Larchmont Launches 3D Mammography at All Locations

In November 2014, the American College of Radiology officially announced that breast tomosynthesis, also known as 3D digital mammography, is “no longer investigational” and has been “shown to be an advance over digital mammography, with higher cancer detection rates and fewer patient recalls for additional testing.”

Now, just a few months later, Larchmont is one of only a few centers nationwide with FDA approval to offer this screening to patients, with new Siemens MAMMOMAT Inspiration units with the tomosynthesis option installed at all of our locations.

How is tomosynthesis different from a conventional mammogram? And what are the benefits to patients?

“3D breast tomosynthesis is to a 2D mammogram as a CAT scan is to a chest X-ray,” said breast imaging specialist Sarah Palestrant M.D., D.A.B.R. “We are now able to take images of the breast at multiple points, rather than the standard two-dimensional view, akin to reviewing slices of bread rather than looking at the whole loaf from one view. We’re taking the standard 2D mammography image and then, rather than just having that single view of the breast, we are actually dividing it into multiple slices.”

The ability to view multiple layers of breast tissue at different depths makes tomosynthesis more sensitive and specific than conventional two-dimensional mammograms.

“That translates to finding more cancers and saving more lives,” Dr. Palestrant said. “Not to be overlooked, it also means fewer callbacks and decreasing patient anxiety.”

The Siemens MAMMOMAT Inspiration generates 3D images by rotating around the breast and acquiring an image every two degrees while moving through an angular map of 50 degrees. This creates 25 projections, which the image processing software then reconstructs into three-dimensional images in conjunction with two-dimensional mammogram images.

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"With tomosynthesis," Dr. Palestrant said, "we really get two studies in one: a set of conventional mammogram images, plus 3D image slices for additional views."

**Who Should Be Referred for Tomosynthesis?**

"Any woman who meets the criteria for having regular screening mammograms can benefit from tomosynthesis instead of conventional 2D mammography," Dr. Palestrant said. "So we view it as an appropriate modality for routine screenings. The CPT codes are now in place and, in New Jersey, insured patients who have extremely dense breasts—including Medicare recipients—can expect coverage. For the other 50 percent of the population, however, the insurance status has yet to be determined. But I’m optimistic about that because it’s clear that reducing the need for additional studies, as well as finding cancers at earlier, more treatable stages, will also reduce overall costs for breast cancer screening, diagnosis, and treatment."

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**Task Force Recommendations on Mammograms Could Result in Unnecessary Deaths**

On April 20, the U.S. Preventive Services task force released draft mammogram guidelines that your patients may find confusing. The proposed guidelines recommend that women begin mammograms at age 50 instead of age 40, and that they have the screenings every two years instead of annually.

If the recommendations become official, they could affect the availability of coverage for mammograms under the Affordable Care Act.

Based on an overwhelming preponderance of research evidence, we believe that these recommendations are misguided and counter to the medical consensus among experts in cancer and breast health. We therefore hope that you will join us in continuing to recommend that women have annual mammograms starting at age 40, as endorsed by the American Cancer Society and other major medical organizations. In particular, it’s important to remember that:

- One in six breast cancers occurs in women between age 40 and 49.
- A recent study found that 70 percent of women who died of breast cancer in their 40s were among the 20 percent of women who were not being screened.
- Medical science cannot determine which cancers will advance to kill a woman—so if we exclude women in their 40s, we may lose our chance to catch those cancers early and save thousands of lives.
- Research also shows that reducing the frequency of screenings to every two years does result in additional breast cancer deaths.

To consult with a breast imaging specialist about the best screening approach for your patients, please call **(609) 914.7017**.
At Larchmont Medical Imaging, our CT scanners are equipped with state-of-the-art dose limiting technology that enables us to provide two important, low-risk, noninvasive studies to test for signs of heart disease: low-dose coronary CT with calcium scoring and low-dose coronary CT angiography (CTA).

These exams can help primary care physicians assess two of the most frequent scenarios involving possible heart disease that they encounter: (1) asymptomatic patients with coronary artery disease risk factors, and (2) patients with chest pain of uncertain origin.

