the suturing of a highly vascular area. Which characteristic of the needle should the surgical technologist consider MOST important when preparing the suture?

Tapered point

Blunt tip

Cutting edge

Large eye

Correct answer: Tapered point

A tapered point is designed to pierce and spread tissue without cutting it, making it ideal for suturing highly vascular areas with minimal trauma and reduced risk of bleeding.

A blunt tip is typically used for friable tissue and may not be suitable for penetrating highly vascular areas.

A cutting edge can cause more trauma to the tissue, potentially leading to increased bleeding in a highly vascular area.

The size of the needle's eye is less relevant to its ability to suture a highly vascular area than the shape of the needle tip.

25.

Which instrument would be most suitable for manipulating or holding bowel tissue during a laparotomy?

DeBakey forceps

Bulldog clamp

Rongeur

Trocar

Correct answer: DeBakey forceps

DeBakey forceps are designed with atraumatic teeth, making them suitable for gently grasping delicate tissues like the bowel without causing significant damage.

Bulldog clamps are used to clamp blood vessels and are not effective for holding or manipulating bowel tissues effectively.

Rongeurs are used for removing bony structures and are not appropriate for tissue manipulation.

Trocars are used to create pathways for the insertion of tubes or other instruments into body cavities and are not used for tissue manipulation.

26.

If a patient exhibits signs of anaphylaxis during surgery, what is the MOST appropriate action for the surgical technologist to take?

Prepare to assist in providing epinephrine to the anesthesia provider

Administer an antihistamine to the patient immediately

Increase the rate of IV fluids as a first response

Apply a cold compress to the patient's forehead

Correct answer: Prepare to assist in providing epinephrine to the anesthesia provider

Epinephrine is the first-line treatment for anaphylaxis, and preparing it for administration by the anesthesia provider is appropriate and within the scope of practice for a surgical technologist if necessary.

While antihistamines are used in the treatment of allergic reactions, the administration of these medications is not within the surgical technologist's scope of practice.

Adjusting the rate of IV fluids is a medical decision to be made by the anesthesia provider or surgeon, not the surgical technologist.

A cold compress does not address the systemic nature of anaphylaxis and is not a relevant action in this situation.

27.

A surgical technologist is preparing the operating room and realizes that the biohazard waste bin is nearly full. What is the most appropriate next step?

Replace the biohazard waste bin with an empty one before starting the procedure

Continue with the preparation, and deal with the biohazard waste bin after the surgery

Ask a colleague to empty the bin while continuing with the room preparation

Ignore the bin's status, as it is not part of the surgical technologist's responsibilities

Correct answer: Replace the biohazard waste bin with an empty one before starting the procedure

Replacing the biohazard waste bin before the procedure ensures the operating room remains organized and complies with standard precautions for handling potentially infectious materials.

Leaving the biohazard waste bin nearly full can lead to improper disposal of potentially infectious materials, violating standard precautions.

While asking a colleague to assist is proactive, directly ensuring that the bin is replaced avoids any delay or oversight in handling biohazardous waste.

It is part of the surgical technologist's responsibilities to maintain a safe and sanitary operating environment, which includes managing biohazard waste.

28.

A surgical technologist is setting up a computer navigation system for a neurosurgical procedure. What is the MOST important factor to ensure system reliability throughout the surgery?

Continuous monitoring of the system's power supply

Regular updates of the navigation software

The surgeon's experience with the system

Proper sterilization of the navigation equipment

Correct answer: Continuous monitoring of the system's power supply

A stable power supply is crucial to prevent system failures during critical surgical procedures. This helps avoid any interruptions or malfunctions in the computer navigation system, which could lead to critical failures at crucial moments. This stability is not merely about preventing the system from shutting down entirely but also about ensuring that there are no fluctuations or surges in power that could cause the system to malfunction or provide inaccurate information.

Software updates are important but typically done before the surgery. They are not typically a factor to monitor continuously during the procedure.

While the surgeon's experience is important for the overall success, it does not directly ensure the system's reliability.

Sterilization is critical for preventing infection but does not affect the reliability of the navigation system's technical performance.

29.

When preparing to enter the operating room for a procedure that involves a high risk of fluid splash, which of the following pieces of personal protective equipment should be donned LAST?

Sterile gloves

Surgical gown

Protective eyewear

N95 respirator mask

Correct answer: Sterile gloves

Sterile gloves are typically donned last in the sequence of putting on personal protective equipment to ensure the hands remain sterile after gowning, thus minimizing the risk of contaminating sterile surfaces.

The surgical gown is usually donned before sterile gloves to ensure the gown's sleeves are covered by the gloves, maintaining sterility.

Protective eyewear is generally donned before sterile gloves to ensure the face and eyes are protected without contaminating the hands after gowning.

An N95 respirator mask is typically donned before sterile gloves and usually before entering the operating room as part of protecting the respiratory tract from airborne particles.

30.

A patient scheduled for elective surgery has noted a latex allergy in their medical history. What is the FIRST step in preparing the operating room?

Replace all latex-containing items with latex-free alternatives

As standard surgical supplies are latex-free, no changes are necessary

Administer antihistamines to the patient preemptively, as completely avoiding latex is not feasible

Evaluate the type of latex allergy, as the surgery may need to be postponed depending on the allergy type

Correct answer: Replace all latex-containing items with latex-free alternatives

The safety of the patient with a latex allergy requires replacing all potential latex-containing items with latex-free alternatives to prevent potential allergic reactions.

Assuming that standard surgical supplies are latex-free is dangerous; specific measures must be taken to ensure a latex-free environment for allergic patients.

Preemptive antihistamines do not eliminate the risk of a severe allergic reaction and are not a substitute for creating a safe environment. It is feasible to ensure that all equipment is latex-free and to address a known allergy.

While it is important to understand the severity of the patient's allergy, it is unlikely that the surgery would need to be postponed.

31.

After connecting a surgical drain to the suction apparatus, you notice there is no fluid being collected in the suction reservoir. What should you do FIRST?

Check for kinks or obstructions in the drainage system

Increase the suction pressure to the maximum level

Replace the suction apparatus with a new one

Immediately inform the surgeon about the malfunction

Correct answer: Check for kinks or obstructions in the drainage system

The most common reason for lack of drainage is a physical obstruction or kink in the system, which should be addressed first. Identifying and rectifying any obstructions ensures that the drainage system can function effectively, preventing the accumulation of fluid at the surgical site.

Increasing the suction pressure without checking for obstructions could damage tissues or the drainage system.

Replacing the suction apparatus without troubleshooting could be unnecessary and time consuming.

While communication with the surgical team is important, the first step is to troubleshoot the issue at hand.

32.

A surgical patient exhibits a sudden decrease in blood oxygen saturation. The blood visible in the surgical field turns from bright red to dark red. What does this change MOST likely indicate?

Decreased oxygenation

Increased oxygenation

Serious bleeding

Allergic reaction

Correct answer: Decreased oxygenation

The change in blood color from bright red to dark red signifies that the blood is carrying less oxygen, as hemoglobin without oxygen (deoxyhemoglobin) is darker in color than oxygenated hemoglobin, indicating decreased oxygenation.

Increased oxygenation would cause the blood to appear brighter red because oxygenated hemoglobin is brighter due to the oxygen bound to it; darkening of the blood suggests the opposite.

Serious bleeding could lead to a decrease in blood pressure or volume but would not directly cause the blood in the surgical field to change color.

An allergic reaction might cause various systemic responses, including changes in blood pressure, hives, or anaphylaxis, but it would not directly result in the blood changing from bright red to dark red.

33.

For a surgical procedure requiring the use of a suction drain, what is the MOST critical preparation step to ensure effectiveness?

