Diagnostic Ultrasound Performance Testing & Accreditation

SAMs Questions

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1. Reported annual incidence rates of ultrasound transducer defects are best estimated as:
   (a) 0%
   (b) 1-5%
   (c) 10-30%
   (d) 40-60%
   (e) >75%

References:

2. Effective, routine ultrasound quality control testing for a scanner and 5 transducers:
   (a) can be performed in 30 minutes or less
   (b) requires that 5 or more different phantom tests be performed
   (c) requires the use of an expensive commercial phantom
   (d) must include an evaluation of spatial resolution
   (e) is not needed - sonographers find all important problems

Reference:
3. Ultrasound practice accreditation programs address which of the following items?

(a) Physician qualifications
(b) Equipment quality control testing
(c) Sonographer or technologist qualifications
(d) Quality of sample clinical exams
(e) All of these are typically addressed

References:

4. The maximum depth of penetration is most closely correlated with which of the following parameters?

(a) Caliper accuracy
(b) Axial resolution
(c) Post-processing lookup table
(d) System noise
(e) Scanner display calibration

Reference:
5. Which of the following is most effective at identifying ultrasound imaging system defects?

(a) Assessment of Doppler accuracy
(b) Uniformity evaluation
(c) Mechanical integrity assessment
(d) Depth of penetration measurement
(e) Clinical use of the system

Reference:

6. Ultrasound phantoms that most accurately mimic the acoustic properties of human tissue are primarily comprised of:

(a) A mixture of water and alcohol
(b) Plexiglas
(c) Urethane rubber
(d) Water held at 20 degrees Celsius
(e) Aqueous gel

Reference: