

Medical Malpractice Litigation

What Are the Foundational Requirements for High-Tech Exhibits?

Attorneys don't bring radiology films and light boxes to court any more

By Suzanne Collins

With the multitude of technological resources now available to trial attorneys, the question of admissibility of technologically generated demonstrative evidence, and the weight such evidence is given by judges and juries, remains significant.

In the past, trial counsel in medical malpractice and personal injury actions that center on missed radiological findings would arrive at trial with sleeves of original radiology films and a light box. Films are now nearly exclusively produced in a digital format and viewed via computer. In such cases, even slight changes in contrast and brightness can turn innocuous findings into remarkable evidence of disease. As such, the admissibility of such images faces substantial new challenges. Not only must attorneys confront issues surround-

Collins is a member of the personal injury services group at Archer & Greiner PC in Princeton, where she concentrates on personal injury and medical-malpractice litigation.

ing how these images are produced, but also how they were seen by a radiologist at the time of the alleged negligence, and under what conditions they were produced or altered as demonstrative aids at trial.

In *Rodd v. Raritan Radiologic Associates*, 373 N.J. Super. 154 (App. Div. 2004), the Appellate Division held inadmissible, in the absence of foundational testimony, digitized computer images of mammograms which the plaintiff used to simulate for the jury what the defendant radiologist actually saw when he viewed the original images with a magnifying lens. Without a limiting instruction stating that the images were only an aid to help the jury understand the medical testimony, as opposed to proof of what the radiologist actually saw, the court held that the "visual aid" took on testimonial significance and could be perceived as substantive evidence. The court further held that the computer images unduly prejudiced the defendant and entitled him to a new trial.

Background in the *Rodd* Case

The plaintiff, Joseph Rodd, individually and as administrator of his wife, Maria's, estate, brought suit against Stuart Kotler, M.D., and Raritan Radiologic Associates, alleging wrongful death and medical malpractice. Maria Rodd began having mammography screenings — X-rays of the breast that are taken in

order to detect cancer — at an early age. The decedent's mammograms were negative for cancer through 1995. Defendant Kotler, a radiologist with a subspecialty in mammography, reported that the calcifications appearing in the decedent's 1997 and 1998 X-rays were not indicative of cancer, and he recommended a one-year follow up. In early 1999, Maria Rodd discovered a lump in her breast. She was diagnosed with breast cancer by biopsy on Jan. 9, 1999. Following unsuccessful treatment, she died on Aug. 30, 2002.

To interpret the decedent's mammogram, Kotler used the recognized diagnostic tool at the time: a hand-held 2.5 power magnifying glass that magnified the image by four times. At the time of trial, the plaintiff digitally scanned select portions of decedent's 1997 and 1998 mammograms into a computer to produce magnified images, which were then projected onto a six-foot by eight-foot screen for the jury to view. The images were selectively collected by the plaintiff's counsel and were magnified by anywhere between 30 and 150 times the size of the original X-rays. The plaintiff purportedly offered the computerized demonstration to aid the jury by explaining the nature of the appearance of a malignancy in a mammogram. In effect, the images were used to simulate for the jury what the defendant allegedly should have seen when he viewed the films, namely, calcifications indicative of breast cancer. Viewing the computerized images on a large screen by the jury was, according to the plaintiff's expert, similar to a radiologist viewing a mammogram film on a light box from close observation using a four-times magnifying glass.

Notwithstanding the defendant's objections that (1) he had no notice of the plaintiff's intention to use the magnified computer images; (2) the defendant was not provided an opportunity to test the process by which the images were created; and (3) the images could potentially cause confusion; the trial judge allowed the use of the computer images as demonstrative evidence to aid the jury, without a limiting instruction. Throughout the trial, the plaintiff used the computer images to suggest to the jury that the cluster of calcifications was clear in the blown-up computer image; therefore, it would have been equally clear when the defendant viewed the mammogram films using a handheld magnifying glass.

The jury returned a verdict awarding the plaintiff \$3.2 million. The defendant moved for a new trial, arguing, in part, that the computer magnification of the mammograms was unfair. The trial judge denied the motion and an appeal followed.

The Problem with Computer Images

In *Rodd*, the essence of the malpractice claim was whether the defendant deviated from the accepted standard of care when he viewed the plaintiff's mammogram and concluded that what he saw on the X-rays was not suspicious of cancer. The standard of care required the defendant to view the mammogram *with a magnifying lens, not computerized magnification*. Rather than instructing the jury that the computer images were not an exact replication of every detail that could or should have been seen by the defendant, the jury

was repeatedly informed by the plaintiff's expert that the computer magnification was an identical representation of the images on the decedent's mammogram films when viewed under a standard magnifying glass. The court held, therefore, that the use of computerized images to demonstrate that a cancerous cluster existed on the decedent's mammogram and that it should have been discovered by the defendant, could confuse the jurors and distract them from evaluating the defendant's actions under the correct standard of care.

Although the plaintiff offered no medical evidence to prove that the images in a mammogram are accurate when the X-ray is scanned into a computer, blown-up and projected on a large screen, as the one presented by the plaintiff, the court held that there was a great risk that the jury could have assumed the defendant should have used the computer technology presented at trial. Because the blown-up images could have altered the appearance of the calcifications in the decedent's films, thereby creating the appearance of a cluster suspicious of cancer, the court noted that the capacity of the computer images to mislead the jury was "very real." The images, in effect, did more than illustrate the plaintiff's expert's testimony. The court determined that the digitized images provided the jury with "independent proof" of what allegedly could and should have been observed by the defendant using the standard magnifying glass when, in fact, computer images were not the medically accepted diagnostic tool to view the decedent's mammogram.

The Appellate Division reversed and

remanded for a new trial, finding that, in the absence of a limiting instruction, the computer images were (1) capable of misleading the jury and causing confusion over the appropriate standard of care; (2) susceptible to being accepted as substantive evidence; and (3) clearly capable of producing an unjust result. The plaintiff's medical expert, through whom the computer images were introduced, did not create the computer projection, nor was he able to provide any explanation regarding how the computer images were created or the level of magnification involved in the computer enlargement. Taking into consideration reliability issues arising from computer-generated exhibits and the process by which they are created, the court determined that a more detailed foundation is required for computer-generated exhibits, including testimony from a witness who has sufficient knowledge of the technology used to create the exhibits.

In general, "the trial court enjoys wide latitude in admitting or rejecting ... illustrations and demonstrations and in controlling the manner of presentation and whether or not particular items are merely exhibited in court or actually received in evidence." If seeking to admit digitally enhanced imagery, even for mere demonstrative purposes, in light of *Rodd*, trial attorneys should be prepared to show that the images' probative value outweighs their prejudicial effect. Attorneys should also produce testimony by a person with knowledge of the relevant computer processes, who can be examined and cross-examined and provide their adversary advance notice. ■