Testing the suction functionality before surgery

Coiling the drain tubing neatly on the sterile field

Flushing the tubing of the suction drain

Lubricating the exterior of the drain tubing

Correct answer: Testing the suction functionality before surgery

Ensuring the suction functionality works properly before surgery is crucial to avoid intraoperative complications and to ensure that the drain can effectively remove fluids or air from the surgical site.

While coiling the drain tubing neatly on the sterile field is important for organization and preventing contamination, it does not directly impact the effectiveness of the suction drain.

Flushing the tubing of the suction drain may be necessary in some situations, but it is not as critical as testing the functionality of the suction mechanism itself.

Lubricating the exterior of the drain tubing may facilitate the placement of the drain but does not directly ensure the effectiveness of the suction capability.

34.

After an appendectomy, which type of dressing is MOST appropriate for the surgical wound?

A dry sterile gauze dressing to absorb minimal exudate

A transparent film dressing to allow for continuous observation

A hydrocolloid dressing to support a moist healing environment

An alginate dressing for heavy exudate management

Correct answer: A dry sterile gauze dressing to absorb minimal exudate

Dry sterile gauze dressings are commonly used for clean, closed surgical incisions due to their ability to absorb minimal exudate and protect the wound site.

While transparent film dressings allow for observation, they are not typically used for incisions with minimal exudate like an appendectomy.

Hydrocolloid dressings are used for wounds requiring a moist environment but are not the standard choice for clean, closed surgical incisions.

Alginate dressings are highly absorbent and best suited for wounds with heavy exudate, not typical of an appendectomy wound.

35.

During a cholecystectomy, the surgeon requests an injection of 0.5% Marcaine into the gallbladder bed. What is the primary reason for using this medication?

To reduce post-operative pain

To induce systemic anesthesia

To provide muscle relaxation

To control bleeding

Correct answer: To reduce post-operative pain

Marcaine (Bupivacaine) is a local anesthetic used to reduce post-operative pain by blocking nerve impulses.

Marcaine is used for local anesthesia, not systemic. Marcaine does not provide muscle relaxation; it blocks nerve conduction to reduce pain. While Marcaine has vasoconstrictive properties, its primary use in this context is for pain control, not hemostasis.

36.

A DeBakey forceps is BEST classified under which of the following categories?

Grasping or holding

Clamping or occluding

Cutting or dissecting

Suturing or stapling

Correct answer: Grasping or holding

DeBakey forceps are primarily used for grasping and holding delicate tissues, offering precise control without causing damage.

DeBakey forceps are not designed for clamping or occluding vessels, do not have cutting edges so are not used for cutting or dissecting, and are not used for suturing or stapling tissues.

37.

Which of the following is the MOST appropriate method for cleaning blood spills on the operating room floor?

Using an approved disinfectant cleaner following the spill kit instructions

Covering the spill with towels to immediate wick blood away from the floor

Immediately mopping the area with water

Allowing the blood to dry or congeal before cleaning to reduce the risk of splashing

Correct answer: Using an approved disinfectant cleaner following the spill kit instructions

Using an approved disinfectant cleaner according to the spill kit instructions ensures the elimination of pathogens, adheres to health and safety guidelines, and is designed specifically for such biohazardous situations, making it the most effective and safe approach.

Covering the spill with towels may temporarily absorb the blood but does not disinfect the area, leaving potential pathogens on the floor and posing a risk of cross-contamination.

Immediately mopping the area with water will not eliminate pathogens as effectively as using an approved disinfectant cleaner that is part of a spill kit.

Allowing the blood to dry or congeal before cleaning fails to address the immediate need to decontaminate the area properly.

38.

After opening a sterile instrument tray, what is most important for the surgical technologist to do to maintain the sterility of the instruments?

Ensure the tray remains within the sterile field boundaries

Immediately cover the tray with a sterile drape

Inspect each instrument individually before use

Place the tray at the edge of the sterile field for easy access

Correct answer: Ensure the tray remains within the sterile field boundaries

Keeping the tray within the boundaries of the sterile field is crucial to maintain sterility and prevent contamination from the surrounding environment.

Covering the tray with a sterile drape is unnecessary if it will be used promptly and can actually increase contamination risk through additional handling. While covering the tray with a sterile drape may help maintain the sterility of the instruments in some situations, ensure the tray remains within the sterile field boundaries is more important.

While inspection is important to ensure the instruments are functioning correctly, the question focuses on maintaining sterility after opening, which is ensured by proper placement within the sterile field.

Placing the tray at the edge of the sterile field risks contamination. The tray should be placed well within the boundaries to maintain sterility.

39.

A patient with a lower extremity fracture that was not corrected during the surgery needs to be transferred from the operating table to a stretcher. What special consideration is needed for this transfer?

Ensure the fractured extremity is supported and immobilized during the transfer

Transfer the patient without any special equipment

Allow the patient to assist with the transfer to decrease the load

Use only two staff members to minimize crowding around the patient during the transfer

Correct answer: Ensure the fractured extremity is supported and immobilized during the transfer

While transferring a patient who has a fractured extremity is uncommon after surgery, this situation can occur sometime in trauma where the surgery is addressing something that has a higher priority than the extremity fracture. Supporting and immobilizing the fractured extremity in these situations is crucial to prevent displacement of the fracture or increased pain.

Transferring without taking the fracture into consideration could cause further injury. Allowing the patient to assist, especially with a lower extremity fracture, can risk further injury. The number of staff members should be based on the patient's needs and safety, not on minimizing crowding.

40.

What is the MOST important consideration when selecting a thermal ablation method for liver tumor surgery?

The size and location of the tumor

The size of the patient

The preference of the surgical technologist

The availability of post-operative care

Correct answer: The size and location of the tumor

The size and location of the tumor are critical in choosing an appropriate thermal ablation technique to ensure effective treatment and minimal damage to surrounding tissues.

The size of the patient is less relevant to the choice of thermal ablation method for liver tumors, as this decision is primarily based on tumor-specific characteristics rather than patient body size.

The preference of the surgical technologist is not a clinical factor in the decision-making process for thermal ablation methods.

Although post-operative care availability is important for overall treatment planning, it doesn't directly influence the choice of thermal ablation method.

41.

After a laparotomy, the surgical team notices slight skin irritation around the wound edges. Which action is MOST appropriate when dressing this wound?

Use a skin barrier film around the wound edges before applying the dressing

Apply a dressing with adhesive directly on the irritated skin to secure it

Cover the entire area with an antibiotic ointment before dressing

Select a dressing impregnated with alcohol to disinfect the area

Correct answer: Use a skin barrier film around the wound edges before applying the dressing

A skin barrier film can protect the irritated skin from further damage by adhesives or the dressing itself, promoting healing and preventing further irritation.

Applying adhesive directly on irritated skin can further damage the skin and increase discomfort. Antibiotic ointment is not generally applied over large areas of skin without a specific indication and can cause further irritation or allergic reactions. Alcohol-impregnated dressings can dry out the skin and exacerbate irritation, making them unsuitable for already irritated skin.

42.

After a vascular surgery, the surgical technologist notices continuous oozing of blood from the surgical site that does not appear to clot. What is the MOST appropriate initial response?

Report the observation to the surgeon immediately

Understand that minor bleeding is normal after surgery and is to be expected

Apply a bandage to the site to observe if the bleeding stops

Check the patient's medical record for anticoagulant use

Correct answer: Report the observation to the surgeon immediately

Immediate reporting is necessary for rapid assessment and potential intervention to address the bleeding.

While some bleeding can be expected, continuous oozing that does not clot could indicate a serious complication.

While applying a bandage may be part of postoperative care, it does not address the urgency of continuous bleeding that doesn't clot.

