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M.D. NEWS

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SMIL

A Tradition of Excellence

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By Eve Zaslow

Scottsdale Medical Imaging has been providing top-notch radiological services to Valley residents for over 27 years. SMIL, a wholly physician-owned practice, now numbers 10 locations and strives to provide the most advanced technologies, coupled with expert interpretation for all its patients. SMIL's 43 radiologists are broken up into eight different subspecialties that concentrate on body imaging, MRI, CT and ultrasound cardiovascular radiology, thoracic imaging, pediatric radiology, women's imaging, oncologic radiology, neuroradiology, interventional radiology, nuclear medicine including PET and PET/CT and musculoskeletal radiology.

SMIL is a patient-centric practice, with a staff of knowledgeable, thoughtful and passionate physicians who truly care about their patients and their work. This is evidenced by the fact that they are one of the few private practices in the country to have a separate research department that is dedicated to finding new and better ways to advance the field of radiology. These advances have brought about better pharmacological agents and technologies, which will allow the physicians at SMIL to continue to raise the bar with regard to radiological care.

PHOTO COURTESY OF SMIL

Lori Kunzelman, M.D.

The 43 radiologists at SMIL are broken into eight subspecialties, each of which is headed by a lead physician. The Breast Imaging department is lead by Lori Kunzelman, M.D., who is dedicated to making sure that every woman gets the best, and most appropriate, state-of-the-art breast imaging as possible.

Accurate diagnoses are made using a variety of technologies, such as ultrasound, MRI and diagnostic mammography. When deemed necessary and appropriate, interventional modalities may be used, such as pre-op needle localization, stereotactic ultrasound and magnetic resonance core biopsy. Today, technology is leading the way in providing answers, from diagnoses to treatment plans, from the simplest to the most complex of disorders. MR, CT, SPECT, PET and ultrasound are providing the roadmaps for Kunzelman and her team to follow when using guided, minimally invasive procedures, which results in improved care with greatly reduced complications.

INTERVENTIONAL RADIOLOGY

John M. Neil, M.D., lead interventional radiologist at SMIL, points out that all the interventional radiologists at SMIL are not only board certified, but they are also experienced in providing patients with minimally invasive procedures using the most up-to-date, guided imaging systems, which enhances outcomes. Typical patient concerns include the following:

DVT

Deep-vein thrombosis, caused by a blood clot, is a silent occurrence until it begins to cause pain and swelling, which eventually leads to greater problems. Typically, medications will not break up the clot sufficiently in order to ensure good health. An interventional radiologist will use guided imagery to bring the medicine via catheter to the exact site of the clot, thereby sparing the patient any serious health problems.

John M. Neil, M.D.

UTERINE FIBROIDS

A significant number of women over the age of 40 suffer from this debilitating condition. Fibroid embolization is used to directly target the tumor. Surgery is avoided, no hysterectomy is needed and recovery time is faster, all the while lessening risk and inconvenience.

OSTEOPOROSIS

For both women and men, osteoporosis is a condition fraught with fear and pain. Spinal fractures not only cause pain and restricted motion, but also curtail quality of life. Radiologists perform kyphoplasty or vertebroplasty in a minimally invasive outpatient procedure.

CANCER

Ablation and chemo-embolization are two procedures accomplished via guided imagery. Heat kills tumor cells, and interventional radiologists use heat and medications to target tumors in a minimally invasive manner to affect desired outcomes.

STROKE

The effects of stroke may be reversed when drug delivery is made via catheter to the exact site of concern. In some patients, technology permits the visualization and removal of carotid blockages. Great advancement in technology has made life-sparing procedures easier, and may return blood flow to affected areas quicker, in the hopes of a faster and more permanent reversal of symptoms.

VEIN ABLATION

Varicose veins are far from just a cosmetic issue; they can be a painful medical condition as well. Vein ablation is minimally invasive, targeted to each vein and returns the patient to their normal lifestyle the same day. A very low recurrence rate coupled with a high success rate makes this procedure a winner in the imaging technology arena.

NEURORADIOLOGY

Neuroradiologists focus on the head and neck, spine and brain. Their tools of choice are CR, CT, MR, myelograms, angiograms and PET scans. Imaging with perfusion, diffusion and spectroscopy is providing more information for the radiologist to use not only in diagnosing, but also in creating treatment plans for patients. Neuroradiologists treat patients with many different diagnoses, such as Alzheimer's, dementia and central nervous system infections. Mark D. Keiper,

Mark D. Keiper, M.D.

