

What Every Mammography Technologist Would Like Their Radiologist To Know About: Our Patients

Louise C. Miller, RT RM

Many times it is difficult for radiologists to understand the challenges and frustrations that most technologists face when performing mammograms. Technologists are acutely aware that our technical skills are essential and we also know that our interactions with our patients are equally important. In fact, the experience that the patient had with the technologist (and other staff) is one of the greatest determinants if the patient will return for a subsequent examination. While technologists try our best to excel in producing clinically excellent images, while providing a positive experience for the patient, the best of our intentions are often affected by numerous patient-related factors.

Nowhere else in medical imaging are technologists faced with so many variables that will influence their ability to produce a quality image.

Breast variables include: size; shape; texture; mobility; tenderness; previous breast procedures/surgeries; and the presence of implants including type, age, and level of encapsulation.

Physical patient variables include: age; mobility; compromised range of motion; rigidity; height, weight; congenital abnormalities; and the presence of devices, such as pacemakers, ports, defibrillators, and neural stimulators.

Other patient variables include: Personality, emotional state, influence of medications, disabilities, hygiene, skin conditions, language barriers, and cultural differences.

Here are some examples of “typical” challenges mammographers face.

Patient 1: Everyone’s favorite grandma: Very sweet, cooperative and compliant. However, she is confined to a wheelchair and cannot stand. She is kyphotic, has a pacemaker in her left chest wall, and also has extremely tender breasts. She also has limited range of motion due to a torn rotator cuff. Her medication

produces tremors which she cannot control.

Potential Problems: Kyphosis and the presence of a pacemaker inhibit the progression of the normal path of the compression paddle. Compression may be compromised due to breast tenderness, which may result in motion unsharpness, which will be exaggerated by uncontrollable shaking. Limited range of motion, especially in the shoulder area, makes it difficult to position the patient properly for the MLO view. Very often, imaging of the superior, lateral, and posterior breast tissue is compromised.

Patient 2: The seemingly perfect patient: 5’7”, 140 lbs; average size; fatty, mobile breasts. However, her previous mammographic experience was less than perfect. She claims the previous technologist “brutalized” her, and she gives the technologist an admonition that she “better get it right.” She is argumentative and authoritative, refusing to fill out the history sheet (“I filled it out last year. It must be in your records!”) and insists on the “thyroid guard” that Dr. Oz recommended and refuses even moderate compression.

Potential Problems: Lack of adequate general cooperation often translates into poor images. It is not easy to position a patient who will not cooperate and even more challenging to produce an adequate image on a patient who will not allow adequate compression. This creates a very difficult challenge for the technologist on many levels.

Patient 3: A 42-year-old patient who is very short and extremely thin, with pectus carinatum. She has bilateral encapsulated implants with very little natural breast tissue. She is confused about screening guidelines, and she states that even her doctor told her that she did not need an annual mammogram. But because her friend recently died of breast cancer, she came anyway. She is extremely emotional, sweating profusely, and reports that she has

fainted during previous mammograms.

Potential problems: Very thin patients often complain about the image receptor “poking” into their thorax. It is therefore very difficult to image posterior breast tissue adequately. Due to the absence of body fat, it is also very difficult to image the inframammary fold. Imaging is further compromised due to the patient’s congenital abnormality.

Encapsulated implants, especially those surrounded by a very small amount of natural breast tissue (seemingly just skin covering the implant), result in compression of the nipple/areolar complex only for the implant displaced views, which (understandably) can be very uncomfortable for the patient and yields little to no information. Sweaty (or oily) skin also further compromises positioning and compression as the technologists’ hands (and compression paddle) slip off the breast, making it difficult to maintain position and compression. Vasovagal syncope can result in patient and/or technologist injury.

