

### About Piedmont Radiology

Mission statement: To provide compassionate and quality healthcare and promote a balanced perspective on life.

Core values: Innovation, teamwork, compassion, quality healthcare, and lifestyle balance.

Piedmont Radiology: The Imaging and Intervention Leaders

Founded in 1969 as Radiology Associates of Atlanta (RAA), Piedmont Radiology was established to be the exclusive provider of radiology services at Atlanta's Piedmont Hospital, a relationship that continues to thrive nearly half a century later. From its inception, Piedmont Radiology's growth has been driven by anticipation and response to patient needs and a commitment to excellence. Piedmont patients have always expected and received the best of care. Piedmont physicians in all specialties have continuously stayed abreast of the latest medical developments in response to a highly educated patient base with high expectations, and the physicians of Piedmont Radiology are no exception.

With patient privacy rights protected, today's precise digital image results are immediately available to referring physicians. Quality indicators for all procedures include patient safety, with an emphasis on reducing radiation exposure for all procedures. Piedmont Radiology is among the leaders in the field of radiology research, with numerous ongoing clinical trials, keeping us on the cutting edge of imaging and interventional technology.

Our highly trained radiologists are all board-certified, with additional subspecialty board-certifications where available, such as in neuroradiology, interventional radiology, and cardiac CT. Most have received subspecialty fellowship training and one has attained certification in cardiac imaging at its highest level, Instructor. Several have served as attending physicians on staff at prestigious university centers such as Harvard, Emory, Johns Hopkins, and Indiana Universities. We have representatives on editorial boards of the most respected radiology research journals and radiologists who have been recognized by their national and international peers, having been granted fellowship status by the American College of Radiology and the Society of Interventional Radiology, which is quite rare in a community-hospital radiology practice. All provide expert services across the full spectrum of radiology, ensuring that patients are served by radiologists dedicated to – and specially trained in – the specific type of imaging requested by their physicians.

The revolutionary changes that have occurred since the discovery of the x-ray in 1895 have continued to this day. Founded on the belief that physician-to-physician consultation drives the growth of radiology services and optimizes patient care, Piedmont Radiology remains committed to remaining in the forefront of technology as we work alongside our internal medicine and surgical colleagues to diagnose and treat patients with compassion while remaining in the forefront of radiologic advances.

Today, Piedmont Radiology is proud to provide imaging and interventional expertise to patients at Piedmont Hospital, Piedmont Fayette Hospital, The Outpatient Diagnostic Center, The Doris Shaheen Breast Health Center, and the Piedmont West Outpatient Center. We also serve as a tertiary-care referral site for Piedmont Mountaintop Piedmont Newnan Hospitals.

Please read more about our remarkable history...

### The Early Days

The founding members of RAA were James Milsap, M.D., Henry Johnson, M.D., Eyvin Rasmussen, M.D., and Walter Sale, M.D. Frank Underwood, M.D., Steve Wilks, M.D., and Robert Halper, M.D. were added a short time later. In the 1960's and 1970's, X-ray films at Piedmont Hospital were state-of-the-art. As consultants, the physicians of Piedmont Radiology became integrally involved with physicians of virtually all medical and surgical specialties as, together, they consulted one another to create the best possible care plan for their patients. That close connection between the Piedmont physicians and Piedmont radiologists spawned the ever-growing subspecialization of radiology services over the years, as radiologists responded to the higher and higher levels of service required to be the best of the best.

Since its inception, in concert with Piedmont Hospital, the expertise of Piedmont Radiology has driven the explosion of imaging services and technology on our hospital campus. From the late 1970's to the millenium, real-time ultrasound, computed tomography (CT), magnetic resonance imaging (MRI), positron emission tomography (PET), digital mammography, and digital subtraction angiography (DSA) were added to the burgeoning diagnostic-imaging armamentarium at Piedmont.

