

## Identifying Hidden Breast Cancer MRI-Guided Biopsy Proving to be Faster, More Accurate and Less Painful

Of the 1.2 million breast biopsies performed each year, only 25 percent prove positive for cancer. This has led providers, patients and payors alike to invest in more effective and less invasive ways to verify malignancy. Over the past 20 years, with the participation of radiologists working directly in the field, the science and technology of breast biopsy has evolved to address these needs.

To that end, doctors at Inland Imaging are now using a new biopsy tool in combination with magnetic resonance imaging (MRI) to more accurately detect and diagnose breast cancer. This combination of leading-edge technologies allows doctors to more accurately target suspicious areas and obtain better samples. Doctors suspect this biopsy capability should lead to better treatment, fewer unnecessary mastectomies and a better early detection method for women who are at high risk.

**“MRI-guided breast biopsy really complements the full range of breast imaging services that we offer here at Inland Imaging. With MRI-guided biopsy technology, we are now capable of biopsying lesions that we could not see with mammography or ultrasound,” says Dr. Florence Gin, Inland’s Director of Breast Imaging.**

Inland Imaging is utilizing a vacuum-assisted breast biopsy system, guided by MRI technology, to find occult breast cancers.

“Breast MRI has been a part of our breast imaging armamentarium for some time. It was very important for us to add MR-guided biopsy and localizations to our current capabilities since we must have a method



to evaluate lesions which are seen only by MR,” says Dr. Gin.

Until recently, because of the powerful magnets used in MRI, doctors could only use small, nonferromagnetic needles made from titanium. These biopsies were particularly challenging because the procedure had to be completed before the contrast used to highlight abnormal tissue during an MRI dissipated. In addition, prior to the computer software sophistication available today, physicians had to target lesions manually after viewing them on MRI. This made for a kind of ‘hit or miss’ process.

MRI-guided breast biopsy allows doctors at Inland Imaging to offer patients additional breast imaging technology with a biopsy method that is fast, accurate and less painful compared to other methods.

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Benefits of MRI-Guided Biopsy

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### Digital Mammography Earns ACR Accreditation

Inland Imaging Awarded for High Practice Standards

### Annual Referring Provider Survey Results

96.5%, Overall Satisfaction Rating

20

number of MRI machines from which Inland Imaging physicians interpret studies

1.2 million  
annual number of breast biopsies performed nationally

## Profiles

### Christopher Zylak, MD *Neurointerventional, Angiointerventional*

Dr. Christopher Zylak is a board-certified physician who has been with Inland Imaging since July 2002. He recently completed a neurointerventional fellowship at Oregon Health and Sciences University focusing on cerebral aneurysms, cervical and cranial stenting, and acute stroke care. This makes him the only certified neurointerventionalist in Spokane. Previously, he completed a fellowship in interventional radiology at the Miami Cardiac and Vascular Institute and his residency in diagnostic radiology at the University of Arizona.



**College:** Queen's University at Kingston  
**Medical School:** Queen's University at Kingston Medical School, Ontario, Canada  
**Residency:** University of Arizona  
**Fellowship:** Interventional Radiology, Miami Cardiac and Vascular Institute; Neurointerventional Radiology, Oregon Health and Sciences University  
**Email:** czylak@inland-imaging.com

### Justin Smith, MD, RAC *Diagnostic Radiology Nuclear Medicine*

Dr. Justin Smith recently joined Inland Imaging, bringing 16 years of imaging experience. One of Inland's Seattle-based radiologists, he is a graduate of the University of Washington School of Medicine and is board-certified in both diagnostic radiology and nuclear medicine. Dr. Smith specializes in integrated oncology imaging, including PET/CT and breast MRI. He invented MRI technology covered by two U.S. patents and founded Confirma, a medical device company that has created computer-assisted detection systems for breast MR, and CADstream.



