1. What is a surgical site infection?
Surgical wound infections are now more appropriately referred to as “surgical site infections” (SSIs). There are different types of SSIs, which are classified by depth, timing after surgery, clinical criteria, and symptoms. The three categories of SSIs as defined by the Centers for Disease Control and Prevention are:
   a. Superficial incisional
   b. Deep incisional
   c. Organ/deep space

Superficial incisional infections involve the skin and subcutaneous tissues. These SSIs must occur within 30 days of surgery unless a foreign body (e.g., cardiac pacemaker) is left in situ. In the case of implanted foreign materials, 1 year must pass before surgery can be excluded as the source of an infection.

Deep incisional infections involve the deep soft tissues, such as fascial and muscle layers. They must occur within 90 days of the operation to be considered a surgical site infection (except in the event of a foreign material as mentioned above).

Organ/deep space infections involve any part of the body deeper than the fascial/muscle layer that is openly manipulated during an operation. These infections must occur within 90 days of the operation to be considered a surgical site infection.

2. How common are surgical site infections?
Surgical site infections have become the most common healthcare-associated infections (HAIs) in the United States. Surveillance data from the Centers for Disease Control’s National Health Safety Network noted that SSIs comprise 31% of all HAIs. Despite advances in critical care and infection control practices, these infections continue to be a substantial cause of morbidity, prolonged hospitalizations, and death. Annual healthcare expenditures related to surgical site infections range from 3.5 billion to 10 billion dollars.

3. What are the classic signs of surgical infections?
Superficial and deep incisional SSIs:
   - Calor (heat)
   - Rubor (redness)
   - Tumor (swelling)
   - Dolor (pain)
   - Purulent drainage

Organ space SSIs should be suspected in the presence of systemic signs and symptoms:
   - Fever
   - Ileus
   - Shock

Definitive diagnosis of organ space SSIs may require imaging studies.

4. What factors increase the risk of surgical site infections?
Depth and complexity of the wound, patient factors, procedure related conditions, and microbial factors all contribute to the occurrence of surgical site infections.

5. How does the complexity of the wound affect surgical site infection?
Many organisms found in surgical site infections originate from the epidermis. Intact skin is the most resistant to infection, requiring an inoculum of 8 million bacteria to initiate infection, whereas only 1 million are required if the dermis has been violated. When foreign material is being used, only 100 organisms are required (e.g., mesh in hernia repairs, pacemaker placement, total joint replacement, etc.). An additional source of organisms in surgical site infections is wound contamination from deeper tissues. Organisms in these deeper tissues can arise from sources such as the epithelial...