### Facility Expansion

In 1987, Piedmont Hospital's physical footprint began to grow as the Katherine Murphy Riley Piedmont Outpatient Diagnostic Center was formally named and opened to address the growing demand for outpatient diagnostic imaging. In 1997, Piedmont Hospital opened a brand-new hospital in one of the fastest-growing communities in the nation, Fayette County. This led to the creation of Piedmont Healthcare, the corporate entity serving both Piedmont and Piedmont Fayette Hospitals. Since Piedmont Fayette Hospital (PFH) opened its doors with 120 inpatient beds, Dr. John McNair has served as the anchor radiologist for Piedmont Radiology, which serves the hospital with 24/7/365 coverage. While all Piedmont Radiology's physicians work at PFH and cover it on call, Drs. Chris Caldwell, Deborah Coursey-Prah, Scott Faith, and David Bodne have lived and worked in Fayette County and facilitated the rapid expansion of both outpatient and inpatient imaging and interventional services at PFH as the hospital has grown its inpatient capacity to 200 beds and its busy Emergency Department's annual volumes have exceeded that of parent Piedmont Hospital's Emergency Department. In 2003, Piedmont Healthcare purchased Mountaintop Hospital in Jasper, Georgia and Newnan Hospital in Newnan, Georgia to improve access to worldclass healthcare in these growing metro Atlanta counties. Most recently in 2009, the Piedmont West outpatient center was developed and opened, providing comprehensive state-of-the-art diagnostic imaging services in an easily-accessible location.

### The Digital World

Radiology consisted of images created on silver-based film, and the original image was only viewable in the Radiology Department, not in the doctors' offices or in the hospital patients' rooms where care was provided. With Piedmont's picture-archiving communications system (PACS) in 2005 and the replacement of film with electronic images, virtually all imaging and Piedmont Radiology's interpretations from all of Piedmont Radiology's sites are available to all Piedmont Hospital- and Piedmont Fayette Hospital-affiliated physicians, on nearly every desktop computer on the inpatient hospital floors as well as in their offices. This allows the Piedmont Radiology physician, the referring physician, and the patient to simultaneously view these images, enhancing both the physician-to-physician virtual consultation and patient access to their images while under the care of their physician. It also enhances consultative opportunities among Piedmont Radiology physicians, who may be working at sites many miles apart, to ensure that the best interpretation and care is rendered. Piedmont plans to open another outpatient diagnostic-imaging site in Marietta, Georgia in late 2010 to serve our patients in Cobb County. As Piedmont Healthcare sites have expanded in location and scope, Radiology Associates of Atlanta, P.C. began using the name Piedmont Radiology to better identify who we are and the hospitals that we serve.

### Focus on Breast Imaging

Piedmont Hospital's commitment to women's services and the early detection of breast cancer were firmly established with the opening of the Piedmont Breast Health Center in 1995. This was followed by the expansion and development of the comprehensive diagnostic and interventional breast services now offered in the Doris Shaheen Breast Center, founded in 2003. Directed by Jeff Allen, M.D. and with the addition of Drs. Purna Sharma and Handel Reynolds, the physicians of Piedmont Radiology have continuously provided university-caliber breast-imaging and intervention expertise. The Breast Center now boasts all-digital mammography, dedicated breast ultrasound, stereotactic breast biopsy, and dedicated breast MRI, the last scheduled for opening in late 2010. The Breast Center maintains the rigorous standards required for accreditation by the American College of Radiology (ACR) for the high level of care expected by the metro Atlanta community and was the first center in Georgia to become ACR-certified in all breast imaging and intervention modalities (mammography, ultrasound, MRI, and stereotactic biopsy).

### Ultrasound and CT Image Advances

The development of real-time ultrasound and CT imaging in the late 1970's increased physicians' ability to more definitively diagnose many conditions, dramatically complementing the physical exam and leading to more timely treatment decisions. This was particularly true for abdominal imaging, reducing the need for exploratory surgery with its attendant risks, morbidity, and mortality. Ultrasound imaging today provides rapid, customized imaging of a plethora of superficial and deep organs without ionizing radiation. The speed and resolution of MR imaging began to improve in the 1990's and continues to this day. This allows imaging of infection, cancer, blood flow, brain and nerves, and musculoskeletal tissues and joints better than any other imaging modality, also without ionizing radiation. Under the direction of Drs. Judith Chezmar, Gonzalo Fernandez, Gillian Sherbourne, Georgia Thompson, and Johnson Liou, the advent of Doppler ultrasound, multidetector (spiral) CT, single-breath-hold MRI, and manipulation of a variety of contrast agents between the late 1990's and the present have become essential to the diagnosis and treatment direction for a host of diseases. This is particularly true for malignancies of the abdomen and pelvis, especially the liver (see Transplantation section below).