While certainly the majority of patients are cooperative and, for the most part “easy” to position, it is evident that the introduction of even one or two (and perhaps multiple) variables can prove to be a challenge to even the most experienced technologist. Technologists learn to work around these “obstacles” by utilizing different mammographic projections and employing their skills in overcoming a variety of challenges. Certainly producing clinically excellent images and creating a positive mammography experience are the goals of every dedicated mammographer, but despite their experience, expertise, and best intentions it is not always possible to produce beautiful images. Dedicated mammographers, however, continue to strive to provide the best patient care possible to all patients regardless of the limitations that the technologists encounter. ❖

(This is the first of a 3 part series. In subsequent articles Ms. Miller will discuss Image Quality and The Role of the Technologist)

What Every Mammography Technologist Would Like Their Radiologist To Know About: Image Quality (Part 2 of a 3 part series)

Louise C. Miller, RT RM

In part 1 of this series, we discussed the challenges that many technologists encounter when dealing with patients. These challenges often result in a compromise in image quality. This article, however, will not address those difficult patients that comprise approximately 15% of our patient population. Our focus, instead, will target the majority of our patients and the positioning standards we should all strive to achieve for screening and diagnostic examinations. Many radiologists complain about technologists who produce substandard images; many technologists complain about radiologists who are “too picky.” Hopefully, the following discussion will help to bridge the gap between these two perceptions. Technologists are often confused by a deviation of standards/policies/preferences between radiologists, especially those in large practices. We also want you to know that we need continued, ongoing communication and dialogue concerning these issues; education is the key to creating and maintaining excellence

Know the standards:

There are specific criteria for evaluating standard screening views. Technologists and radiologists should be familiar with these positioning standards; unfortunately, some have not received proper training in this area. Lack of familiarity with the established criteria for clinical images can often result in a disagreement as to what is or is not acceptable. A good source for this information would be the image evaluation sheet which you receive in association with ACR Mammography Accreditation Program (MAP) process. Many facilities fail the positioning component of the accreditation process because the participants did not meet the basic criteria for each view. While we have discussed that there is a certain percentage of patients (approximately 10-15% of all patients) whose limitations will result in suboptimal images, the majority of images should achieve these standards.

Repeat/rejects/additional views:

Obviously there are times when technologists should repeat films: failure to achieve the accepted standards, artifacts (including superimposition of body parts), and other justified reasons. I often hear complaints from radiologists and technologists about skin and fat folds. On digital mammography, there is a higher prevalence of visualization of skin and fat folds, compared to film-screen mammography. Repeat images are not warranted unless the skin or the fat folds obscure visualization of an area of major concern. Another common issue is the use of XCCL views as part of a standard screening examination. If the patient has prominent glandular breast tissue extending laterally on the CC views, and thus obscured from view on the standard screening views, an XCCL view should be performed on the baseline mammogram. Often the need for XCCLs can be eliminated if the technologist follows a proper CC positioning protocol which includes pulling on the lateral posterior breast tissue when positioning the CC view. This is one of the most

commonly overlooked, important aspects of positioning and when performed properly will help eliminate the need for XCCLs. If, however, the XCCL is necessary on the baseline examination; on subsequent screening examinations, XCCLs need not be included. However, the MLO views must visualize glandular breast tissue back to the retromammary fat space. Additional views (including XCCLs) should be added as needed to visualize specific areas of concern.

Another common issue that causes unnecessary repeats/rejects/additional views is visualization of the nipple in profile. Many times, patients will present with prominent superior fullness in the breast which causes the nipple to “fold under” on the CC view. It is important to note that additional views are not needed if the nipple is visualized in profile on one of the two standard views AND there is no question of a subareolar mass. If a subareolar mass is suspected, then additional views will be needed.

As the two common situations described above indicate, it is critical that each department have set policies and procedures that are agreed upon by all radiologists in the practice and understood by all technologists. This will help to eliminate unnecessary repeat/rejects/additional views and thus benefit productivity and patient care and eliminate frustration and misunderstandings.

Training:

Both radiologists and technologists should participate in an on-going image quality evaluation program. However, it should be understood that initial training (or retraining) should consist of methods that are consistent and reproducible. This type of training will help establish standards so that problems can be easily addressed and eliminated. Radiologists can also benefit from an understanding of positioning techniques so they can give appropriate feedback to their technologists. Checklists can be developed for feedback, repeat/reject records should be reviewed on a regular basis, and specific help should be given to those technologists needing it. Team building can be improved by scheduling an image evaluation session (perhaps twice yearly) where technologists and radiologists come together and review images in an informative and encouraging manner. This will go a long way to eliminating misunderstandings. A good lead technologist can be an excellent liaison between technologists and radiologists. Also, image evaluation should be an important part of every technologist’s performance evaluation.