**College:** University of Washington  
**Medical School:** University of Washington School of Medicine  
**Residency:** University of Washington School of Medicine  
**Email:** jpsmith@inland-imaging.com

### John Uglietta, MD *Neuroradiologist Vascular/Interventional*

Inland Imaging recently welcomed Dr. John Uglietta to our team. He is fellowship-trained in neuroradiology with additional qualifications in vascular/interventional radiology. Dr. Uglietta has more than 14 years of experience working in the field of radiology. He earned his medical degree from Georgetown University in Washington, DC and performed a residency in pathology before completing his residency in diagnostic radiology at Duke University Medical Center in Durham, North Carolina.



**College:** Brandeis University, Waltham, MA  
**Medical School:** Georgetown University, Washington, DC  
**Residency:** Duke University Medical Center, Durham, North Carolina  
**Fellowship:** Neuroradiology, Duke University Medical Center, Durham, North Carolina  
**Email:** juglietta@inland-imaging.com

## Digital Mammography Earns ACR Accreditation

### American College of Radiology Awards Inland Imaging for High Practice Standards

Inland Imaging has been awarded a three-year term of accreditation in digital mammography as the result of a recent survey by the American College of Radiology (ACR). The ACR has granted accreditation to all six of Inland Imaging's digital mammography machines located at Sacred Heart Imaging Center, Holy Family Imaging Center and Inland Imaging's Valley location.

The ACR awards accreditation to facilities for the achievement of high practice standards after a peer-review evaluation of the practice. Evaluations are conducted by board-certified physicians and medical physicists who are experts in the field. They assess the qualifications of personnel and the adequacy of facility equipment.

ACR accredited technology, partnered with Inland's team of dedicated breast imaging specialists, ensures Inland Imaging patients

receive the most accurate diagnosis to meet their individual needs.

Inland Imaging became the first facility in Spokane to offer digital mammography in September 2005 as part of a continued commitment to offering the latest in breast imaging technology. The benefits of digital mammography at Inland Imaging include expanded options in evaluation of the breast, shortened exam times and decreased x-ray exposure.

# Magnetic Resonance Angiography Challenges Catheter-Based Approach in Diagnoses

## New Tool Used in Evaluation and Surgical Planning of Peripheral Vascular Disease

The recent development and refinement of magnetic resonance angiography (MRA) has challenged catheter-based approaches in the treatment of peripheral vascular disease. In some cases, MRA has replaced it in the evaluation and surgical planning of patients suffering from symptomatic disease.

Inland Imaging is now offering the advanced technology of peripheral MRA to better provide our referring physicians and patients with access to the highest quality services.

Peripheral arterial occlusive disease is a local progression of the systemic atherosclerotic process. Patients present with a wide range of symptoms depending on the severity of disease and the degree of peripheral ischemia. Treatment options vary according to the underlying arterial anatomy.

Preoperative planning is required before intervention regardless of the type of revascularization. For the past three decades, catheter angiography has served this purpose.

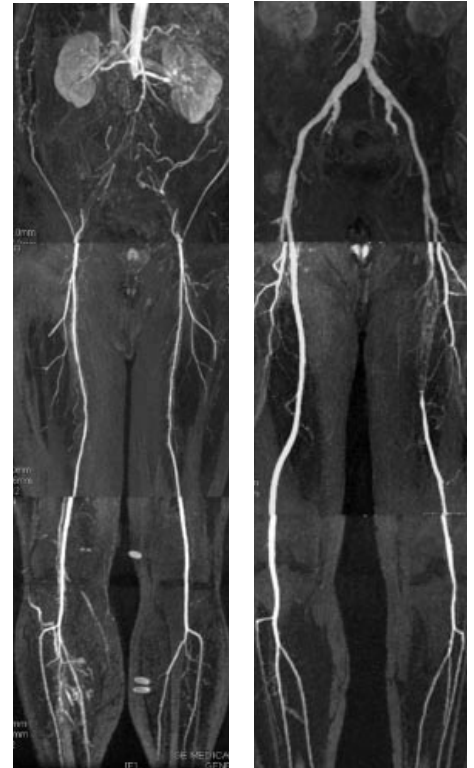
The first reports of imaging peripheral vessels with MRA began to appear in the late 1980s and early 1990s. These studies showed

that peripheral MRA was remarkably accurate at depicting peripheral vascular disease compared with catheter angiography.