### The Emergence of Nuclear Medicine

The 1980's and 1990's also witnessed the emergence of new radiopharmaceuticals and biomedical computer engineering, which transformed nuclear medicine into the imaging science it is today, particularly in the care of heart disease and malignancies. Pioneers of nuclear cardiology, including Eric McClees, M.D., have fostered the growth of offerings to our Piedmont patients. Over the past decade, the merging of CT and PET imaging, under the guidance of Sabah Tumeh, M.D., has become an essential component of the care of patients with a wide variety of cancers, facilitating and directing oncologic physicians to offer the very best oncologic treatments available in a time-efficient fashion.

### Neuroradiology Innovations

The 1990's brought vast improvements in neuroimaging, particularly MRI. Coincidentally, Louis Jacobs, M.D., already a Piedmont fellowship-trained

neuroradiologist, obtained additional year-long fellowship training in neurointerventional radiology at the University of Tennessee-Memphis. Subsequently, a new set of minimally-invasive catheter-directed treatments for a variety of brain and spine conditions was born at Piedmont. Since 1994, in concert with Piedmont neurologists and neurosurgeons, Dr. Jacobs has provided emergent treatments for Piedmont patients suffering strokes, brain aneurysms, blockages in the arteries serving the brain, and compression fractures of the spine. The 2000's brought further developments in both CT and MRI, allowing more definitive diagnosis and selection of patients who can benefit from neurointerventional treatments, including acute stroke, as well as vascular diseases of the brain and spine. Fellowship-trained in neuroradiology, Drs. Robert Halper, Stephen Wilks, and Eric McClees helped build Piedmont Radiology's neuroradiology service line to the point that two dedicated radiologists provide neuroradiology consultation and care daily at Piedmont Radiology sites. Drs. Johnson Liou and Doris Lee, also fellowship-trained in neuroradiology, have since joined Piedmont Radiology to continue this commitment to our patients.

#### Dr. Robert Halper Leads Angiography Development

Angiography is the practice of placing very small hollow tubes (catheters) into vessels in the body, advancing the catheters into vessels that we wish to evaluate, injecting iodinated contrast media (Xray dye) through the catheters into these vessels, and recording images of these vessels on film. The practice of modern angiography in the U.S. began in the mid-1960's and was developed by Robert Halper, M.D. at Piedmont at that time. Shortly thereafter, angiographers around the world began not only imaging these vessels but also providing catheter-directed therapies simultaneously. Dr. Halper performed the first balloon angioplasty at Piedmont in 1972.

#### Interventional Radiology Takes the Stage

Over the ensuing few decades, angiography physicians like Dr. Halper around the world began to envision and perform more and more therapeutic catheter-directed treatments, using angiographic imaging for guidance, angiography became progressively less directed toward diagnosis and more focused on treatments that improved patient outcomes with a less-invasive approach compared to open surgery. This field of practice then became known as vascular and interventional radiology and finally interventional radiology. Since that year, Piedmont radiologists have dramatically expanded the practice of providing catheter-directed therapies to patients with a wide variety of diseases and conditions, both benign and malignant. Functioning more as imaging-guided surgeons, Piedmont interventional radiologists opened an outpatient clinic to consult with patients before and after their procedures, becoming an integral member of the treatment team. Today, several hundred patients are seen annually in the clinic, improving both patient education and care. Piedmont interventional radiologists have been instrumental in developing many cutting-edge treatments over the years, being among the first in the nation to provide definitive care for such conditions as symptomatic uterine fibroids (uterine fibroid embolization), liver cancer (chemoembolization, radioembolization, radiofrequency ablation, irreversible electroporation), deep-vein thrombosis (catheter-directed thrombolysis, pharmaco-mechanical thrombectomy), and painful vertebral compression fractures (percutaneous vertebroplasty, percutaneous kyphoplasty), largely on an outpatient basis.