**Coronary CT with Calcium Scoring**

“Routine primary care exams often identify risk factors in patients who are not experiencing symptoms,” said Andrew Zeiberg, M.D., D.A.B.R. “By using a screening resource such as the Framingham Risk Assessment Tool from the American College of Cardiology, patients’ risk of dying from a heart attack in the next ten years can quickly be categorized as low, intermediate, or high.”

While high-risk patients may need immediate treatment, coronary CT with calcium scoring is a quick, safe, and painless outpatient exam appropriate for screening intermediate-risk patients for the presence and extent of calcium deposits. The result of the test—the calcium score—can be the basis for determining whether treatment or additional testing for heart disease is needed.

The calcium score ranges from zero—which indicates a 96–100 percent chance of having no heart disease—to 400 or more, which calls for treatment because the extent of disease indicated by calcium deposits reveals that the patient’s risk is higher than what the initial screening suggested.

“It’s invaluable to be able to make these clear determinations without the use of invasive testing or a higher radiation dose,” Dr. Zeiberg said.

**Evaluating Chest Pain with Low Dose Coronary CT Angiography (CTA)**

For patients experiencing chest pain at a level that may or may not indicate heart disease, coronary CT can reliably determine whether the pain is heart related. A CTA that is normal or shows minimal disease indicates with near 100 percent certainty that the pain is not heart related, enabling the patient to move on to additional testing to determine whether the pain is related to a musculoskeletal or gastrointestinal issue. When the CTA exam does confirm coronary artery disease, the severity of blockage can be evaluated to help with treatment planning.

**Interpretations You Can Count On**

“Our team includes radiologists with years of experience and subspecialty training in CT angiography,” Dr. Zeiberg said. “Local physicians can refer with confidence for these noninvasive, low-risk studies that provide vital insights into cardiovascular health.”

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**LAD: Normal left anterior descending coronary artery. A normal CTA rules out significant coronary disease.**

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**Anomalous LM: Anomalous origin of the left main coronary artery from the right coronary cusp. Anomalous vessels can be difficult to evaluate with conventional angiography. CTA can also determine the course of an anomalous coronary to be sure it isn’t compressed between the aorta and pulmonary artery (malignant variant) which is associated with an increased risk of MI and sudden death.**
Today’s joint replacements made of alloys like titanium-cobalt-chromium are MRI safe. However, for joint-replacement patients experiencing problems such as discomfort or inflammation, physicians have often avoided ordering MRIs due to the artifacts that metal implants tend to create in the images.

“The artifacts are almost like what you see when someone shines a flashlight in your eye,” said musculoskeletal imaging specialist Andrew Gargiulo, M.D., D.A.B.R. “The artifact created by the metal prosthesis distorts and obscures much of the bone and soft tissue around the joint, making the images difficult to interpret.”

However, metal suppression software, an image processing technology recently added to MRI systems at Larchmont Medical Imaging, reduces artifacts so that soft tissue and bone surrounding a joint replacement can be more clearly seen for diagnostic evaluation.

“Before the software was developed, an MRI scan of someone with a joint replacement was just not helpful,” Dr. Gargiulo said. “Physicians would typically opt for other modalities such as CT, X-rays and nuclear medicine studies.”

With GE’s MAVRIC SL software, patients experiencing problems in the area of a joint replacement can now benefit from the strengths of MRI: clearly imaging structures that can be difficult to see in ultrasounds, X-rays, or CT scans.

“We can now better evaluate potential comorbidities involving not only the prosthesis and the surrounding bone but also soft tissue pathology such as muscle and tendon injury,” Dr. Gargiulo said. “It also allows us to evaluate soft-tissue inflammation and synovitis that you couldn’t otherwise see with a traditional MRI. With plain radiograph and CT, one can evaluate the bone and prosthesis but evaluation of the surrounding soft tissues with these modalities is inadequate.”

“Unfortunately, people do have problems after joint-replacement surgery,” Dr. Gargiulo said. “While it may be related to the prosthesis, the patient could also have a more acute injury as they become active again. MRI is the gold standard for imaging a joint but in the presence of the metallic implant this was not the case in the past. As a result, some of these patients may go undiagnosed. Now, with the addition of the metal suppression software, we are able to evaluate these joints with greater confidence which ultimately enhances our ability to provide the patient and the ordering physician with a diagnosis.”