Additionally, recent results comparing contrast-enhanced MRA and duplex ultrasound provide evidence that contrast-enhanced MRA is more sensitive and specific for diagnosis and preinterventional work-up of peripheral vascular disease.

MRA has also proved useful in a variety of other diseases, including the examination of diseased intracranial arteries to screen for patients that will need to undergo a more invasive catheter study. MRA excels in screening patients with a family history of arterial aneurysm to define an inherited asymptomatic disorder. MRA is also used to detect disease in the aorta and in blood vessels supplying the kidneys and lungs.

The staff and physicians at Inland Imaging are happy to answer your questions regarding peripheral MRA. Please contact Dr. Christopher Zylak, [czylak@inland-imaging.com](mailto:czylak@inland-imaging.com), for more information.



**Image left:** MRA shows images of aortoiliac occlusion with tremendous accuracy.

**Image right:** MRA is able to precisely diagnose superficial femoral artery occlusion.

## Identifying Hidden Breast Cancer

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When utilizing this advanced technology, Inland doctors first use MRI to pinpoint the exact location of the tumor or lesion in the breast. Then, while the patient lies prone on the MRI table, they insert the vacuum-assisted probe into the breast to obtain the sample.

"This procedure uses an 11-gauge vacuum-assisted biopsy system which yields a specimen sample that is sufficient to give an adequate diagnosis," says Dr. Gin.

With only one insertion of the probe, core samples are taken in a 360-degree pattern. The single probe insertion also allows for the

tissue acquisition to happen quickly, in about 30 seconds.

Dr. Gin says this new technology is especially effective in situations when breast MRI is the only modality to detect an early cancer, specifically in women with dense breast tissue.

This new biopsy method comes to Inland Imaging in conjunction with unveiling another new breast imaging technology, digital mammography. Inland Imaging performs more mammograms and related breast procedures annually than any other imaging provider in Spokane.



MRI-guided breast biopsy offers patients precise breast imaging technology with an immediate and complete biopsy method that is fast, accurate and less painful.

If you any have questions about MRI-guided breast biopsy or Inland Imaging's comprehensive breast services, **please contact Dr. Gin directly at [gfin@inland-imaging.com](mailto:gfin@inland-imaging.com).**

# Annual Referring Provider Survey Results

## Overall Satisfaction of our Referring Providers: 96.5%

Thank you for your participation in our annual referring provider survey. Your feedback provides valuable information to us as we continue our performance improvement efforts in the delivery of quality imaging services to you and your patients. In May 2005, we sent out over 1,450 surveys to referring providers and received 357 back for a 25% response rate.

### Performance and Summary Detail

QUESTION:	PERFORMANCE:		
	2005	2004	2003
Q1: Reports contain useful and accurate information	82%	86%	85%
Q2: Radiologists are available for consultation	81%	81%	81%
Q3: Radiologists are responsive and cooperative	84%	84%	NA
Q4: I have my reports when I need them	74%	76%	74%
Q5: Ease of scheduling patients	75%	74%	80%
Q6: Appointment times are available when and where my patients want	70%	70%	71%
Q7: Access to Stentor online images and reports improved patient care in my practice	79%	81%	83%
Q8: Inland Imaging staff are helpful and courteous	85%	84%	86%
Q9: Response to your complaints	79%	78%	NA

### OVERALL SATISFACTION

**Pie Graph:** Percent that answered *very satisfied* or *satisfied*.

96.5%      94.6%      95.4%

### Summary Results

All questions are rated on their importance as well as the performance.

Our key strengths and priority target areas for improvement are listed below.

**The areas that were high importance and high performance were:**

- Radiologists are responsive and cooperative
- Inland Imaging staff are helpful and courteous

**The areas that were high importance yet scored below the performance standard (83.5%) were:**

- Radiologists are available for consultation
- Reports contain useful and accurate information