PHOTOS COURTESY OF SMIL

M.D., points out that all technologies used are cutting edge, yet the even more important aspect of care provided is expertise and experience in providing accurate interpretation.

CROSS-SECTIONAL BODY IMAGING

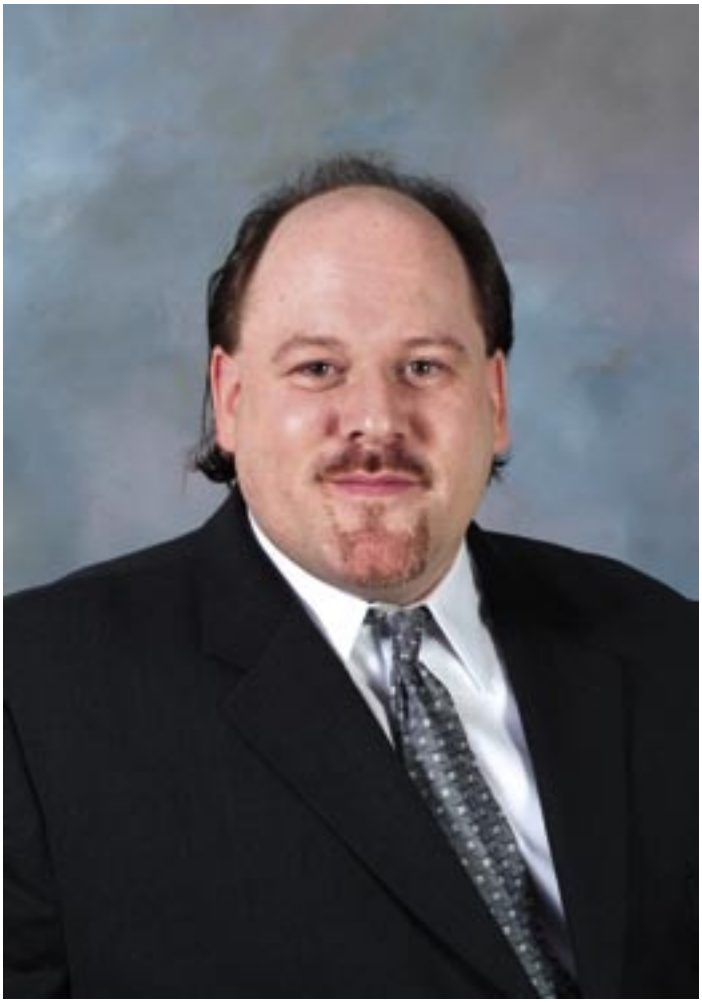
This type of imaging gives a very detailed view of all tissues. It is used to diagnose many cancers. The imaging permits not only the confirmation of tumors, but also allows for their precise measurement. Visualization of whether the tumor has migrated aids in treatment formulation. Injuries to small bones in the hands and feet can easily be detected, and the radiologist also has a very clear view of blood vessels and muscles in the immediate area. Many vascular diseases can be diagnosed in time to prevent stroke or kidney damage. Mark D. Kuo, M.D., points out that CT exams are also used as a venue to do biopsies, measure bone density, guide minimally invasive instrumentation and monitor radiation treatment.

PHOTOS COURTESY OF SMIL

Mark D. Kuo, M.D.

