Article: Intuitive Real-Time Multidimensional Diagnostic Sonographic Image Optimization Technology
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Objectives: After studying the article entitled “Intuitive Real-Time Multidimensional Diagnostic Sonographic Image Optimization Technology,” you will be able to:

1. Describe the interactions of multiple image control settings
2. Adjust images for resolution versus penetration
3. Describe the differences in image contrast versus sharpness

1. Image parameters that are set when an organ system or body area is selected are referred to as
   a. Automatic gain
   b. Automatic image optimization
   c. Automatic adjustments
   d. Presets

2. Manual optimization of an image relies on
   a. The knowledge and skill of the sonographer
   b. Patient body habitus
   c. The organ system of interest
   d. The dynamic range of the ultrasound machine

3. The technology described in this report adjusts the image using
   a. Automatic gain control
   b. Automatic adjustment of contrast
   c. Simultaneous adjustment of so-called macro-parameters
   d. Minimization of dynamic range

4. The optimization technology in this report was developed with the purpose of
   a. Eliminating sonographer input to the image to decrease operator error
   b. Eliminating the machine image controls to ensure artifacts are eliminated
   c. Making all images appear the same to reduce sonographer bias
   d. Reducing the need for changes to control setting to increase sonographer efficiency

5. The macro-parameters referred to in this report include
   a. Dynamic range and contrast
   b. Resolution and smoothness
   c. Gain and sharpness
   d. Penetration and gray map