

IMAGING UPDATE

Physician's Guide
to Radiological Services

Spring 2003

DIAGNOSTIC
IMAGING CENTERS



*A personal note from Kathi Crouch,
Director of Clinical Operations*



Expanded Services Means Timely Scheduling

LOCATIONS

Eastern Jackson County

4911 S. Arrowhead Dr.
816 795-7040
816 795-9920 fax

Kansas City, Midtown

6724 Troost, Suite 900
816 333-8420
816 333-7843 fax

Kansas City, North

5400 North Oak Trfwy.
816 455-5959
816 455-1122 fax

Overland Park, Kansas

5500-5520 College Blvd.
913 491-9299
913 696-0936 fax

Olathe, Kansas

1803 S. Ridgeview, Suite 101
913 397-7272
913 397-7373 fax

Lee's Summit, Missouri

First National Bank Bldg.
609 N. M-291 Highway
816 795-7040
816 795-9920 fax

Diagnostic Imaging Centers (DIC) works hard to provide both service and quality. Service does not stop at being able to schedule the appointment and perform the exam. Service includes timely exam completion and reporting of results. We at DIC know healthcare needs for your patients cannot always wait! So when you ask, "Can you get this patient in today?" Our answer will be, "Yes."

Because service is such a big part of Diagnostic Imaging Centers, every effort is made to facilitate timely scheduling of exams for our valued customers. Thus, MRI, CT and Sonography daily openings are posted with each DIC scheduler in order to meet referral needs. Diagnostic Imaging Centers provides services at multiple offices and this provides the flexibility resulting in same-day scheduling. Should your patient need an exam completed today, just notify any DIC scheduling staff member and an appointment will be arranged for the first available opening. And, of course, your report will be dictated, transcribed and faxed directly to your office. ■

Diagnostic Imaging Centers' newly-remodeled MRI suite located at 5400 North Oak Trafficway is now equipped with three MRI units.

Along with the 0.5T Phillips MRI unit, two new additions are operating at the North Oak location: a high-field strength MRI scanner, the 1.5T GE Signa Horizon, and one of the highest field strength Open MRI scanners in the Northland area, the GE 0.35T Ovation.

With the enlargement of DIC's MRI suite at the North location, the ability to offer same-day scheduling and work in patients is readily available.

Review of Radiographic Contrast Reactions

What you should know for your patients —

Detailed Information About...

- Scheduling
- Services
- Managed Care
- Physicians
- Patient Care
- Community

...Is Always Available at the DIC web site.

Visit:
www.dic-kc.com

There are a variety of radiographic contrast agents that are used to aid diagnosis in radiographic studies. Contrast reactions can occur with all contrast agents, though the relative frequency of reaction and type of reaction varies significantly depending on the type of radiographic contrast used. This article will review three of the more common contrast agents, and their associated adverse reactions. The three types of contrast agents that will be discussed are: iodinated contrast agents, gadolinium used during some MRI studies, and barium.

Iodinated contrast material, also referred to by some as "x-ray dye" is used in many diagnostic imaging exams including excretory urography (better known as IVP), computed tomography (CT), hysterosalpingography, arthrography, cystography, sialography, angiography, and other miscellaneous procedures.

Iodinated contrast is given as an intravenous injection, usually placed through a small IV placed in the arm. The contrast is excreted by the kidneys. Patients often feel a warm sensation, or feel nauseated for a few seconds after contrast administration. Due to the higher absorption of the x-ray "beam" by iodinated contrast, normal and abnormal structures can be better seen. It is estimated that the overall frequency of adverse reactions is 5-10%.

Most of the reactions are very mild. Mild reactions include nausea and vomiting, mild urticaria (hives) and pruritus, and mild diaphoresis. However, in about 0.1-0.2% of exams, a moderate reaction may occur which includes increased severity of a mild reaction, facial and laryngeal edema or mild bronchospasm. Severe reactions may include hypotensive shock, cardiac or respiratory arrest, pulmonary edema, loss of consciousness, convulsions, and severe laryngeal or bronchial spasm. The risk of death from iodinated contrast is estimated to be approximately 0.3 to 2.5 per 100,000 uses, which is similar to the risk of death from receiving a dose of penicillin.

Low osmolality contrast media (LOCM) are iodinated contrast agents with a lower incidence of mild, moderate and severe reactions compared to high osmolality contrast media (HOCM). However, the risk of death is not significantly changed between the two types of iodinated contrast. LOCM is more expensive than HOCM iodinated contrast. At Diagnostic Imaging Centers, we use only LOCM iodinated contrast to minimize our adverse contrast reaction rate, and ensure the most optimal imaging experience for your patient. All contrast exams are performed in the presence of a radiologist, in case a reaction occurs that would require treatment.

HIPAA Brings Change to After Hours Exam Reporting Process

Iodinated contrast can be nephrotoxic. Patients with insulin-dependent diabetes, volume depletion, multiple myeloma, and other causes of renal dysfunction should have a serum creatinine checked prior to iodinated contrast administration. Different radiology groups use different creatinine values to determine whether the benefit of administering contrast outweighs the risk. There is an uncommon but serious adverse effect of lactic acidosis, possibly leading to death, which can occur in patients who are taking Metformin. Metformin or Glucophage, as well as combination type diabetic medications with metformin such as Glucovance, Metaglip, and Avandamet, need to be withheld for 48 hours after iodinated contrast injection to prevent this adverse reaction. The serum creatinine should be rechecked prior to resuming one of these medications.