For many years, Dr. Daniel Kopans titled many of his courses/lectures “The Team Approach.” Technologists and radiologists attended positioning classes, discussed image evaluation issues and common obstacles/barriers to achieving excellence. It is through this concept and common understanding and willingness to work together as colleagues that we can accomplish the best in image quality and subsequent patient care. ❖

What Every Mammography Technologist Would Like Their Radiologist To Know About: The Role of the Technologist (Part 3 of a 3 part series)

Louise C. Miller, RT RM

In the Part I of this series I attempted to familiarize the radiologist with some of the physical challenges encountered by mammography technologists. In addition to physical limitations that technologists encounter, we also have to deal with less than optimal personalities and sometimes even rude and condescending behaviors. We often say that a good mammography technologist plays the role of health care professional, psychologist, educator, engineer, acrobat, and maybe, even a bit of a magician. . . .all in about 20 minutes or less. The mammography technologist must be adept at obtaining the best images possible on the most difficult body habitus, often accompanied by unique emotional demands, and even occasionally be the brunt of sarcastic, demeaning comments. This is not, after all, an examination that patient's look forward too. Many times, patients direct their frustrations and fears at that technologist in a manner in which they would never address a physician. Patients can be rude and condescending, often making "fun" of our work. They can cry, laugh too much or too loud, make inappropriate comments and jokes, and sometimes be outright mean. Breast imaging colleagues can be rude, demanding and impersonal. On the other hand, patients and colleagues can be deeply appreciative, exceptionally kind and grateful. It is constant uncertainty for which we must be prepared by utilizing our skills, experience, expertise and compassion. We have to remember to focus on the positive, despite all the demands of our profession.

There are many times when mammography technologists feel underappreciated by their patients, administrators and medical colleagues. Fellow technologists and other medical colleagues often feel that "anyone can do a mammogram," which is simply not true. It takes months, even years for a technologist to master all aspects of their responsibilities, including positioning, quality control, constantly changing computer programs, regulatory compliance issues, continuing education, and most importantly, patient care. Mammography requires dedicated initial training and ongoing continuing education, which is often not supported by our individual departments or by our administrators. Additionally, many mammography technologists are paid at the same salary levels as general radiologic technologists although they are performing a specialized examination, requiring

specialized licensure. The overall feeling often becomes one of frustration, which can lead to diminished job performance, increased stress, and burnout.

There are many things that can be done to help support and encourage your technologists:

- Support continuing education endeavors. If there is no funding available, arrange for lectures which will provide the mammography technologists with continuing education credits. Case reviews are good opportunities for learning and improving skills.
- Encourage positive communication. Tell the technologists when they do well and when they need to improve. Offer suggestions for improvement in a supportive manner. If the technologist makes a mistake, please wait until it can be discussed privately, and never in front of patients or colleagues.
- Work in a collaborative environment. Invite questions and encourage professional growth. Working as a team benefits everyone, especially our patients.
- Help the mammography technologists celebrate milestones as well as daily successes. Pizza, parties, and praise are greatly appreciated.

It may be interesting to note that most mammography technologists form fast and long friendships with each other. Their appreciation for how difficult the job can be creates strong bonds that are based on a supportive network of mutual respect and empathy. While the technologists have this among our mammography "sisterhood," it is also important for the technologists to feel the same level of appreciation and mutual respect from the other members of the breast imaging team, including fellow technologists, sonographers and radiologists. Mammography technologists endeavor to establish and maintain collaborative, professional relationships; consequently, there is a sense of pride most technologists feel in being able to surmount daily challenges.

These suggestions should help to establish and maintain a healthy, productive working milieu for an extremely important component of the breast imaging team: our mammography technologists. ❖

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