Although relevant, the first step should be to report the bleeding. Checking the medical record can be done concurrently but should not delay reporting.

43.

During the transfer of a patient from the operating table to a stretcher, what is the BEST way to ensure the patient's dignity is maintained?

Cover the patient with drapes or blankets

Complete the transfer as quickly as possible

Use sufficient staff to support the patient's body fully

Explain the transfer process to the patient beforehand

Correct answer: Cover the patient with drapes or blankets

Covering the patient ensures privacy and maintains dignity during the transfer, regardless of the patient's level of consciousness.

Speed is less important than the patient's safety and dignity. While important for safety, having sufficient staff does not specifically address the patient's dignity. Explanation is important if the patient is conscious but does not directly addresses maintaining dignity during the transfer.

44.

When caring for an immunocompromised patient undergoing surgery, what is the MOST critical action for the surgical technologist to take during preoperative preparation?

Limiting the number of personnel in the operating room

Selecting the sharpest instruments available to reduce tissue damage

Applying additional surgical drapes to the patient

Ensuring all team members are up to date with their vaccinations

Correct answer: Limiting the number of personnel in the operating room

Reducing the number of personnel in the operating room minimizes the risk of infection for immunocompromised patients, which is a critical consideration for their safety.

While using sharp instruments is a general best practice to minimize tissue damage, it is not the most critical action specific to the care of immunocompromised patients.

Applying additional surgical drapes does not directly reduce the risk of infection for immunocompromised patients, which is a primary concern.

Ensuring vaccination status of team members is important for overall infection control, but it does not directly address the immediate environmental control needed for immunocompromised patients in the operating room.

45.

During a laparoscopic procedure, the surgeon requests an instrument that was not initially part of the sterile field. What is the BEST method to introduce this instrument aseptically?

Have a circulating nurse use sterile technique to introduce the instrument onto the sterile field

Have a circulating nurse pass the instrument directly to the surgeon.

Place the instrument in a solution of sterile saline before handing it to the surgeon

Wipe the instrument with an antiseptic wipe and allow at least a two minute dwell time before passing it to the surgeon

Correct answer: Have a circulating nurse use sterile technique to introduce the instrument onto the sterile field

Having a circulating nurse use sterile technique to introduce the instrument onto the sterile field is the best practice for maintaining asepsis. This approach minimizes the risk of infection and adheres to the principles of surgical asepsis.

Having a circulating nurse pass the instrument directly to the surgeon is not the best practice because the circulating nurse is not part of the sterile field. Direct transfer without proper sterile technique risks contaminating the instrument and the sterile field, increasing the risk of infection.

Placing the instrument in a solution of sterile saline before handing it to the surgeon does not ensure that the entire instrument is sterile.

Wiping the instrument with an antiseptic wipe and allowing a dwell time before passing it to the surgeon might reduce the bioburden on the instrument but does not ensure it is sterile.

46.

A patient is scheduled for a thyroidectomy. Which of the following positions would be most appropriate for this procedure?

Supine position with a shoulder roll

Prone position

Thyroid-extended position

Lateral decubitus position

Correct answer: Supine position with a shoulder roll

The supine position with a shoulder roll under the shoulders helps to extend the neck, providing better exposure of the thyroid area for the procedure.

The prone position is used for surgeries on the back or posterior part of the body and is not suitable for a thyroidectomy.

The thyroid-extended position is not the name of a recognized surgical position.

The lateral decubitus position is used for surgeries on the side of the body, like thoracic or kidney surgeries, and would not provide proper access for a thyroidectomy.

47.

For effective drainage, how should the surgical technologist position a drainage reservoir relative to the patient?

Below the level of the surgical site to enhance effectiveness

Above the level of the surgical site to facilitate drainage

At the same level as the surgical site to equalize pressure

Positioning of the reservoir never affects the effectiveness of suction

Correct answer: Below the level of the surgical site to enhance effectiveness

Positioning the reservoir below the surgical site uses gravity to assist in the drainage process, enhancing the effectiveness of the suction. The effect of this positioning will vary based on the type of reservoir used and will have minimal impact if suction is used; however, it will still have some effect.

Placing the reservoir above the surgical site would hinder, not facilitate, drainage. Equalizing pressure does not optimize the effectiveness of drainage. The positioning of the reservoir plays a role in the effectiveness of the drainage, especially in systems where gravity plays a primary role.

48.

A patient is scheduled for a peripheral vascular bypass surgery on the leg. In addition to standard surgical site preparation, which of the following is an important consideration to prevent post-operative complications?

Ensuring the entire leg, from the groin to the ankle, is prepped

Application of a heating pad to the site prior to incision

Covering the prepped area with sterile gauze until the surgery begins

Dry shaving the surgical site the night before surgery

Correct answer: Ensuring the entire leg, from the groin to the ankle, is prepped

For peripheral vascular bypass surgery, it is important to prep the entire leg from groin to ankle to ensure that any adjustments in the incision site can be accommodated without the risk of contamination.

Application of a heating pad is not typically recommended as part of surgical site preparation because it does not contribute to reducing microbial flora and may cause burns.

While covering the prepped area with sterile gauze can protect the area, it is not a substitute for adequate preparation of the entire surgical field.

Dry shaving the site the night before can increase the risk of surgical site infections due to microabrasions and is not recommended as part of surgical site preparation practices.

49.

What is the MOST important reason for properly securing electrical cords away from the surgical site?

To ensure that the cords do not come into contact with sterile surfaces

To reduce the risk of electrical interference with monitoring equipment

To prevent tripping hazards in the operating room

To maintain the aesthetic appearance of the surgical area

Correct answer: To ensure that the cords do not come into contact with sterile surfaces

The primary reason for securing electrical cords away from the surgical site is to prevent contamination of sterile surfaces, which could lead to infection or other complications. This aligns with the overarching goal of maintaining a sterile environment around the patient.

While reducing electrical interference is important, it is not the primary concern related to the placement of electrical cords in relation to sterility and patient safety.

Preventing tripping hazards is crucial for overall safety but is secondary to the imperative of maintaining sterility at the surgical site.

The aesthetic appearance of the surgical area is the least of concerns when considering the purpose of securing electrical cords.

50.

Which of the following is a critical step when testing the integrity of a pneumatic tourniquet before surgery?

Ensuring the air hose has no leaks

Verifying the correct size of the tourniquet cuff for the patient

Testing the battery life of the pneumatic device

Checking the range of motion of the affected limb

Correct answer: Ensuring the air hose has no leaks

A leak in the air hose could lead to a failure in maintaining adequate pressure, compromising patient safety and the effectiveness of the tourniquet.

While important, selecting the correct cuff size is a preparation step, not a test of the pneumatic system's integrity. Pneumatic tourniquets are typically powered by a compressed air source, not batteries. Checking the range of motion is part of patient assessment, not a direct concern for the functionality of the pneumatic tourniquet.

51.

A surgical team is using a high-frequency ultrasound (HIFU) device for tumor ablation. What is the key advantage of HIFU over traditional thermal ablation techniques?

It allows for precise targeting of tumor cells

It can be used without anesthesia

It is more cost-effective

Recovery times are significantly shorter

Correct answer: It allows for precise targeting of tumor cells

High-Frequency Ultrasound's (HIFU) primary advantage is its ability to precisely target and destroy tumor cells with minimal thermal impact on surrounding healthy tissues due to its focus on high-energy sound waves.

Anesthesia requirements depend on the procedure and patient tolerance, not the ablation technique.

Cost-effectiveness varies based on the healthcare setting, procedure complexity, and other factors and is not the key advantage of HIFU.