At Larchmont, MR studies of patients with prosthetic joints are interpreted by fellowship trained subspecialists in musculoskeletal imaging—including Dr. Gargiulo, who has extensive experience in interpreting MR studies that use metal suppression software. To consult with Dr. Gargiulo on a patient case, please call (609) 914.7017.
TMJ Studies Help Diagnose Jaw Pain and Discomfort

More than 10 million people in the U.S. are affected by temporomandibular joint (TMJ) disorders. Typically, the presenting symptoms in a visit to a general dentist or primary care physician are jaw pain, clicking, and limited range of motion—the patient can’t fully open the mouth. A referral to a maxillofacial surgeon is usually the next step.

If the symptoms persist or worsen in spite of efforts to manage them conservatively with pain medications, MR TMJ studies play an important role in helping maxillofacial surgeons evaluate the morphology and position of the disc, osseous abnormalities, joint effusion, arthritis, and supporting soft tissue structures. This evaluation serves as the basis for deciding on possible further interventions, such as adjusting dental occlusions or, in severe cases, surgery of the joint.

The study is obtained with the mouth open and closed, with no IV contrast required. Larchmont Medical Imaging offers dentists and physicians the advantage of a dedicated team of imaging specialists with expertise in interpreting TMJ MR studies, as well as conveniently located facilities fully equipped with state-of-the-art 1.5 Tesla and 3 Tesla MRI units.

For questions about TMJ MR studies, please contact Jinhee Kwak, M.D., D.A.B.R., at (609) 914.7017.

Is Your Patient Dense?

Per New Jersey’s Breast Density Inform law, we’re committed to fully informing you about breast density findings in your patients’ mammograms—and to providing additional screenings that benefit women with dense breasts.

- Mamography reports for your patients include information about their breast density, which will be characterized based on categories established by the American College of Radiology:
  - Predominantly fatty—less than 25 percent fibroglandular tissue
  - Scattered density—25-50 percent fibroglandular tissue
  - Heterogeneously dense—50-75 percent fibroglandular tissue
  - Extremely dense—more than 75 percent fibroglandular tissue

- All mammography patients will receive a letter that includes general educational information about breast tissue density and encourages them to have discussions about breast tissue density with their doctors.

- We encourage all referring physicians to discuss breast density when reviewing mammogram results with patients and assess the possible need for additional screenings for women with heterogeneously dense or extremely dense breasts.

- Larchmont Medical Imaging now has 3D breast tomosynthesis available for screening mammograms at all locations, which benefits patients of all density levels with layered views of tissue at different depths of the breast.

New Jersey’s Breast Density Inform law requires insurance plans to cover additional screenings for women in the “extremely dense” category. However, individual screening needs may vary. For example, a woman who is not categorized as having dense breasts overall may still have a small area of tissue density that can make it harder to spot abnormalities on a mammogram in that part of the breast. With a full complement of breast screening and diagnostic tools and an expert team of subspecialty-trained breast imaging specialists, we can help physicians formulate a screening plan that takes all of the relevant information into account.

To discuss patient cases with a breast imaging radiologist, please call (609) 914.7017.

Normal right TMJ, mouth open. The articular disc is normal in morphology and normally positioned.

Abnormal left TMJ, mouth open. The articular disc is deformed and anteriorly displaced.
Lung Cancer Screening Program Making a Positive Difference for Smokers

160 lung screening chest CTs have been performed with four positive studies for lung cancer in patients whose prognosis is much better than it would have been had they waited until they experienced symptoms or later-stage disease was detected. These are the results, so far, of our new ultra-low-dose CT lung cancer screening program.

“The lung cancer screening CTs enable us to identify early lung cancer in asymptomatic patients—at a stage when they are much more treatable and even curable,” said Michael Brodsky M.D., D.A.B.R. “Research has demonstrated that screened patients have their risk of dying from lung cancer lowered by at least 20 percent.”