Piedmont Radiology's interventional radiology volumes and quality of procedures for the treatment of these conditions rival others nationally, including those at lauded academic centers. Patients are becoming progressively better informed about their choices and continue to seek out Piedmont interventional radiologists for opinions and treatments. Referring physicians are likewise progressively involving interventional radiologists in a growing number of patient treatment plans, often in a multidisciplinary fashion, further benefitting the care of Piedmont patients. This has served to continue the growth of interventional radiology at Piedmont Radiology, which now has one of the highest-volume and most comprehensive community-hospitalbased interventional radiology practices in the Southeastern United States. To this point, three fellowship-trained interventional radiologists provide these services daily at Piedmont Radiology sites. Drs. Aravind Arepally, Michael Bosley, Christopher Caldwell, Steven Citron, Scott Faith, and Louis Jacobs provide 24/7/365 interventional services to Piedmont and Piedmont Fayette Hospitals exclusively and provide tertiary subspecialized care and treatment to patients referred directly to them from Piedmont Mountainside and Piedmont Newnan Hospitals. They currently consult with and treat patients referred from non-affiliated hospitals throughout the Southeast United States. Consultations can be scheduled by contacting our office by email or telephone (see Contact Us).

#### Imaging Enhances Transplant Services

Organ transplantation at Piedmont Hospital began in September 1986 with transplant surgeons Drs. John Whelchel and David O'Brien. Since then, Piedmont has ranked among the top 5% nationally in the volume of kidney and pancreas transplant. Dr. Whelchel's vision and leadership then brought a liver transplantation program to Piedmont in 2005. Since then, Piedmont's volume and success rates in orthotopic liver transplantation rival those of internationally-recognized university centers. The transplant physicians and the physicians of Piedmont Radiology, including Drs. Judith Chezmar, Johnson Liou, and Steven Citron, have developed a close working relationship as Piedmont Radiology has expanded the imaging and interventional expertise necessary to provide ongoing care and management of the complex transplant patient.

#### Coronary Disease Detection

On the forefront of the latest treatments available, Piedmont Radiology offers the most advanced care options available for stroke therapy, non-surgical options for the treatment of uterine fibroids and many liver and kidney malignancies, and comprehensive imaging of the patient with cardiovascular disease, including coronary-calcium scoring, CT angiography (CTA) of the coronary and other arteries, and MR angiography (MRA). These imaging modalities range from the simple detection and quantification of plaque-containing calcium within the coronary arteries to gauge the risk of heart attack to the complex CTA and MRA evaluation of aneurysms and dissection of the cardiovascular system. Under the leadership of Drs. Judith Chezmar and Johnson Liou, Piedmont Radiology physicians consult with cardiovascular physicians to plan and evaluate a variety of conditions that best suit each patient so that the proper treatment plan is developed. Drs. Chezmar and Liou have both been certified as experts in the interpretation of coronary CTA by the Society of Cardiovascular Computed Tomography. If you or a loved one is concerned about their risk of heart attack, coronary-calcium scoring is available to you without a referral from your physician by calling 404-605-1810.

#### On the Orthopaedic Team

With the presence of Peachtree Orthopedic Clinic as well as Grady Clinkscales, M.D. and the emergence of the hand surgery subspecialty, orthopedics has always been a strong suit of Piedmont Hospital. Piedmont Radiology has consistently offered state-of-the-art imaging and image-guided intervention for the orthopedic patient, now consisting of plain-film digital radiography, high field-strength MRI, MR arthrography, and image-guided interventions, such as joint aspirations and therapeutic injections. Fellowship-trained in musculoskeletal imaging and intervention, Ashur Lawand, M.D. joined Piedmont Radiology in 2009, adding to the expertise of Drs. David Bodne, Keller Carlock, Scott Faith, Robert Halper, Johnson Liou, John McNair, and Jon Wagreich in the care of the orthopedic patient.

#### Next Steps

Piedmont Radiology remains committed to growing in expertise and services, anticipating the needs of its patients and referring physicians. Always on the forefront of the latest technology and treatment options, Piedmont Radiology will continue to provide compassionate and innovative care for generations to come.