THORACIC IMAGING: CARDIOTHORACIC IMAGING

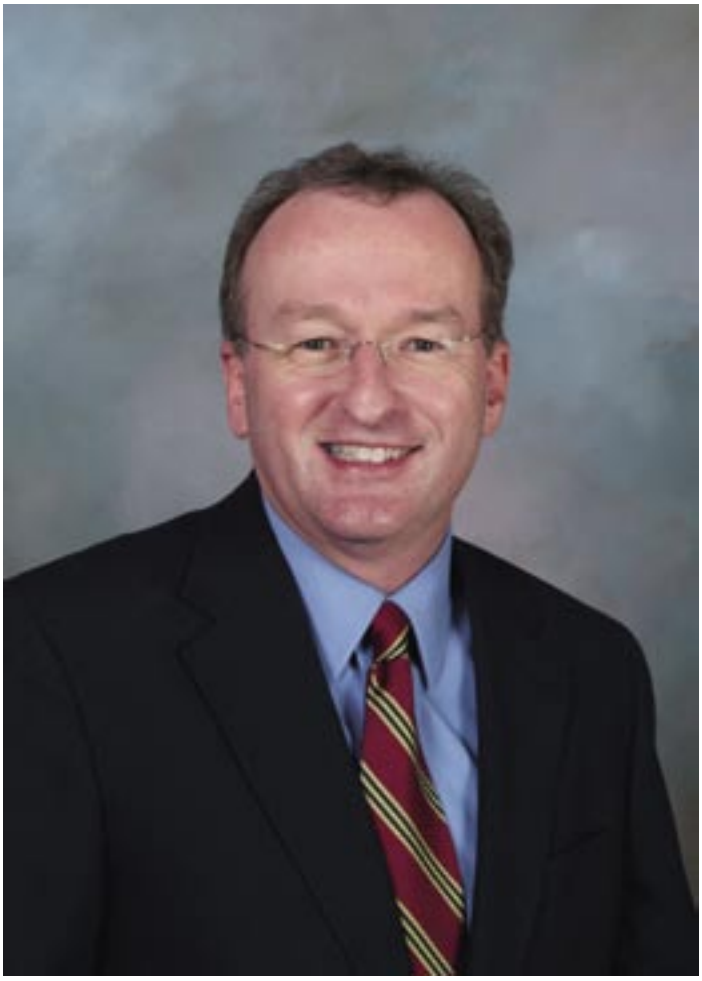
This subspecialty of radiology is devoted to imaging and interventional treatment for chest diseases. Thoracic radiology uses conventional X-ray, digitized radiography, computed tomography, US, MRI and nuclear medicine modalities to diagnose and treat patients. From the more common chest X-ray to the most advanced imaging technology, SMIL radiologists choose the right diagnostic tool for each patient. Disease processes that fall under the cardiothoracic heading range from aortic stenosis and pericardial effusion to valvular infection. All cardiac findings, such as enlarged heart and coronary stenosis, as well as lung imaging from cavitation to pleural effusion, are part of the day's work for SMIL thoracic radiologists, notes Michael B. Gotway, M.D.



Michael B. Gotway, M.D.

MUSCULOSKELETAL IMAGING/BODY MRI

SMIL radiologists work with sports injuries, arthritis, trauma and tumors. Raymond Murphy, M.D., and his team focus on the skeleton, ligaments, muscles and joints. Instrumentation used in diagnosis and treatments are X-rays, CT and MRI. MRI has an added advantage in that it clearly shows soft tissues like bone marrow, nerves and the vascular system, as well as muscle and cartilage. MRI is the technology of choice for many scans, but may be precluded if the patient has even a small fragment of metal in their body, such as a pacemaker or stent. MRI is very popular with patients since it is painless and there is



Raymond Murphy, M.D.

no radiation, while radiologists like MRIs because multiple tissue differentiation is possible. MRIs also produce multiple planes. If patients are claustrophobic, SMIL's open MRI provides an excellent option.

NUCLEAR MEDICINE

The subspecialty of nuclear medicine uses a blend of technology and a radiopharmaceutical agent to identify and diagnose infection, the presence of cancer, bone evaluations, measure thyroid function and scan the body for vascular problems. Functional information attained by this methodology is not attainable with other imaging protocols. "In many cases, a nuclear test is the only one that can give a clear diagnosis," says Ron Korn, M.D., SMIL's head of nuclear medicine.

CARDIAC NUCLEAR MEDICINE

Cardiac nuclear medicine is used in diagnosing angina, while myocardial perfusion scanning shows blood-flow patterns.

