Impacƞul Statements
Periprosthetic Joint Infections

An impactful recommendation is one that offers the potential for current evidence to change care offered to patients. This influence can be due to one or more of the following:

- Evidence highlighting current variations in care that were previously unsupported by evidence
- Current evidence supporting a significant difference or change from current clinical practice or previously held "gold standard" care

The following impactful statements are based on the Diagnosis and Prevention of Periprosthetic Joint Infections Clinical Practice Guideline:

1. Obtain blood serums and synovial fluid as “first-line” diagnostic tools for a suspected periprosthetic joint infection.
2. Do not initiate antimicrobials until adequate synovial fluid cultures are obtained when trying to make the diagnosis of a periprosthetic joint infection.
3. Give prophylactic preoperative antibiotics prior to revision surgery when a periprosthetic joint infection is not suspected or has already been diagnosed with appropriate cultures.

The following guideline recommendations are the basis of the impactful statements:

1. Strong evidence supports the use of the following to aid in the preoperative diagnosis of prosthetic joint infection (PJI):
   - Serum erythrocyte sedimentation rate (ESR)
   - Serum C-reactive protein (CRP)
   - Serum Interleukin-6
   Moderate strength evidence supports the use of the following to aid in the diagnosis of prosthetic joint infection (PJI):
   - Synovial fluid leukocyte count and neutrophil percentage

2. Moderate evidence supports avoiding administration of antimicrobials in patients suspected of having a periprosthetic joint infection until cultures have been obtained and a diagnosis has been established.
3. Strong evidence supports that preoperative prophylactic antibiotics be given prior to revision surgery in patients at low preoperative suspicion for periprosthetic infection and those with an established diagnosis of periprosthetic joint infection of known pathogen who are undergoing reoperation.

- Synovial fluid aerobic and anaerobic bacterial cultures
- Synovial fluid leukocyte esterase
- Synovial fluid alpha-defensin (a-defensin)
- Synovial fluid C-reactive protein (CRP)
- Synovial fluid nucleic acid amplification testing [e.g. polymerase chain reaction (PCR)] for bacteria