

AMI Reports

NOVEMBER 2011

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NEW 3D Technology at Women's Diagnostic Center

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Recently incorporated into the Silverdale Women's Diagnostic Center breast cancer detection technology are 3D Mammography, also known as Tomosynthesis and Shear Wave 3D Elastography Breast Ultrasound. These two new technologies will significantly enhance the diagnostic capabilities in detecting breast cancer. According to AMI radiologist Dr. Wesley Solze, Medical Director for the Women's Diagnostic Center, "I have already seen cases where this technology has detected and characterized breast lesions and prevented unnecessary breast biopsies. I know these women were very appreciative

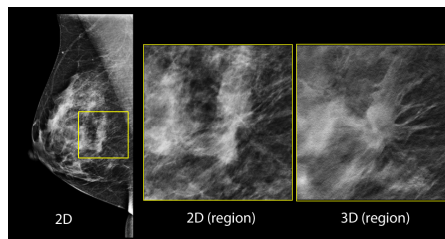
of this accurate diagnosis and not needing to go through a breast biopsy to determine whether the lesions were complex cysts or solid lesions. It saved them not only significant stress but time, money and recuperation."

Both 2D and 3D images are taken which gives our radiologists side by side comparisons for analysis. 3D scanners offer more information, and overlapping tissue can now be

viewed from all angles. Another benefit is that many women may not need to return for additional imaging. The combined use of 2D and 3D imaging with the new system roughly doubles the amount of radiation. Over the course of a woman's lifetime, it is significant and of concern to AMI radiologists. Patients selected for this technology will be selected or at high risk for breast cancer.

Elastography Breast Ultrasound is what Dr. Solze is most excited about. "This technology evaluates breast lesions, differentiating

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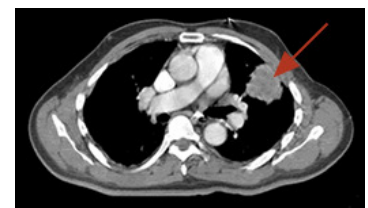
Low-dose CT for Lung Cancer Screening

Lung cancer death accounts for about 25% of all cancer deaths. In 2007, 90 million US citizens had a history of smoking with one-half reported as current smokers. Detecting lung cancer early is important when treatment options are greater. Clinical stage at diagnosis is a major determinant of survival after therapy.

There have been several studies completed begin-

ning in the 1970s, but none have shown a decrease in lung cancer mortality. The National Lung Screening Trial (NLST) beginning in 2002 is the largest and most recent. It compared low dose helical CT with chest x-ray in the screening of older current and former heavy smokers for early detection of lung cancer. 53,454 patients took part in the study in 33 US medical centers. Participants, divided into two

groups, were offered 3 screenings—either CT or x-ray. Data were collected on cases of lung cancer and deaths from lung cancer that occurred through December 31, 2009.



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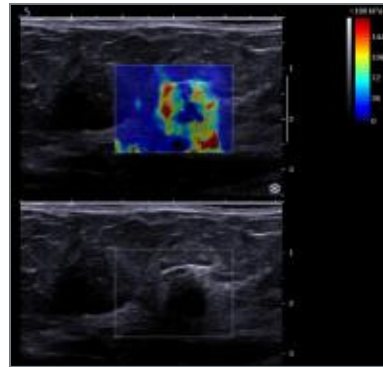
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complex cysts from solid lesions. It is extremely helpful in evaluating breast lesions and determining which cases are suspicious for cancer. The information helps to make a decision whether to follow the lesion for a period of time or refer for breast biopsy. We believe this is an important tool and is now incorporated into our breast ultrasound techniques.”

The technology is an added feature of the ultrasound equipment. There is no radiation and it takes only two to three minutes to perform. It measures the firmness or stiffness of the lesion. Cancers tend to be very dense or firm. They do not move much and they look different than soft areas on the breast.

Elastography can also differentiate benign from malignant lesions in many cases. The lesion is measured on 2D ultrasound and then measured with elastography and the images are compared side by side. Cancerous lesions appear larger on elastography. “A large number of the

lesions found on ultrasound are indeterminate and require biopsy for definitive characterization. Elastography helps identify many of these lesions as benign and therefore not requiring biopsy. Elastography does for ultrasound, what tomosynthesis does for mammography” according to Dr. Solze.



The image at left shows invasive ductal carcinoma. It shows the stiffness of tissue in color. Stiff lesions appear red, while soft lesions appear as blue.

Low-dose Lung CT

Although x-rays have an extremely low radiation dose, the technology is limited in the size and location of the abnormalities it can detect. A chest x-ray can find a nodule down to about 10 mm in diameter reliably, depending on where it's located. Radiation dose for an adult, one view PA is about .22 mGy.

On a chest CT scan, nodules can be seen clearly at 1 to 2 mm in size. It's the speed of the helical CT and the overlapping nature of the slices that make it possible to find small nodules in the lungs. Plus, you can visualize nodules just as well if you turn down the radiation dose. The radiation in screening CT is much less than a diagnostic CT. Screening low dose CT is 1.8 mGy vs. 14.7 mGy in a routine CT chest.

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The National Lung Screening Trial (NLST) was conducted to determine whether screening with low-dose CT could reduce mortality from lung cancer. Initial results released in November 2010, show lung cancer screening with low dose CT reduced mortality by 20% when compared to standard chest x-rays in patients 50—75 years old who were heavy smokers.