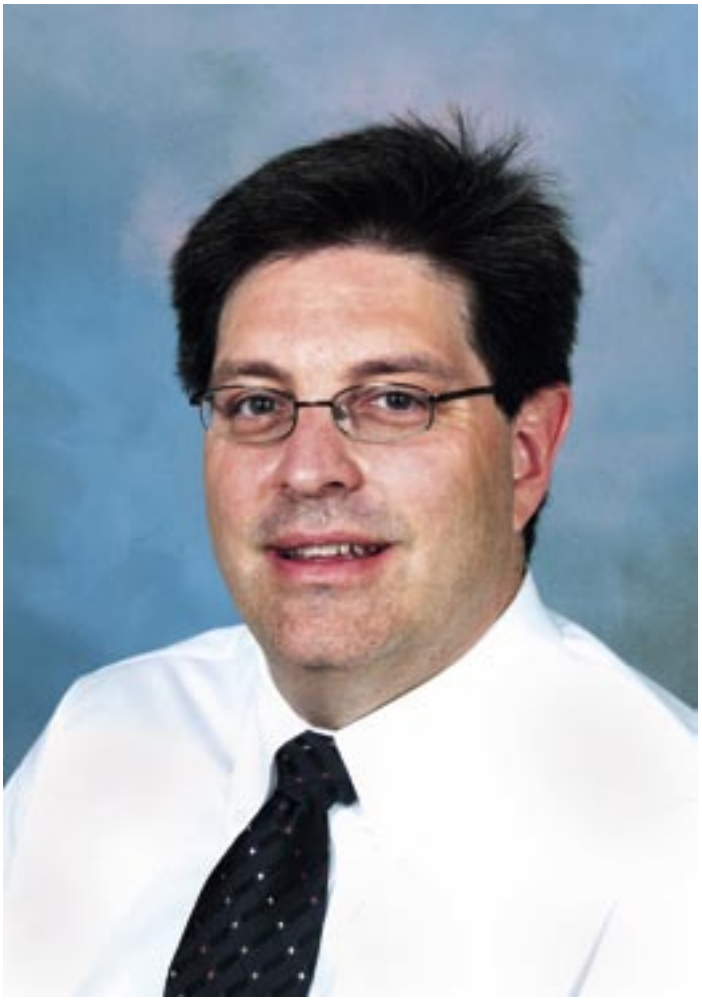
LYMPHOSCINTIGRAPHY

A scintogram is a clear picture of the lymphatic system. This procedure can indicate lymph blockage and tumors, and can help to diagnose lymphedema. When breast cancer is suspected, a scintogram assesses the drainage quality of the sentinel lymph node.

PHOTO COURTESY OF SMIL

The ASCO Award for Excellence in furthering cancer research was awarded, on June 2, 2007, to Scottsdale Medical Imaging by the American Society of Clinical Oncology for outstanding work in cancer-related clinical trials. In the continued fight against cancer, clinical trials are paving the way for better detection and cure rates. Under the direction of Ron Korn, M.D., SMIL was able to enroll over 300 patients during 2006 for participation in groundbreaking clinical trials. At present, SMIL has five ongoing cancer clinical trials and takes great pride in being able to help patients, and at the same time elevate standards of care for cancer patients.

The American Society of Clinical Oncology (ASCO) is an international organization comprised of physicians who represent all subspecialties of medicine, who are actively working with cancer patients. Twenty-five thousand oncology subspecialists worldwide are working to increase funding for research, improve cancer care and ultimately find a cure for cancer. ASCO has created a consumer website, www.plwc.org for cancer patients and their loved ones.



PHOTOS COURTESY OF SMIL

Ron Korn, M.D.

PEDIATRIC NUCLEAR MEDICINE

Many congenital diseases are diagnosed with radiopharmaceutical agents, and are used in the evaluation of the liver, kidneys, heart and bones. Bone infection and kidney blockages are also detected in this fashion.

POSITRON EMISSION TOMOGRAPHY

PET scans can help to consolidate the findings regarding biochemical changes in cancer patients. These scans are usually whole-body scans. For cardiac patients, PET scans can show whether cardiac function is intact, has returned or if there is scarring. For cardiac patients, PET scans are usually combined with a perfusion study to correctly differentiate nonfunctioning heart muscle from good cardiac muscle. PET scans of the brain can help to evaluate patients with brain dysfunction of unknown etiology, and can also be used in the early detection of Alzheimer's.

RADIOIODINE I-131

This is a therapy used for hyperthyroidism. This treatment causes the thyroid to slow its function. Radioiodine is also used in Grave's disease, goiter and cancer of the thyroid.

