

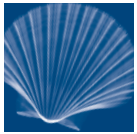
TheInsideView

NEWS *from* SOUTHTOWNS RADIOLOGY

FALL 2011

Greetings from Southtowns Radiology.

In this issue, we will discuss thyroid ultrasound and guided biopsy, the role fasting plays in preparing for an abdominal sonogram, options for treating varicose veins, as well as an overview of breast MRI. We would also like to introduce you to two new doctors who have joined our practice. To receive this newsletter electronically, please email Emilie Beecher at eebecher@southtownsradiology.com.



Southtowns
Radiology

Our experience matters. And so does yours.

ORCHARD PARK

3050 Orchard Park Rd
West Seneca, NY 14224
716 558 5400

WEST SENECA

550 Orchard Park Rd
West Seneca, NY 14224
716 558 5140

HAMBURG

3040 Amsdell Rd
Hamburg, NY 14075
716 649 9000

southtownsradiology.com

The Inside View

NEWS from SOUTHTOWNS RADIOLOGY

FALL 2011

ULTRASOUND TECHNOLOGY

Thyroid ultrasound and guided biopsy: How it works, how it helps.

Paul F. Pizzella, M.D.



Thyroid ultrasound is a widely used technique that helps to evaluate thyroid nodules and guide in the biopsy of suspicious nodules. The lack of radiation, superficial gland position and improved technology has made thyroid ultrasound a common risk-free procedure. The increased use of thyroid sonography has aided in the discovery of many nodules.

Thyroid nodules come in all sizes and shapes with the vast majority benign. The challenge that exists is the identification of the potentially malignant nodules. Adding to the confusion are the multiple and at times contradictory guidelines.

Recent literature has shown that there are four suspicious gray scale characteristics that are directly correlated with malignancy. These are solid nodules with marked hypoechogenicity, noncircumscribed margin, microcalcifications and have a taller-



than-wide shape. Nodules with one or more of these characteristics should be considered for ultrasound-guided biopsy.

Doppler ultrasound can add to nodule description but, vascularity itself or in combination with gray scale features is not as useful as the suspicious gray scale features alone for predicting malignancy.

The use of ultrasound-guided biopsy is a safe and simple way to adequately sample suspicious nodules with little to no patient discomfort. The added benefit of a second look before sampling ensures proper nodule selection and biopsy.

Our registered ultrasound technologists are well trained and competent in performing thyroid ultrasound. Our American College of Radiology (ACR) certified equipment includes high frequency and small parts transducers that ensures the highest quality exam. Southtowns Radiology's board certified physicians are experienced with interpreting thyroid ultrasound and in the performance of ultrasound-guided biopsy.

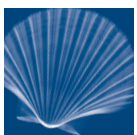
Fasting isn't fun, but there's a reason for it.

Why do patients have to fast for abdominal sonograms?

Patients scheduled for abdominal sonograms are instructed to have nothing to eat or drink for eight hours prior to their exam and are offered early morning appointments. Necessary medications may be taken with a sip of water.

Fasting ensures the gallbladder will be distended and also minimizes intestinal gas, which interferes with imaging abdominal organs. After eating, the gallbladder contracts, making it difficult to visualize small stones and wall thickening may be indistinguishable from cholecystitis.

So, for best results, patients should fast before abdominal sonograms. Emergencies do occur and we can attempt the scan if the patient has eaten, but if results are equivocal the scan may have to be repeated.



**Southtowns
Radiology**

Our experience matters. And so does yours.

ORCHARD PARK

3050 Orchard Park Rd
West Seneca, NY 14224
716 558 5400

WEST SENECA

550 Orchard Park Rd
West Seneca, NY 14224
716 558 5140

HAMBURG

3040 Amsdell Rd
Hamburg, NY 14075
716 649 9000

southtownsradiology.com

VASCULAR & INTERVENTIONAL RADIOLOGY

**Vein problems are common.
But they're also treatable.**

Joseph G. Rusnak, M.D.



Varicose vein disease is a health issue which affects 20-25% of women and 10-15% of men. The problematic veins range in size from small, unsightly spider veins to those well over one centimeter in size.

The underlying problem is the loss of competency of the valves within the veins. If the valves are not functioning properly, blood pools in the veins rather than returning to the heart. Over time, the veins distend because of the chronic pressure, resulting in varicosities.

A genetic predisposition is the most common cause of varicose veins. Pregnancy is also a contributing factor. Less common causes include obesity and trauma.

Some patients don't have any symptoms. Others may experience painful effects, such as swelling, itching, or an overall tired and heavy feeling in the leg. There can be a discoloration of the skin, especially adjacent to the medial ankle. Skin ulcers may develop when long-term varicose vein disease occurs.

Elevation of the leg, weight loss and exercise can help relieve the symptoms. Prolonged standing may make the symptoms worse. Compression stockings can provide some relief by preventing the varicosities from distending because of too much blood.

Medical intervention is often recommended for the treatment of varicose veins. This starts with a thorough physical exam of the leg and an ultrasound of the affected veins. The ultrasound is a critical component as it provides an image of the greater saphenous and lesser saphenous veins, which are deep within the leg muscle. The radiologist evaluates the health of these veins and the connecting veins between them.

Treatment options include sclerotherapy, laser ablation or radio frequency ablation. Sclerotherapy is an injection of medication into a vein, causing the vein to scar down and disappear. It is typically used on smaller veins like spider veins. Ablations are used for treatment of varicose veins caused by problems with one of the saphenous veins. They are performed under local anesthetic and a small puncture is made into the vein. Real time ultrasound is used for guidance.

Energy is converted to heat, which injures the vein wall causing it to collapse. The body sends cells to fix the injury and in the process gets rid of the vein. The patient does not feel the heat. There may be some short-term bruising or discomfort after the procedure.