Recovery times can vary based on many factors, including the patient's overall health, the size and location of the tumor, and the extent of the procedure. While HIFU may offer benefits in this area, it's not the key distinguishing advantage.

52.

During a total knee arthroplasty, the surgical technologist is responsible for verifying the implant size. Which of the following is the MOST appropriate action to ensure the correct size is used?

Confirm the size with the surgeon before the procedure begins

Verify the size with the surgeon as insertion of the implant is beginning

Verify the implant size with the circulating nurse

Use clinical discretion to determine if the size on the pre-operative plan is correct

Correct answer: Confirm the size with the surgeon before the procedure begins

Verifying the implant size with the surgeon before the procedure begins ensures both parties are in agreement on the size, minimizing the risk of using an incorrect implant.

Verifying the size as the implant insertion is beginning is less effective because it is likely to be too late to make adjustments without affecting the flow of the surgery.

While the circulating nurse is an important member of the surgical team, the ultimate responsibility for the size of the implant lies with the surgeon, making direct verification with the surgeon more appropriate.

Using clinical discretion to determine if the size on the pre-operative plan is correct bypasses the critical step of verification with the surgeon, increasing the risk of error.

53.

When transporting a patient to the operating room, what is the MOST important safety consideration?

Making sure the side rails are up on the transport stretcher

Ensuring the patient's chart is with the bed

Confirming the identity of the patient before transport

Covering the patient with a warm blanket

Correct answer: Making sure the side rails are up on the transport stretcher

Ensuring that the side rails are up is a fundamental and immediately relevant safety measure to prevent the patient from falling off the stretcher during transport, making it the most critical safety consideration.

While having the patient's chart available is important for documentation and communication, it is not the most critical safety consideration during transport.

Confirming the patient's identity is a critical step before performing any procedure but is not directly related to the physical safety of transporting the patient.

Providing warmth is important for patient comfort, but it is not the primary safety consideration during transport.

54.

What is the PRIMARY purpose of using a phacoemulsification device in ophthalmic surgery?

To fragment and aspirate the lens during cataract surgery

To coagulate blood vessels and reduce intraoperative bleeding

To measure intraocular pressure accurately

To provide illumination within the anterior chamber

Correct answer: To fragment and aspirate the lens during cataract surgery

The primary purpose of phacoemulsification is to fragment and aspirate the lens, particularly in cases of cataract, allowing for the removal of the lens with minimal incisions.

Coagulating blood vessels is not the primary function of a phacoemulsification device; other instruments or techniques are used for hemostasis in ophthalmic surgery.

Measuring intraocular pressure is not the primary function of a phacoemulsification device.

While illumination is necessary for ophthalmic surgeries, it is not the primary function of a phacoemulsification device; specialized lighting or an operating microscope provides illumination.

55.

In preparing the operating room for a surgery that involves a high risk of infection, such as a bowel resection, what is the MOST important environmental preparation?

Ensuring all surfaces have been correctly wiped down with an approved disinfectant

Lowering the lights to a comfortable brightness for the surgeon

Setting the temperature to a cooler setting to inhibit bacterial growth

Arranging for additional sterile drapes to be on hand

Correct answer: Ensuring all surfaces have been correctly wiped down with an approved disinfectant

Proper disinfection of all surfaces is critical in surgeries with a high risk of infection, such as bowel resection, to prevent postoperative infections.

While the surgeon's comfort is important, it does not directly impact infection control measures.

Temperature control during surgery is not typically determined by infection control consideration but by other factors.

Having additional sterile drapes is good practice, but it is not as directly related to reducing infection risk as thorough disinfection of the environment.

56.

Which of the following instruments is primarily classified under suturing or stapling?

Needle holder

Mayo scissors

Frazier suction

Allis clamp

Correct answer: Needle holder

Needle holders are specifically designed to grasp and manipulate needles during the suturing process, making them an essential tool for suturing or stapling tissues.

Mayo scissors are primarily used for cutting tissues and sutures, not for suturing or stapling directly.

Frazier suction is used for removing fluids from the surgical site, not for suturing or stapling.

Allis clamp is used for grasping and holding tissues, particularly during procedures requiring tissue manipulation, but not for suturing or stapling.

57.

During the setup of an ultrasound machine for intraoperative monitoring, which of the following actions is essential to optimize the quality of the ultrasound image?

Ensuring adequate contact between the transducer and the patient's skin

Selecting the highest available frequency transducer

Increasing the machine's power setting to the maximum level

Placing the transducer at the farthest possible distance from the target area

Correct answer: Ensuring adequate contact between the transducer and the patient's skin

Adequate contact between the transducer and skin, facilitated by ultrasound gel, is essential to eliminate air gaps that can interfere with sound wave transmission and image quality.

While a higher frequency transducer provides better image resolution, it may not penetrate deeply into tissues, which is not always optimal depending on the target area.

Increasing the machine's power setting to the maximum may not improve image quality if other factors, such as transducer contact, are not optimized.

Placing the transducer closer to the target area, not farther, improves image resolution and quality.

58.

What is the primary classification of a scalpel?

Cutting or dissecting

Grasping or holding

Clamping or occluding

Suturing or stapling

Correct answer: Cutting or dissecting

Scalpels are primarily used for cutting or dissecting tissues during surgery.

Scalpels are not designed to grasp or hold tissues, do not have the capability to clamp or occlude vessels, and are not used for suturing or stapling tissues.

59.

In assessing the significance of blood loss during surgery, which of the following would be considered the MOST reliable indicator?

The volume of blood collected in the suction canister

The patient's reported feeling of light-headedness

A measured decrease in blood pressure

The color of blood in the surgical site

Correct answer: The volume of blood collected in the suction canister

The volume of blood collected in the suction canister provides a direct and quantifiable measure of blood loss, making it the most reliable indicator among the options given.

The patient's feelings under anesthesia cannot be assessed.

A measured decrease in blood pressure can be an indicator of significant blood loss, but it is a secondary sign that can be influenced by other factors and is not as reliable as direct measurement.

The color of blood in the surgical site is highly subjective, making it an unreliable method for assessing blood volume loss.

60.

For a patient undergoing a colectomy, the surgical team needs to use a stapling device that can create a resection and end-to-end anastomosis in one action. Which stapling device should be utilized?

Circular stapler

Linear cutter stapler

Skin stapler

Hemorrhoidal stapler

Correct answer: Circular stapler

Circular staplers are designed for end-to-end anastomoses in procedures like colectomies, making them the ideal choice for this scenario.

Linear cutter staplers are used for transection and anastomosis but are more suited for linear resections rather than creating a circular anastomosis.

Skin staplers are used for closing skin incisions and are not suitable for internal resections and anastomoses.

Hemorrhoidal staplers are specifically designed for the resection and anastomosis of hemorrhoidal tissue and are not appropriate for colectomies.

61.

Before inserting a urinary catheter during a surgical procedure, what is the MOST important preparation step to prevent urinary tract infections (UTIs)?

Performing hand hygiene and wearing sterile gloves

Applying lubricant to the catheter tip

Flushing the catheter with saline solution

Testing the balloon inflation mechanism

Correct answer: Performing hand hygiene and wearing sterile gloves

Proper hand hygiene and the use of sterile gloves are essential to prevent introducing bacteria into the urinary tract, significantly reducing the risk of Urinary Tract Infections (UTIs).

While applying lubricant is important for patient comfort and ease of insertion, it does not primarily prevent UTIs. Flushing the catheter may ensure patency but is not the most critical step for preventing infection and can increase the risk of introducing bacteria into the catheter lumen. Testing the balloon ensures the catheter's functionality but is not directly related to infection prevention.

62.

When assisting in the application of a cast, which of the following is crucial to assess AFTER the cast has been applied?

