

Ultrasound Guided Recommendations

The American Society of Regional Anesthesia and Pain Medicine (ASRA Pain Medicine) ultrasound-specific infection control recommendations based on level of evidence grades (refer to table 1 in the article).

Evidence Grades:

A: High certainty that the net benefit is substantial

B: High certainty that the net benefit is moderate, or moderate certainty that the net benefit is substantial

I: Evidence is lacking, or poor quality, or conflicting, and balance of benefits and harms cannot be determined.

Ultrasound Equipment

Safe handling of ultrasound equipment with LLD (low-level disinfectant) should be widely used and recommended for ultrasound-guided regional and pain procedures.^B

- Transducers must be cleaned/disinfected before first use and after every procedure.^B
- Thorough cleaning and disinfection of all ultrasound transducers are essential for every procedure to interrupt significant cross-contamination risk.^B
- Non-critical procedures (eg, diagnostic ultrasound over intact skin areas) with intact skin can be safely performed with LLD of the transducer.^B

Ultrasound Gel

Single-dose sterile ultrasound transmission gel should be used during the following:^A

- Performing regional anesthesia and/or interventional pain procedures.
- Performing a biopsy or puncture.
- Procedures involving mucous membranes (e.g., transesophageal echocardiogram).
- Scanning non-intact skin.
- Scanning near a surgical wound.
- Scanning neonates and critically ill pediatric patients.

Non-sterile ultrasound gel may be used for low-risk, non-invasive procedures on intact skin and for low-risk patients when appropriate precautions are taken.^A

The following steps should be taken:

- Single-use containers are recommended.
- Avoid direct contact between the gel container dispensing tip and ultrasound equipment and patient.
- Limit warming of ultrasound gel. Dry heat is the only recommended method. The warmer should be cleaned and disinfected regularly according to manufacturer's and infection control's policy requirements.
- Additional multidose non-sterile ultrasound containers precautions include:
 - Seal multidose non-sterile ultrasound containers appropriately when not in use.
 - Discard multidose vials after being deployed on a patient who is under droplet or contact precautions.
 - Do not reuse ultrasound gel containers and replace when empty.
 - Bottle should be dated and discarded after 1 month of use.
 - Products must be stored in areas that are protected from potential sources of contamination.

Procedural Recommendations for Interventions Involving Ultrasound

For regional anesthesia and interventional pain procedures that do not involve implanted or indwelling devices, use LLD with single-use sterile probe cover and single-use sterile gel.^B

- For surgical procedures and interventional implant pain procedures, use HLD (high-level disinfection) for probe disinfection with single-use, long sterile probe sheath and sterile gel.^B
- Transparent film dressings should not be used in lieu of dedicated, manufacturer-approved, commercially available ultrasound probe sheaths.^{I (insufficient)}

