



## CIMTEC helps make breast density measurement a reality Friday, March 15, 2013



Radiologists use breast density as one measure of the likelihood of a woman developing breast cancer. Women with breast tissue density measuring above 75% have a four-to-six times greater chance of developing breast cancer.

“It’s a flag”, says Mohamed Abdoell (pictured at left). “It’s a way to triage women for appropriate follow-up imaging.”

Until now, radiologists have estimated breast density using four broad categories (BI-RADS) relying on visual assessment of mammograms. “They’re generally pretty good at it,” says Abdoell, “but a less subjective way to measure breast density would generate more accurate and reliable density measures. If we can provide a more quantitative measurement, it will be a real benefit,” he says.

Abdoell, an associate professor in the diagnostic radiology department at Dalhousie University in Halifax, has developed a way to provide a more quantitative measurement. He uses a fully automated algorithm that processes images to generate a standardized, reliable measure of density.

In a unique nod to personalized medicine, women will be able to upload their mammogram images to the Internet and the algorithm will give them a personalized breast density measure. Having access to this service is more profound than simply satisfying curiosity, Abdoell says. He points to the emerging consensus in the health sector that better health outcomes can be realized when patients are empowered with their own health information.

Densitas Inc. is the company Abdoell formed to commercialize his discovery. He has also discovered there is more to commercializing than simply having a good idea. So he turned to CIMTEC, the Centre for Imaging Technology Commercialization, for help.

In early testing, Densitas, as the algorithm is known, showed strong agreement with radiologists’ density assessments of full-field digital mammography images.

CIMTEC has played an important role in evaluating the early prototype to validate those results and to develop an improved and more robust algorithm.

CIMTEC also worked with Densitas Inc. to determine a solution for seamless integration of the algorithm into clinical workflow and helped prepare the company for developing new strategic partnerships. With CIMTEC’s assistance, Abdoell estimates that Densitas could be commercially available by the end of 2013 or early 2014.

Abdoell says working with CIMTEC has been invaluable.

“Finding such expertise under one roof has been critical,” he says. “It would be virtually impossible for a lean start-up to go out and recruit this kind of expertise – it’s tough enough generally, but it’s even more difficult in the imaging world.”

Says Abdoell, “One of the greatest benefits of working with CIMTEC is the continuity and coherence that comes from its ability to provide assistance along the entire continuum of commercialization; from product development and technical know-how to considering regulatory issues as part of the commercialization process.”

“It’s almost a one-stop shop,” he says. “It’s impossible to put a value on having access to that pool of skills in one place. I can’t imagine being where we are now without CIMTEC.”