The range of motion of joints not immobilized by the cast

The patient's preference for cast color

The range of motion of joints immobilized by the cast

Documentation of the time the cast was applied

Correct answer: The range of motion of joints not immobilized by the cast

Assessing the range of motion of joints not immobilized by the cast is crucial to ensure that the cast does not inadvertently restrict movement beyond the intended area, which could impact circulation and potentially lead to further complications.

While the patient's preference for cast color can be important for patient satisfaction, it does not impact the medical or functional outcome of the cast application and is therefore not crucial to assess after the cast has been applied.

The range of motion of joints immobilized by the cast is not typically assessed immediately after cast application because these joints are expected to be restricted by the cast; the primary purpose of the cast is to immobilize these joints to allow for healing.

Although documenting the time the cast was applied is important for medical records and tracking the duration of wear, it is not a crucial assessment related to the immediate physical condition of the patient or the functional outcome of the cast application.

63.

Which of the following items should be disposed of in a sharps container after surgery?

A broken scalpel

Used gauze pads soaked with blood

The wrapper from a sterile surgical instrument

Any empty irrigation syringe

Correct answer: A broken scalpel

A broken scalpel is considered a sharp object, potentially contaminated with pathogens, and should be disposed of in a sharps container to prevent injury and infection.

Used gauze pads soaked with blood should be disposed of in a biohazard bag, not a sharps container.

The wrapper from a sterile surgical instrument is not a sharp object nor is it contaminated with biological material; it should be disposed of in the regular trash unless hospital policy dictates otherwise for recyclable materials.

An empty irrigation syringe is not sharp unless a hypodermic needle is attached and should be disposed of according to the facility's policy on plastic waste.

64.

Which of the following best exemplifies the use of universal precautions during surgery?

Wearing waterproof gowns when there is a risk of fluid exposure

Using a laser safety mask when operating a laser

Implementing sharp safety mechanisms for all surgical instruments

Ensuring all patients are tested for blood-borne pathogens pre-operatively

Correct answer: Wearing waterproof gowns when there is a risk of fluid exposure

Waterproof gowns protect against exposure to blood and bodily fluids, aligning with the principle of universal precautions.

While important for safety, laser masks are specific to laser use and not a universal precaution against blood and fluid exposure.

Sharp safety is critical, but it's a specific safety strategy rather than an example of following universal precautions broadly.

Pre-operative testing is part of infection control but does not reflect the proactive protective measures used in universal precautions.

65.

Which of the following information is MOST crucial to include on the label of a specimen container for a suspected cancerous tumor?

The site from which the specimen was taken

The patient's preferred name

The type of fixative used

The exact time the specimen was collected

Correct answer: The site from which the specimen was taken

The site from which the specimen was taken is most crucial for pathological analysis and diagnosis, guiding treatment decisions.

While the patient's name is important, the preferred name may not match medical records, which could lead to identification issues.

Information about the fixative may be important for processing but is not as crucial as the anatomical origin of the specimen.

The exact time of collection is very important but is less critical than knowing the anatomical site for accurate diagnosis and treatment planning.

66.

Following a total knee arthroplasty, the surgical team used a mixture of medications for intra-articular injection. Which component of the medication report is MOST crucial for the postoperative care team?

The individual volumes of each medication administered

The sequence in which the medications were administered

The total volume of the medication mixture administered

The rate at which the medication mixture was administered

Correct answer: The individual volumes of each medication administered

Knowing the individual volumes of each medication administered is crucial for understanding potential interactions, effects on patient recovery, and managing any side effects. This information should be coupled with the concentration of each medication to accurately record how much medication the patient received.

The sequence of administration is typically less important than knowing the specific amounts of each medication.

The total volume provides an overview but does not offer detailed information regarding the amounts of each specific drug.

The rate of administration might affect the immediate postoperative period but is less important than the specific volumes of medications administered for long-term care planning.

67.

A surgical technologist is asked to assist in suctioning during a neurosurgical procedure. What is the PRIMARY concern when suctioning near the brain tissue?

Minimizing the suction pressure

Duration of suctioning

Avoiding the introduction of air bubbles

The temperature of the suctioned fluid

Correct answer: Minimizing the suction pressure

Minimizing the suction pressure is crucial to prevent damage to the delicate brain tissue and surrounding structures.

While efficiency is important, the duration of suctioning is less critical than ensuring delicate handling of brain tissue. Air bubbles are a concern in vascular procedures but less so in direct brain tissue suctioning. The temperature of the suctioned fluid should be controlled but is not as critical as the suction pressure in preventing tissue damage.

68.

Prior to the start of an orthopedic surgery, which of the following steps is crucial in preparing the operating room environment?

Ensuring the availability and functionality of the pneumatic tourniquet

Setting up for an arterial line

Dimming the room lights to reduce glare

Increasing the room temperature to 80°F (27°C)

Correct answer: Ensuring the availability and functionality of the pneumatic tourniquet

The pneumatic tourniquet is essential for controlling bleeding in orthopedic surgeries, making its availability and functionality crucial.

An arterial line is not always used during orthopedic surgery and is not considered a crucial step of preparing for orthopedic surgery.

While reducing glare is important, it is not as critical as ensuring the tourniquet's functionality for orthopedic procedures.

Setting a specific high temperature is not as important as ensuring essential equipment like a tourniquet is ready for orthopedic surgeries.

69.

A surgical technologist is preparing sterile supplies for an appendectomy. Which of the following items should be prioritized for immediate availability on the sterile field?

Hemostatic clamps

Suture removal kit

Extra-large wound dressings

Post-operative abdominal binder

Correct answer: Hemostatic clamps

Hemostatic clamps are essential for controlling bleeding during an appendectomy and should be readily available on the sterile field.

Suture removal kits are used well after the operation is complete, not during the initial stages of an appendectomy.

While wound dressings are important, they are not needed immediately during the surgery as hemostatic clamps are.

An abdominal binder is used post-operatively for support, not during the surgery.

70.

For a lengthy abdominal surgery, which additional equipment is MOST important to ensure the patient's normothermia?

Forced-air warming blankets

Bovie pad

Positioning device

Sequential compression device

Correct answer: Forced-air warming blankets

Thermoregulatory devices, such as forced-air warming blankets, are specifically designed to maintain or adjust the patient's body temperature during surgery, making them essential for lengthy procedures where the risk of hypothermia is increased.

A Bovie pad is essential for safe use of electrocautery; however, it does not contribute to maintaining the patient's body temperature.

While proper positioning is critical for patient safety and comfort during surgery, it does not directly ensure normothermia.

Sequential compression devices prevent DVT but are not designed to maintain or monitor body temperature.

71.

How should a surgical technologist respond if the surgeon requests a quick change in surgical technique that requires different instruments?

Verbally acknowledge the request and promptly arrange for the required instruments

Continue using the current instruments until a there is a good time for the equipment change

Inform the surgeon that this is not practical, as it will require a brand new setup

Ask the surgeon to clarify the change before proceeding

Correct answer: Verbally acknowledge the request and promptly arrange for the required instruments

Promptly acknowledging the surgeon's request and arranging for the required instruments ensures the surgical procedure can continue smoothly and efficiently without significant delays. This approach reflects the surgical technologist's role in being adaptable and responsive to the needs of the surgical team, maintaining the flow of the operation, and ensuring patient safety.

Continuing to use the current instruments until there is a perceived good time for the equipment change may lead to delays in the procedure and potentially compromise patient safety.

Informing the surgeon that the request is not practical may disrupt the workflow and could potentially compromise the surgical outcome. Surgical technologists are expected to facilitate the smooth execution of the procedure by accommodating the surgeon's requests for instrument changes as long as they are reasonable and within the scope of maintaining patient safety.