CT lung screening is a low radiation dose, contrast free scan. Our radiologists are able to see the location, nature and extent of many different abnormalities in the lungs. These exams are available in Silverdale on our 64-slice CT and in Port Orchard on our 16-slice CT.

“Art for the Cure” event planned—Oct 27th 5:00—8:00 pm

Lisa Stirrett, well-known Silverdale glass artist and AMI Women's Diagnostic Centers have teamed up to present a new Breast Cancer Awareness event called “Art for the Cure”. Lisa is opening a new glass studio at 9536 Silverdale Way and will be hosting an Open House Oct 27th. Numerous local businesses have been asked to join and display or demonstrate their items. CJ's General Store & Catering, Stacy McBride Collections, Amy's Chocolates, Bella Bella Cupcakes, Tina Marie Design,

123 Fit and several others will be present, including AMI displaying new 3D technology to detect breast cancer. There will be great raffle items with all money donated to Susan G. Komen for the Cure, Puget Sound Chapter. Refreshments will be served. Plan to attend this fun evening event.



Study finds breast self exam, annual screening key

In a study presented September 2011 at the American Society of Clinical Oncology Breast Cancer Symposium, researchers found that both screening mammography and breast self-exams have value in detecting cancer, even in women younger than 50. These women also were more likely to have advanced-stage cancer that required mastectomy, making breast self-examination an important tool.

In 2009, the US Preventive Services Task Force guidelines actually recommended against routine mammograms for women 40—49

years, as well as breast self examination. These guidelines conflicted with the established recommendations which suggest annual screening mammograms beginning at age 40 and encourage regular self exams.

Researchers in Michigan analyzed data from 5,903 women between 2006 and 2009. They wanted to assess how the USPSTF recommendations might affect future breast cancer detection, especially for women 40—49.

“While there has been ongoing debate about when and how breast

cancer screening should occur, this study validates that women who undergo regular mammography screening present at earlier stages and often require less aggressive treatment than those who do not. This is true for women older than 50 years, as well as women aged 40 to 49 years for whom routine mammography is questioned by the USPSTF. In addition, women of all ages presented with palpable tumors, highlighting the use of self-breast exam as an important public health measure” according to Dr. Jamie Caughran and her colleagues who analyzed data. “Breast self exam is key to women’s health” Dr. Caughran said.

AMI Radiologists speak at Events



Dr. J. Wesley Solze, AMI radiologist & Medical Director for the Women’s Diagnostic Center recently spoke to a group of clinicians for the quarterly meeting of the Peninsula Breast Center, October 4th at the Silverdale Beach Hotel. His presentation was an “Update on Breast MRI, 3D Elastography Breast Ultrasound and PET/PEM”. He was well received, and there were numerous questions and comments from the attendees.

Dr. Solze recently accepted the position of Medical Director for the Women’s Diagnostic Center.

The annual Harrison Medical Center Breast Cancer Luncheon is scheduled for October 14th at Harrison Silverdale in the Garden Room, beginning at 11:00 AM. This event welcomes nearly 100 breast cancer patients and survivors for lunch and informative talks by area clinicians. Dr. Michael Cook, AMI Medical Director, has been asked to make a presentation on “Image-guided Breast Biopsies.” His topic will include explanations on stereotactic core biopsy, ultrasound-guided biopsy and MRI-guided biopsy.



AMI Women’s Diagnostic Center is the lunch sponsor for this event and will have a display and giveaways for all attendees.

Walk-in Mammos

Our Women’s Diagnostic Centers in Poulsbo and Silverdale now offer walk-in appointments for screening mammograms. The schedules at these two locations have been adjusted to allow for this convenience. We will make sure that your patients are seen in a timely manner—if they prefer not scheduling their annual mammogram.



**Walk-in Screening
Mammograms**
available in
Silverdale and Poulsbo

Advanced Medical Imaging
1780 NW Myhre Road, # 1220
Silverdale, Washington 98383

360-337-6500 800-972-9264
Fax: - 360-662-5501
E-mail: contact@amiradiology.com



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"See with Sound"

Medical Ultrasound Awareness Month is October. This month we celebrate our well educated ultrasound professionals at AMI and thank them for the excellent service they provide to our patients.



Our ultrasound technologists are shown to the left.

This fast growing technology has many uses in the medical field for patients of all ages. Recently AMI incorporated two new ultrasound techniques. One is CIMT or Carotid Intima Media Thickness which measures the thickness of the part of the artery wall which correlates with heart disease. This quick, painless exam takes 20 minutes and can be completed in Silverdale or Port Orchard.

Our second new technology is Elastography Breast Ultrasound. It evaluates breast lesions with no radiation, can differentiate complex cysts from solid lesions and may prevent unnecessary biopsies. This is available in Silverdale at our Women's Diagnostic Center.

Articles & Studies of Interest

Below are articles or studies you may find interesting:

Breast Elastography Accurately Diagnoses Malignancies <http://www.medscape.com/viewarticle/702181>

MESA results confirm prognostic value of CT calcium scoring Journal of the American College of Cardiology, July 11, 2011, online article

National Lung Screening Trial To order copies, contact www.rsna.org/rsnarights



A Division of Advanced Medical Imaging

Women's Diagnostic Centers

are located in

Silverdale, Port Orchard and Poulsbo.