

AbstractID: 8384 Title: What a Practicing Medical Physicist Needs to Know for Testing Full-Field Digital Mammography Systems

The first full-field digital mammography system was approved for clinical use by the U.S. Food and Drug Administration on January 28, 2000. During the first year of introduction, approximately 50 full-field digital mammography systems (Senographe 2000D, GE Medical Systems, Waukesha, WI) were installed for clinical use in the U.S. A similar number of FFDM units were installed outside the U.S., primarily in Europe. This lecture is going to discuss the relevant practical issues for the medical physicist who plans on performing physics testing on full-field digital mammography units. The lecture will be broken into three parts. The first will discuss what is important in preparing for the testing. This will include training recommendations, recommended and required test tools, and practical site issues. The second part will discuss important issues when performing the actual physics testing. This will include describing the important physics tests and comparing them to screen-film mammography, measuring patient dose, evaluating for artifacts, evaluating clinical images, and experiences from previous testing. Finally, the third part will discuss the writing of the report, technologist QC, tips for dealing with the site, the techs, and the FDA. Relevant information and examples from the different FFDM unit manufacturers will be included throughout the lecture.