Asking the surgeon to clarify the change instead of promptly arranging for the required instruments may cause unnecessary delay. It is important to balance the need for clarification with the urgency and clarity of the request.

72.

Which step is MOST important when preparing a wound site for a dressing following a mastectomy?

Ensuring the skin around the wound is dry and free of debris

Applying an antibiotic ointment to the entire chest area

Placing a pressure dressing to prevent any movement of the chest

Covering the wound with a large absorbent pad to collect drainage

Correct answer: Ensuring the skin around the wound is dry and free of debris

Clean, dry skin is essential for dressing adhesion and reduces the risk of infection, making it crucial for wound preparation.

Applying an antibiotic ointment broadly is not a standard practice and could interfere with wound healing or cause adverse reactions.

A pressure dressing is not typically required post-mastectomy unless specific complications necessitate its use.

While absorbent pads could be used to collect drainage in some situations, ensuring the wound site is prepared correctly is more critical to the initial dressing application.

73.

For removing small gallstones during a cholecystectomy, which instrument would be most appropriate?

Gallbladder scoop

Babcock clamp

Kerrison rongeur

Suction irrigator

Correct answer: Gallbladder scoop

The gallbladder scoop is specifically designed for the removal of small gallstones during a cholecystectomy, offering precision and safety in capturing and extracting the stones.

The Babcock clamp is used primarily for grasping or holding delicate tissues, such as intestines or blood vessels, and is not specifically designed for stone removal.

The Kerrison rongeur is a type of forceps used for removing bone, typically in spinal and neurosurgery, and is not suitable for removing gallstones due to its design and purpose.

The suction irrigator is used for irrigating and aspirating fluids from the surgical site, and while it can help in clearing the area, it does not specifically facilitate the removal of gallstones like the gallbladder scoop does.

74.

During a vascular surgery, the surgeon encounters a bleeding arteriole. Which method of hemostasis minimizes damage to surrounding tissues?

Bipolar electrocautery

Monopolar electrocautery

Application of a hemostatic agent

Use of a tourniquet

Correct answer: Bipolar electrocautery

Bipolar electrocautery allows for precise application of thermal energy, minimizing damage to surrounding tissues.

Monopolar electrocautery may be less precise and could cause more collateral damage to surrounding tissues. While hemostatic agents are useful, they may not provide the immediate control needed for arteriole bleeding like bipolar electrocautery would. A tourniquet is not appropriate for controlling bleeding in a specific, localized arteriole.

75.

A surgeon's preference card for an anterior cruciate ligament (ACL) reconstruction specifies the use of a tourniquet. What is the PRIMARY reason for confirming the tourniquet's presence and functionality before the surgery begins?

To control bleeding and provide a bloodless surgical field

To reduce the risk of deep vein thrombosis (DVT)

To facilitate venous blood sampling during surgery

To measure the patient's blood pressure throughout the procedure

Correct answer: To control bleeding and provide a bloodless surgical field

The primary use of a tourniquet in surgeries such as Anterior Cruciate Ligament (ACL) reconstruction is to control bleeding and maintain a bloodless field, which facilitates better visualization and precision for the surgeon.

While tourniquets can influence venous return, their purpose in this context is not to reduce the risk of DVT but to control bleeding.

Tourniquets may be used to facilitate intravenous access in some clinical situations, however, this is not its primary purpose during an ACL reconstruction.

Tourniquets are not used for monitoring blood pressure during surgery. Their primary purpose is bleeding control in the surgical area.

76.

For an upcoming emergency craniotomy, what is the MOST critical action regarding surgical equipment preparation?

Verifying that the procedure set is complete and sterilized

Checking that the patient warming system is set to the highest temperature

Ensuring an ample supply of Dandy clamps

Confirming the availability of surgical gowns

Correct answer: Verifying that the procedure set is complete and sterilized

For an emergency craniotomy, having a complete and sterilized craniotomy set is crucial to perform the procedure safely and effectively. This directly impacts the surgery's success.

While maintaining patient temperature is important, setting the patient warming system to the highest temperature is not specific or critical to a craniotomy.

Dandy clamps will be used during a craniotomy; however, verifying that the procedure set is complete and sterilized is more important than verifying the availability of one specific piece type of equipment.

The availability of surgical gowns, while necessary, is not as critical as ensuring the craniotomy set's readiness for an emergency procedure.

77.

A surgeon requests heparin to be added to the irrigation solution during a vascular surgery. What is the purpose of adding heparin?

To prevent blood clotting

To prevent infection

To reduce post-operative pain

To reduce bleeding-associated risks

Correct answer: To prevent blood clotting

Heparin is added to the irrigation solution during vascular surgeries specifically to prevent blood clotting by inhibiting thrombin and other clotting factors, which is crucial in maintaining patency in the vascular system being operated on.

Heparin does not have antibacterial properties; its primary function is as an anticoagulant, meaning it helps to prevent blood clots from forming.

Heparin's role is not to reduce post-operative pain; instead, it is used to prevent blood clotting during procedures that might involve a risk of thrombosis.

While reducing bleeding-associated risks is important in surgery, the direct purpose of adding heparin is not to reduce bleeding but rather to prevent the formation of blood clots, which can indirectly contribute to safer surgical outcomes by ensuring unobstructed blood flow. Heparin will ultimately increase the risk of bleeding during surgery.

78.

A patient underwent an appendectomy and received a total of 20ml of bupivacaine for local anesthesia. In documenting this for the postoperative report, what detail is MOST critical to include about the bupivacaine used?

The concentration of the bupivacaine solution

The expiration date of the bupivacaine solution

The temperature at which the bupivacaine solution was stored

Whether the bupivacaine solution was used during or prior to the initiation of general anesthesia

Correct answer: The concentration of the bupivacaine solution

The concentration of the bupivacaine solution is crucial to document because it has the potential to have a direct physiological impact on the patient.

While the expiration date of the bupivacaine solution is important for safety, it does not directly impact the anesthetic effect or dosage as critically as the concentration does.

The temperature at which the bupivacaine solution was stored is not particularly relevant to the immediate postoperative outcome and drug efficacy compared to its concentration.

Although it could be useful to know when the bupivacaine was administered in relation to the general anesthesia, it is not as critical as knowing the concentration for determining the drug's immediate effect on the patient.

79.

Which of the following steps is MOST important when troubleshooting poor image quality from an endoscopic camera during a procedure?

Checking the connection between the camera and the video monitor

Increasing the intensity of the operating room lights

Adjusting the patient's position on the operating table

Replacing the endoscopic instrument entirely

Correct answer: Checking the connection between the camera and the video monitor

Poor image quality often results from issues with the connection between the camera and the monitor, making this the first step in troubleshooting.

Operating room light intensity has no direct effect on the quality of the image produced by the endoscopic camera.

The patient's position may affect surgical access but not the quality of the image from the endoscopic camera.

Replacing the instrument is a more drastic step and should be considered only after simpler troubleshooting steps have been attempted.

80.

If a surgical sponge count at the end of an operative procedure is incorrect, what is the MOST appropriate initial action?

Stop and perform a recount of all sponges

Proceed with closing the patient and recounting sponges concurrently

Prepare the patient for post-operative imaging

Notify the surgeon that the patient may become hemodynamically unstable

Correct answer: Stop and perform a recount of all sponges

Stopping to perform a recount of all sponges is the most appropriate initial action because it directly addresses the issue at hand and can quickly resolve discrepancies.

Proceeding with closing the patient before ensuring all surgical materials are accounted for increases the risk of leaving a foreign object inside the patient, which can lead to serious complications.