Mild pain is alleviated by over-the-counter analgesics. The patient is instructed to wear compression stockings for two weeks after

the ablation. Normal activity and work can resume immediately. Vigorous exercise should be delayed for one week.

Southtowns Radiology has been treating varicose vein disease for six years, bringing relief to thousands of patients. A referral from a primary care physician will start the process for treatment of this unsightly and often painful disease.

BREAST CANCER SCREENING

Practical applications of breast MRI

Jennifer Kam Ray, M.D.



Breast MRI is a highly sensitive, but not very specific modality for the evaluation and treatment of breast disease. Historically, it was used exclusively in academic centers but has now become more readily available for routine clinical use. MRI has the ability to image in three dimensions and provides good physiologic and morphologic information. MRI provides unique information that helps women and their surgeons make better treatment decisions.

MRI should not be used to distinguish a benign from a malignant process or to preclude biopsy of a clinically suspicious lesion. In carefully selected cases, MRI may be helpful in clarifying equivocal or suspicious mammographic findings. Detailed mammographic evaluation and ultrasound must be performed first.

In high-risk patients, MRI has been shown to be a useful adjunctive screening tool. "High-risk" is defined by one of the following, according to most insurance carriers:

1. Confirmed presence of BRCA1 or BRCA2 mutation
2. First degree blood relative with BRCA1 or BRCA2 mutation and are untested
3. Have a lifetime risk of breast cancer of 20-25 percent or more using standard risk assessment models (BRCAPro, Claus model, Gail model, or Tyrer-Cuzick)
4. Carry or have a first-degree relative who carries a genetic mutation in the TP53 or PTEN genes (Li-Fraumeni syndrome and Cowden and Bannayan-Riley-Ruvalcaba syndromes)
5. Received radiation treatment to the chest between ages 10 and 30 years, such as for Hodgkin's disease

Nearly all patients who have biopsy proven breast carcinoma will benefit from a "planning MRI" prior to surgery. Feedback from surgeons suggests that an MRI prior to surgery helps reduce the number of positive or inadequate margins on difficult tumors such as ductal carcinoma in situ (DCIS) and lobular cancers. Lobular cancer is frequently multifocal and multicentric and often bilateral. The extent of disease can be accurately assessed in most cases, and surgical planning can be optimized for the patient.

MRI can be useful in detecting occult cancers. About 0.3% of patients present with malignant axillary lymph nodes but have normal mammograms and physical examinations. In the past, the standard treatment of these patients has been mastectomy. MRI often detects multifocal, multicentric, or bilateral cancers.

The exam itself takes approximately 45 minutes. The patient is in a prone position in a dedicated breast coil and is required to receive intravenous gadolinium. If claustrophobia is an issue, sedation is available.

MRI can also be used to evaluate the integrity of breast implants. For this examination, contrast is unnecessary. Suspected intra and extracapsular implant rupture are approved indications for breast MRI.

LATEST NEWS

Southtowns Radiology Expands with Two New Radiologists

This summer Southtowns Radiology announced the addition of two new doctors to its diagnostic imaging, multi-specialty practice: Drs. Aaron M. Powell, M.D. and Travis A. Mastroianni, D.O., both board certified in Radiology.

“Southtowns Radiology has always made the patient experience a priority when treating families across Western New York. We are excited to add Dr. Powell and Dr. Mastroianni to our talented team of physicians, who not only share our commitment to providing compassionate and superior care, but bring a diverse skill set to our practice.”



— Dr. Mary Turkiewicz,
President of Southtowns Radiology

Aaron M. Powell, M.D. is a graduate of the State University of New York Upstate College of Medicine in Syracuse, N.Y. His post-graduate training included a residency at the Penn State Hershey Medical Center in Hershey, P.A., where he served on the Grassroots committee of the American College of Radiology. Prior to attending medical school, Dr. Powell, an Amherst, N.Y., native, received his bachelor's degree in biochemistry, cum laude, at the State University of New York at Buffalo.

Travis A. Mastroianni, D.O. is a graduate of the University of New England College of Osteopathic Medicine, Psi Sigma Alpha. The Youngstown, N.Y., native completed his internship and radiology residency at Botsford Hospital, an affiliate of the Statewide Campus System of Michigan State University's College of Osteopathic Medicine, where he served as chief resident. His postdoctoral training includes a Cross-Sectional Imaging Fellowship at Dartmouth Hitchcock Medical Center. Prior to attending medical school, he received his Bachelor's of Science in Interdisciplinary Engineering and Management from Clarkson University.

Talk of the Towns

- In June, Dr. Gerald Joyce earned his certificate of advanced proficiency in cardiac computed tomography. This honor is awarded to select physicians who meet the requisite qualifications to interpret cardiac CT images.
- Southtowns Radiology is committed to promoting the early detection of breast cancer among Western New York women.

Our recent outreach initiatives include:

- Partnered with Cancer Services Program (CSP) to offer free mammograms and clinical breast exams to uninsured women for the second consecutive year.
- Dr. Claudia Fosket was featured on Channel 2's *The Healthy Zone*. She discussed the importance of annual mammograms and guidelines for women.
- Our Mammograms & Manicures Party was profiled on Channel 7's *AM Buffalo*; the popular offering features a screening mammogram followed by a manicure at Blu Spa & Salon.

Our Wealth of Services

High Field & Open MRI | Multi-Slice & 64-Slice CT Scanning | Digital Mammography | 3D & 4D Ultrasound | Bone Densitometry | Breast Biopsy
Minimally Invasive Special Procedures | PET/CT Scanning | Routine X-Ray & Fluoroscopy | Treatment of Varicose Veins | Women's Services