

Dear Colleague,

Welcome to *Hiatt's Insights*. In each newsletter, I take on a timely topic to provide guidance to HealthHelp's payer clients and other industry leaders. My experience as a diagnostic radiologist combines with my current role as chief medical officer for HealthHelp to give me a broad understanding of healthcare's evolving economic context and the transformative role of technology in medicine. I hope you find this month's topic both informative and thought provoking.

Denser Breasts Make Early Detection Difficult

The association between elevated breast-tissue density (BD) and decreased sensitivity of mammography dates back to the technology's early years, as does speculation that BD directly relates to a woman's risk of breast cancer. Evidence collected over the past decade also suggests that decreased sensitivity (masking risk) and increased risk of cancer (casual risk) are independent of one another, creating a compounding impact on the 40% of women older than 40 with high BD.

Because of the masking, mammography often proves

About the Author



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Dr. Hiatt brings to his position at HealthHelp a wealth of experience in both radiology and business. Prior to joining HealthHelp, Dr. Hiatt was a radiology departmental leader and served on the board at Trinity Mother Frances Hospitals and Clinics in Tyler, Texas. He also earned professional certification from the Healthcare Information and Management Systems Society.

Dr. Hiatt completed a fellowship in cardiovascular imaging at Stanford University after a residency in diagnostic radiology at the University of Virginia. He has a master's in Health Evaluation Sciences, with an emphasis in informatics and resource management, from University of Virginia. Dr. Hiatt earned his medical degree and MBA from Wake Forest University.

Upcoming Presentations by Dr. Hiatt

"Radiology Benefits Management: What, Why, Who, Where, When & How?" – Dr. Hiatt will present on the perspective of radiology benefits management regarding coronary CTA on July 15 at SCCT2011 in Denver.

"Radiology Benefits Management Results: Controlling Healthcare Costs While Improving Quality" – Dr. Hiatt will

insufficient. Discovery of a lesion may be delayed to an advanced stage, with consequently increased morbidity and mortality, not to mention higher treatment cost. Women with high BD and “normal” mammograms may require adjuvant screening, such as with ultrasound, molecular imaging, or MRI. In fact, Connecticut law not only requires disclosure of high BD to patients, along with a warning of the potential insufficiency of mammography, but also payment for an adjuvant ultrasound. Multiple states have similar legislation in the works, as do federal lawmakers.

New Technologies Offer Aid

The challenge, of course, to objective identification of breast density is that density assessment is currently a subjective estimate by the physician. Unfortunately, studies have shown both large intra-observer variability and persistent overestimation of density.

“What’s the best way to determine objectively one’s breast density?” The answer: One successful tool aids researchers in area-based analysis of breast density, while two other techniques, named Quantra and Volpara, employ volumetric breast-density technologies.

The mentioned research tool, which performs an area-based analysis of breast density, requires hand plotting of both the edge of the breast and the observed density before calculating the percent density. Development is focused on volumetric density, as there is more information to be gleaned from volumetric assessment, and it avoids the potential for confusion caused by overlapping dense tissue within the breast. Because even the most radiographically dense breasts are predominately fat, volumetric-density percentages are always much lower than area-based percentages,

present on the impact of radiology benefits management on the quality and cost of healthcare on Aug. 17 at AHRA near Dallas.

About HealthHelp



HealthHelp, a leader in specialty benefits management, generates significant savings and return on investment for health care payers by enhancing physician knowledge, improving quality of care, and reducing unnecessary radiation exposure. Each of its programs addresses a different aspect of diagnostic radiology, cardiology, and radiation oncology. The clients of Houston-based HealthHelp administer local, statewide, and national health care plans across the country. For more information about HealthHelp’s programs, visit www.healthhelp.com.

particularly at the higher levels of density. To be used effectively in clinical practice, however, the volumetric density needs to be “translated” to an equivalent quartile as used in the Breast Reporting and Data System (BI-RADS) established by the American College of Radiology. Accuracy becomes particularly important when high BD is the operative criterion in clinical decisions.

As the one of two volumetric breast-density technologies, Quantra takes an algorithmic approach to density that incorporates imaging parameters such as the thickness of the breast, exposure time, target material, and dose. The FDA has cleared Quantra for use only on Hologic digital mammography units. Volumetric-density assessment technologies all use the “for processing” digital image, the same image used by systems employing computer assisted detection.

Volpara’s technology takes a relative approach to volumetric assessment, first identifying the grayscale level for pure fat in the breast from the subcutaneous area of the image, and then comparing every pixel value in the breast with the fat value to determine density. Volpara also creates a Density Grade that correlates with the BI-RADS density categories. Because this grade calculates volumetric density entirely from values found in the woman’s own breast, the calculated density is relative and not materially affected by differences in imaging parameters. This feature enhances both accuracy and comparability, and it has FDA clearance for use on all digital mammography units.

These means of determining breast density may help physicians bring the benefits of early detection to more women, including those with dense breast tissue. HealthHelp will continue to guide physicians and its payer clients through this ever-

evolving area of care.

Best regards to you as we seek
together the best care for our
patients,

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