Preparing the patient for post-operative imaging as an initial step is premature and inefficient before a thorough manual recount is attempted, as imaging might not be necessary if the recount clarifies the discrepancy or if the sponge can be retrieved while the surgical site is still open.

Notifying the surgeon that the patient may become hemodynamically unstable is not directly related to the issue of an incorrect sponge count.

81.

For a patient with a known allergy to bovine products, which hemostasis method is MOST likely to need to be avoided?

Topical thrombin

Gelatin sponge

Oxidized regenerated cellulose

Polyglycolic acid suture

Correct answer: Topical thrombin

Topical thrombin is often derived from bovine sources. Patients with allergies to bovine products may have an adverse reaction to topical thrombin derived from bovine sources.

Gelatin sponges, while derived from collagen, are typically well-tolerated, but the provider should verify the source if bovine allergy is a concern. Oxidized regenerated cellulose is a synthetic product and does not pose a risk to patients with bovine allergies. Polyglycolic acid sutures are synthetic and do not pose a risk to patients with bovine allergies.

82.

During a lengthy abdominal surgery, you note the patient's estimated blood loss (EBL) is 1500 mL. Which action is most appropriate for the surgical technologist to take FIRST?

Alert the surgeon and anesthesia provider to the EBL

Request immediate cessation of the surgery

Prepare for immediate blood transfusion

Increase the IV fluid rate substantially

Correct answer: Alert the surgeon and anesthesia provider to the EBL

The surgical technologist plays a vital role in the operating room by ensuring that significant findings, such as a high Estimated Blood Loss (EBL), are communicated promptly to the surgical and anesthesia teams. This allows for immediate assessment and the implementation of necessary interventions to ensure patient safety.

Cessation of surgery is a decision for the surgeon based on the necessity of the procedure versus the risk.

Preparation for blood transfusion is a potential next step, but the first action is to communicate the finding.

Adjusting IV fluid rates is within the purview of the anesthesia provider, who should be informed of the EBL first.

83.

After the use of an oscillating saw in an orthopedic surgery, what is the MOST important action for ensuring the saw's longevity and readiness for future use?

Disassembling and cleaning the saw according to manufacturer's instructions

Immediately rinsing the saw under running water

Placing the saw in a high-temperature autoclave for sterilization

Oscillating saws cannot be reused

Correct answer: Disassembling and cleaning the saw according to manufacturer's instructions

Following the manufacturer's instructions for disassembly and cleaning is critical to remove biological debris and prevent corrosion, ensuring the tool's longevity.

Rinsing the saw under running water might not be recommended for certain components and could cause damage. High-temperature autoclaving may not be suitable for all power equipment components and could cause damage. Oscillating saws can be reused if they are cleaned according to manufacturer's instructions.

84.

During an orthopedic surgery, the surgeon needs to remove a small piece of bone by gouging it out. Which instrument should the surgical technologist hand to the surgeon?

Rongeur

Osteotome

Curette

Hemostat

Correct answer: Rongeur

The Rongeur is designed for gnawing away bone, making it the ideal instrument for removing a small piece of bone as requested by the surgeon.

An osteotome is used for cutting or shaping bone, not specifically for removing small pieces. An osteotome would provide a chiseling mechanism, not a gouging mechanism.

A curette is used for scraping the surface of bone or other tissues, not for removal of bone pieces.

A hemostat is primarily used for controlling bleeding by clamping blood vessels, not for bone removal.

85.

If a power failure happens during surgery, what is the MOST critical action for the surgical technologist to take?

Maintain the sterile field until power is restored

Immediately check the status of backup power systems

Ensure that all surgical instruments are accounted for

Assist in manual ventilation if required by the anesthesia provider

Correct answer: Maintain the sterile field until power is restored

Keeping the sterile field intact is crucial to prevent contamination and ensure patient safety during unexpected interruptions.

While backup power is important, the surgical technologist's primary responsibility is to the sterile field and patient safety.

Instrument accountability is vital, but maintaining the sterile field is the immediate priority during a power outage.

Assisting in manual ventilation may be necessary, but it falls under the anesthesia provider's purview; maintaining the sterile field is the technologist's primary responsibility.

86.

What is the CORRECT action if a surgical technologist accidentally touches the faucet with their scrubbed hands?

Dry the hands and start the scrub process over from the beginning

Continue with the scrub, as the faucet is considered clean

Rinse the hands thoroughly with water, then continue scrubbing for an additional minute

Report the incident to the surgical supervisor immediately

Correct answer: Dry the hands and start the scrub process over from the beginning

If contamination occurs, the appropriate action is to dry the hands and restart the scrub process to ensure hands are properly decontaminated.

The faucet is not considered sterile, and touching it compromises the scrub.

Simply rinsing and continuing scrubbing may not adequately address the contamination.

While reporting safety incidents can be important, the best action is to remedy the breach in aseptic technique by restarting the scrub. Taking this action will render the need to report the incident irrelevant.

87.

Before the initiation of a procedure requiring the use of a surgical microscope, what is the MOST important action to ensure its proper functioning?

Checking the clarity and focus of the microscope

Confirming the operating room temperature

Ensuring the microscopic blade is sharp

Reviewing if the surgeon's vision requires correction

Correct answer: Checking the clarity and focus of the microscope

Ensuring the microscope's clarity and focus is crucial for high precision and to avoid errors during surgery, directly impacting the success of the procedure.

While maintaining an appropriate operating room temperature is important for overall equipment function and patient safety, it is not directly related to the functioning of the surgical microscope itself.

Surgical microscopes do not include a microscopic blade.

Reviewing if the surgeon's vision requires correction may be relevant to the surgeon's overall ability to use the microscope effectively but does not address the immediate functionality of the surgical microscope.

88.

What is the MOST appropriate action if a surgical technologist notices a small tear in their glove during a procedure?

Immediately change the glove using proper aseptic technique

Continue the procedure without changing the glove to avoid delay

Cover the tear with another glove and continue the procedure

Apply a sterile adhesive bandage over the tear and continue

Correct answer: Immediately change the glove using proper aseptic technique

Changing the glove immediately, using aseptic technique ensures maintenance of a sterile environment and adherence to universal precautions.

Continuing with a torn glove risks contamination and breaches universal precautions.

Covering the tear with another glove does not adequately address the risk of contamination; replacing the glove is best practice.

Applying a sterile adhesive bandage does not provide a sterile barrier or adhere to standard precautions.

89.

When using a Finochietto rib spreader during a thoracotomy, what is the MOST important action to ensure patient safety and optimal surgical exposure?

Incrementally adjusting the spreader to avoid rib fractures

Spreading the ribs as far apart as possible to maximize visibility

Ensuring that steady traction is applied using the spreader for the entire duration of the procedure

Using the spreader for less than one hour at a time

Correct answer: Incrementally adjusting the spreader to avoid rib fractures

Incrementally adjusting the Finochietto rib spreader helps to prevent rib fractures by gradually increasing the space within the thoracic cavity, thereby ensuring patient safety while still providing optimal surgical exposure.

Spreading the ribs as far apart as possible can lead to excessive strain on the ribs and surrounding tissues, increasing the risk of rib fractures and tissue damage, which is counterproductive to patient safety.

While steady traction is important, the key to safety and effectiveness is not the constant application of force but the careful and gradual adjustment of the spreader to prevent damage to the ribcage and surrounding tissues.

The duration of use for the spreader is less important than the method of its application.

90.

During the time out process, which of the following is essential to verify FIRST?

Correct patient identity

Patient's position on the operating table

The presence of a signed patient consent

Allergy status of the patient

Correct answer: Correct patient identity

Verifying the correct patient identity is the first and most critical step during the time out to prevent wrong person surgery.