Premedication, usually with a steroid and anti-histamine combination, may be necessary in patients who are asthmatic, or have a history of previous adverse reaction. Patients with pheochromocytoma are at risk for hypertensive crisis after iodinated contrast administration, and may require treatment with an alpha and/or beta blocker.

Gadolinium MRI contrast media has been approved for use since the late 1980s and has been extremely well tolerated. Gadolinium is given intravenously. The adverse reaction for

gadolinium is lower than the rate for iodinated contrast. The most common reported reactions are headache (3-6%), injection site coldness (3.6%), injection site pain or burning (2.5%) and nausea (1.9%). Anaphylactic reactions reported occur in 1 in 100,000 cases. Death has been reported in 1 in 10 million cases. Premedication with steroids and anti-histamines may be indicated for patients at high risk for contrast reactions including patients with history of asthma, and prior severe reactions to iodinated contrast though a prior severe iodinated contrast reaction does not preclude administration of gadolinium.

Barium sulfate is given orally, and is very safe. Aspiration of small volumes of barium is usually incidental, and eliminated by coughing. The remainder of the barium is removed by macrophages and will accumulate in tracheobronchial lymph nodes, which may remain opaque for years. Aspiration of large volumes of barium can rarely cause suffocation. If barium extravasates, it may induce a granulomatous reaction.

Please feel free to contact one of our radiologists if there is a question regarding whether a contrast exam is indicated for your patient, and if any specific precautions should be performed. ■

—Scott Sher, M.D.
Staff Radiologist,
Diagnostic Imaging Centers

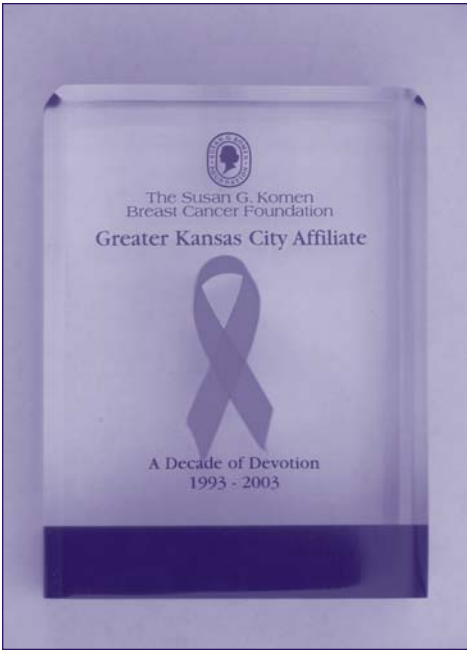
In order to comply with the Health Insurance Portability and Accountability Act (HIPAA), Diagnostic Imaging Centers (DIC) has discontinued access to patient reports after hours via the dictation line.

DIC, however, will continue to contact the referring physicians' offices for designated Call Reports requests. If DIC is unable to make contact with the referrer, a phone number allowing the referrer to speak directly with a DIC radiologist will be provided so that after-hour exam results can be relayed.

Mid America Health Notice

Diagnostic Imaging Centers now accepts Mid America Health Plans. If the plan is provided through a Third Party Administrator, please contact the insurance carrier to verify that Diagnostic Imaging Centers is in-network.

***—Mike Stanfield,
Contract Manager***



Susan G. Komen Breast Cancer Foundation Awards Diagnostic Imaging Centers

Diagnostic Imaging Centers was honored to receive the "A Decade of Devotion" award that recognizes its long-time support of the Susan G. Komen Breast Cancer Foundation.

Register and attend the Susan G. Komen Breast Cancer Foundation Luncheon on Saturday, May 3, 2003, sponsored by Diagnostic Imaging Centers. For more information, call 816-842-0410.

On Wednesday, February 19, 2003, The Susan G. Komen Foundation Greater Kansas City Affiliate hosted a celebration at Kansas City's Union Station, entitled "A Decade of Devotion." As a long-time sponsor, Diagnostic Imaging Centers (DIC), was honored to receive an award for its local participation with the Komen Foundation.

DIC maintains its commitment to the Komen Foundation in a number of ways. DIC will continue its annual sponsorship of the Susan G. Komen Survivors' Luncheon, which will take place on Saturday, May 3, 2003, at the Ritz Charles Convention Center in Overland Park, Kansas (see enclosed insert for details).

DIC will also, once again, sponsor the Susan G. Komen "Race for the Cure," to be held on Sunday, August 10, 2003. DIC physicians, staff members, and their families have

one of the larger walk teams and will distribute educational and promotional items relating to Breast Cancer Awareness.

Dr. Linda Harrison is a DIC radiologist who serves on the Susan G. Komen Grant Disbursement Committee. "The committee works toward providing funding for breast cancer research and for innovative projects in the areas of community-based breast health education and breast cancer screening and treatment projects for the medically underserved in the Greater Kansas City metropolitan area." Dr. Harrison believes that DIC's resources and influence are a worthwhile help to the cause. "Diagnostic Imaging Centers is a part of the Kansas City community and is very proud to work with the Susan G. Komen Foundation in their efforts to eradicate breast cancer in our lifetime." ■

—Barb King,
Public Relations Manager

To request additional exam scheduling forms, call DIC's Public Relations Dept. at 816-276-5400, ext. 3060.

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Kansas City, MO 64131**

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