

Digital mammography is now beginning to be used as a routine tool in breast imaging. While the basic elements of image quality are the same in digital and screen-film mammography, there are certain parameters that must be given special consideration in digital mammography. For example, the nature of image artifacts is often different. In addition, because image acquisition and image display are separated, it is necessary to have tests to evaluate each independently. If both hard copy and soft copy display are used, then the performance of each of these systems must be tested. Special phantoms and test tools are helpful for performing QC on digital systems. Finally, because the image is in digital form, it is feasible to apply much more quantitative tests (eg MTF) to the performance of the digital system. The use of semi-automated, computer-assisted approaches to QC in digital mammography may not only provide more useful quantitative performance data and the ability to log and track temporal variations in performance, but also could reduce the amount of time and labor required to conduct QC testing. In this presentation, current approaches to testing digital mammography systems will be discussed and instrumentation and software used for this purpose will be described.

Learning Objectives:

1. The participant will become familiar with the current approach to evaluation of image quality for full-field digital mammography. He/she will learn how measurement and analysis of key quality parameters in a digital mammography QC program are carried out.