While verifying the patient's position is important, it is not the first priority during the time out process. The presence of a signed patient consent is important but is also not the first priority during this process. Allergy status is important but is verified after confirming the patient's identity as part of the comprehensive time out process.

91.

When inspecting a sterile package before a procedure, which of the following is the MOST critical indicator that the package may have been compromised after sterile?

The package is wet, but the sterilization indicator has changed to the correct color

The package is dry and intact but past its expiration date

There is a small, non-discolored area where the package is slightly indented

The sterilization indicator has not changed color, but the package is intact

Correct answer: The package is wet, but the sterilization indicator has changed to the correct color

A wet package, regardless of the sterilization indicator's color change, is considered contaminated because moisture can act as a conduit for bacteria, potentially compromising the sterility of the contents.

While an expired package should not be used, expiration does not immediately indicate a breach in sterility.

A small, non-discolored indentation may not affect the sterility of the package, especially if the package is otherwise intact and the sterilization indicators show appropriate changes.

If the sterilization indicator has not changed color, this suggests the sterilization process may not have been effective. This would not, however, be considered a compromise that occurred after sterilization.

92.

During a laparoscopic cholecystectomy, what is the MOST appropriate next step after the introduction of the trocar and insufflation of the abdomen?

Insertion of the laparoscope

Application of surgical clips to the cystic artery

Removal of the gallbladder

Closure of the port sites

Correct answer: Insertion of the laparoscope

The laparoscope is inserted immediately after trocar insertion and insufflation to allow visualization of the abdominal cavity, which is the logical next step.

Surgical clips are applied to the cystic artery later in the procedure, after the laparoscope has been inserted and the cystic duct and artery have been identified.

Removal of the gallbladder is the main objective of the procedure but only occurs after identification and clipping of the cystic duct and artery.

Closure of the port sites is the final step of the procedure after the gallbladder has been removed and all instruments have been withdrawn.

93.

You observe that the grounding pad for the electrocautery unit has become partially detached during a procedure. What action should you take FIRST to ensure patient safety?

Reattach the grounding pad securely to the patient

Disconnect the electrocautery unit immediately

Alert the anesthesia team about the need for them prepare to apply a new grounding pad

Alert the anesthesia team about the potential for cardiac disturbances

Correct answer: Reattach the grounding pad securely to the patient

Ensuring the grounding pad is securely attached to the patient is the first and immediate action to prevent any potential burns or electrical injuries, as it safely completes the electrical circuit used during electrocautery, minimizing the risk to the patient.

While disconnecting the electrocautery unit might seem like a preventive measure, doing so could interrupt the surgical procedure unnecessarily and is unnecessary if the grounding pad is securely reattached.

It is not the responsible of the anesthesia team to prepare a new grounding pad or reattached the current grounding pad.

A partially detached grounding pad increases the risk of electrical burns or injury. Alerting the surgical team about any associated risks is not as important as immediately addressing the detachment issue.

94.

During a spinal surgery using computer navigation, the surgeon notices a discrepancy between the navigation display and the actual surgical field. What should the surgical technologist do FIRST?

Check for any obstructions between the navigation sensors and the surgical field

Adjust the lighting in the operating room

Recalibrate the navigation system using the patient's current position

Switch to manual surgical techniques immediately

Correct answer: Check for any obstructions between the navigation sensors and the surgical field

Obstructions can interfere with sensor accuracy, so removing them is the first and simplest step to address discrepancies.

Lighting may affect visibility but not the accuracy of the computer navigation system directly.

Recalibration might be necessary, but the first step is to check for simpler issues like sensor obstruction.

Switching to manual techniques is a last resort if the navigation system cannot be corrected.

95.

You are assisting in preparing a patient for an open heart surgery. As part of the preoperative preparation, which of the following monitoring devices is MOST critical to apply for continuously assessing the patient's cardiac rhythm?

Electrocardiogram (ECG)

Intra-arterial blood pressure monitor

Central venous pressure (CVP) monitor

Temperature probe

Correct answer: Electrocardiogram (ECG)

An ElectroCardioGram (ECG) is crucial for continuously monitoring the patient's cardiac rhythm, especially during open heart surgery, to detect any arrhythmias or ischemic changes immediately.

While an intra-arterial blood pressure monitor provides accurate blood pressure readings, it does not assess cardiac rhythm, which is essential for monitoring during cardiac surgery.

A Central Venous Pressure (CVP) monitor is used to assess venous blood pressure and right ventricular function but is not specifically used for monitoring cardiac rhythm.

A temperature probe is important for monitoring the patient's core temperature but does not provide information on cardiac rhythm.

96.

When preparing a chest drain system before insertion during a thoracic surgery, what is the KEY step to ensure the system functions properly?

Filling the water seal chamber to the prescribed level

Cooling the tubing in ice before connection

Applying antiseptic solution to the tubing

Ensure the water in the water seal chamber is bubbling

Correct answer: Filling the water seal chamber to the prescribed level

Filling the water seal chamber to the prescribed level is essential because it prevents air from re-entering the patient's pleural space, ensuring the one-way flow of air and fluid out of the chest.

Cooling the tubing in ice before connection is not a standard practice for chest drain system preparation and does not ensure the system functions properly.

Applying antiseptic solution to the tubing is not related to the functionality of the chest drain system itself but rather a general infection control practice.

Ensuring the water in the water seal chamber is bubbling before insertion is not a key step; bubbling occurs when air is being evacuated from the pleural space, not before the system is connected to the patient.

97.

When performing a closed-gloving technique, what is the MOST important reason for ensuring that the hands do not protrude from the sleeves before donning the gloves?

To maintain the sterility of the gown sleeves

To prevent exposure of the hands to circulating air

To ensure the gloves fit more comfortably

To avoid damaging the gloves

Correct answer: To maintain the sterility of the gown sleeves

The closed-gloving technique is designed to maintain the sterility of the gown sleeves until the gloves are donned, which is critical for preventing surgical site infections.

Preventing exposure of the hands to circulating air is not the primary reason for ensuring that the hands do not protrude from the sleeves before donning the gloves.

Comfort is important but not the primary concern in the context of sterility during the gloving process. Additionally, using this technique does not improve glove fit.

Avoiding damage to the gloves is important but is not achieved by using this technique.

98.

If a patient's estimated blood loss (EBL) during a procedure is 800 mL, what is the MOST appropriate initial action?

Monitoring vital signs for signs of hemodynamic instability

Immediate transfusion of packed red blood cells

Administering a diuretic to prevent fluid overload

Increasing the rate of IV fluids to match the EBL

Correct answer: Monitoring vital signs for signs of hemodynamic instability

Monitoring vital signs is crucial to assess the patient's tolerance of the blood loss and determine the need for further intervention.

Transfusion is based on clinical signs of anemia or hemodynamic instability, not solely on Estimated Blood Loss (EBL). Diuretics are not indicated in the setting of acute blood loss and could exacerbate hypovolemia. While IV fluids may be adjusted, it's not simply a matter of matching the EBL rate but based on the patient's response and vital signs.

99.

When restocking supplies for the next surgical procedure, which of the following is MOST important to check?

The expiration date of sterile packages

The method of sterilization use

The date the supplies were initially sterilized

The quantity of items remaining

Correct answer: The expiration date of sterile packages

Ensuring that sterile packages have not expired is crucial for maintaining the sterility and safety of surgical supplies, as using expired materials can compromise patient safety and increase the risk of infection.

The method of sterilization is not as immediately critical as verifying that the supplies are still within their safe usage period before a procedure.

The date the supplies were initially sterilized is not as important as the expiration date that directly indicates whether the supplies are safe and effective to use.

The quantity of items remaining does not directly impact the safety or sterility of the supplies being used for a surgical procedure.