Candidates must (1) be healthy enough to undergo treatment if diagnosed with cancer and (2) meet the following criteria:

- Current smokers, age 55-74 (77 for Medicare recipients), with a smoking history ≥ 30 pack years
- Former smokers, age 55-74 (77 for Medicare recipients), with a smoking history ≥ 30 pack years who quit in the past 15 years
- Age ≥ 50 with a smoking history ≥ 20 pack years plus one additional risk factor

Medicare Approval Expands Access

Since many patients who meet the criteria are Medicare beneficiaries, the February 5 announcement that CT lung cancer screenings are now covered makes the procedure much more accessible. Many private insurance plans also cover screenings for people at high risk. Others cover diagnostic CT as a follow-up to suspicious findings on another exam. For those without coverage, our self-pay fees are designed to make screenings accessible to those who need them.

Case Study: Lung Screening CT

HISTORY:
Asymptomatic male with 45 pack year history of smoking, quit 14 years ago, presents for ultra-low dose lung cancer screening chest CT.

CHEST CT FINDINGS:
3.2 x 2.4 x 2.5 cm speculated mass in the right upper lobe without thoracic adenopathy.

WORKUP BASED ON NCCN (NATIONAL COMPREHENSIVE CANCER NETWORK):

1. PET-CT was obtained, demonstrating this to represent a markedly hypermetabolic mass, most worrisome for primary lung cancer.

2. CT-guided biopsy of the mass revealed non small cell lung cancer.

TREATMENT
Just over two months after his initial screening chest CT, the patient underwent curative minimally invasive right upper lobectomy and mediastinal lymph node dissection. He awaits his initial post-operative restaging chest CT.
For Knee, Ankle, Foot, Hand, Wrist and Elbow Exams, Extremity MRI Offers an Extremely Comfortable Experience

At Larchmont Medical Imaging, our high-field Extremity MRI unit provides the best of both worlds for exams of upper or lower extremities: the uncompromising diagnostic quality physicians need, with a convenient, comfortable, low-stress exam for the patient.

Don’t let the size of the Extremity MRI unit fool you. These full-powered devices operate at 1.5 Tesla for image quality comparable to what closed high-field magnets produce.

“The Extremity MRI is an outstanding solution for assessing the knee, ankle, foot, hand, wrist, or elbow,” said Andrew Zeiberg, M.D., D.A.B.R. “It’s a fast, simple exam. The patient just sits in a chair and introduces the affected extremity into the magnet. Claustrophobia is not an issue at all. Patient comfort is much better when there’s no need to deal with being inside a large closed magnet when only an extremity is being examined.”

For wrist imaging, Extremity MRI also presents specific diagnostic benefits by eliminating the issue of the wrist being off center in a large bore unit.

“Getting high quality images of the wrist in a closed magnet scanner can be challenging,” Dr. Zeiberg said. “But Extremity MRI is also optimal for any patient who has an issue in one of the extremities and would prefer not to enter a full-body closed scanner. We’re pleased to be able to offer our community this level of quality and comfort for joint and extremity imaging.”

EVLT Provides Relief from the Discomfort of Varicose Veins

It is well known in the medical community that the effects of varicose veins are more than skin deep, and that the motivations for wanting relief from the resulting physical and emotional discomfort are much more than “cosmetic.” Fortunately, endovenous laser therapy (EVLT) is a highly effective option that can relieve both the obvious physical symptoms and the emotional effects.

A widely accepted, outpatient alternative to surgery for the treatment of symptomatic varicose veins, EVLT is an outpatient procedure that takes about 45-60 minutes to complete. Under image guidance, a radiologist applies heat to the affected veins using a laser probe. The result is eventual reabsorption of the treated vein tissue, with elimination of symptoms and, in most cases, no residual scarring.

Most normal activities can be resumed immediately. Over-the-counter anti-inflammatory medications should easily relieve any discomfort experienced after the procedure.

EVLT is covered by virtually all insurance plans if the patient is experiencing multiple symptoms, such as visible varicose veins, pain, or difficulty walking or standing for prolonged periods.

Why Choose Larchmont for EVLT?

- To confirm diagnosis and ensure that the patient is a good candidate for EVLT, we perform a preliminary ultrasound exam.
- Vein procedures are performed by an expert interventional radiologist.
- Our thorough follow-up care includes progress monitoring at one week, one month, and six months.
- We provide an exceptional patient experience at convenient facilities.

To discuss a patient case, please contact Omar Lalani, M.D., D.A.B.R. at (609) 914.7017.