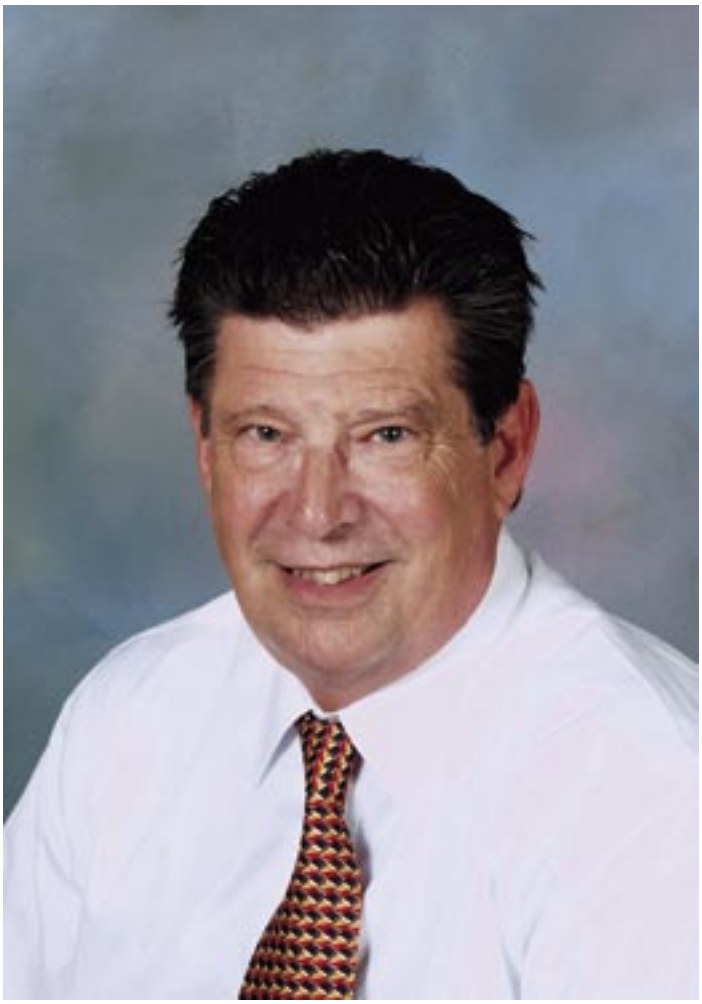


PHOTO COURTESY OF SMIL

Barry Green, M.D.

PET Scan and Alzheimer's Disease

Alzheimer's disease robs people of their quality of life, and then robs them of their memories, just before rendering them helpless and lost in their own homes. Being able to diagnose the disease early is helping many patients forestall the advanced stages of this horrific disease. There is a familial tendency present in some families, which makes them more susceptible for Alzheimer's. It is crucial for all patients, whether from a family that carries this gene or not, to be able to find out if the cognitive dysfunction they are experiencing is Alzheimer's or the result of another disease process. Ron Korn, M.D., explains that radiologists, using the noninvasive PET scan, can differentiate between Alzheimer's and other factors that can cause cognitive decline. Dr. Korn notes that better pharmacological agents, used in conjunction with the PET scan, permit a visualization of the metabolism of the brain, and indicate the plaques that are associated with Alzheimer's. Being able to diagnose Alzheimer's disease in a noninvasive, timely fashion can help many patients have better quality of life. Dr. Korn says, "Being able to determine what type of cognitive problems or dementia a patient has is a boon to the patients and family members, and since we can provide a clear diagnosis, treatment can start immediately." SMIL wants to help patients retain as much quality of life as possible.

PET scans and newer and better pharmacological agents are also helping radiologists investigate tumors, and getting treatment to patients in a shorter amount of time.

THYROID SCAN AND UPTAKE

This is a nuclear medicine exam that helps to evaluate and measure the thyroid. A pharmaceutical agent is injected or swallowed, and a camera and computer are used to do the evaluation. This procedure screens for lumps and inflammation, checks whether there are nodules and can diagnose hyperthyroidism.

PEDIATRIC RADIOLOGY

SMIL pediatric radiologists provide complete imaging and radiological services for some of the Valley's youngest residents. Services include MRI, US, CT scans and nuclear medicine. Pediatric testing requires different testing protocols due to the smaller nature of the patient. SMIL staff is well versed in the algorithms used in providing the appropriate pharmaceutical and interventional agents for this specific patient cohort. Barry Green, M.D., notes, "Safety for pediatric patients is paramount and radiation is titrated to the patient's weight."

The search for newer and better technologies that make diagnoses and treatment better is the everyday goal of the team at Scottsdale Medical Imaging. For over 27 years, SMIL has brought advanced technology — groundbreaking research and excellent patient care to the Valley, making this nationally recognized group a unique practice — and one to watch in the future. ■