

Purpose: To investigate any change in the number of extra views acquired for screening mammography in transitioning from screen/film (SFM) to full field digital mammography (FFDM) and the resulting effect this had on total dose.

Methods and Materials: This was a retrospective study of screening mammograms performed at our institution over a four year period. A total of almost 50,000 screening exams were performed during the last two years of SFM use and the first two years of FFDM implementation with a 24 x 29 cm detector. The picture archiving and communications system was used to view and record the number of images taken per screening procedure for all digital exams, whereas the radiology information system was the source for repeat analysis for the SF period.

Results: Of the 23,516 patients who received screening mammograms on FFDM equipment, 36.5% had more than the standard four-views (craniocaudal and mediolateral oblique views of each breast). There were 15.5% who had a total of 5 images, 12.1% had 6 images, 3.3% had 7 images, and 5.6% had 8 or more images. The total repeat rate averaged over all patients was 14.1%. In contrast, preliminary results show that the repeat rate for patients undergoing SFM screening for an equivalent 2 year period was close to 5.5%. As for dose, there was, on average, an 18% decrease in mean glandular dose per view in going from SFM to FFDM imaging. This dose saving is decreased considerably when the number of extra views is taken into consideration.

Conclusions: A notable increase in the total repeat rate for screening mammograms was observed once the switch from SFM to FFDM occurred. These extra views had the undesired effect of offsetting some of the dose savings afforded by the digital equipment.