

X-ray

Newsletter

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Division of Environmental Health ~ Radiation Protection Section

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Digital Verses Traditional Film/Screen Radiography *What's the Difference?*

Digital radiography is a form of X-ray imaging, where digital X-ray sensors are used instead of the traditional film/screen method. The only essential difference between traditional and digital imaging is the way the image is captured. Instead of a film and processor, there is now a sensor and computer system with software that allows the user to process the image digitally. No more chemicals, film and film cassettes.

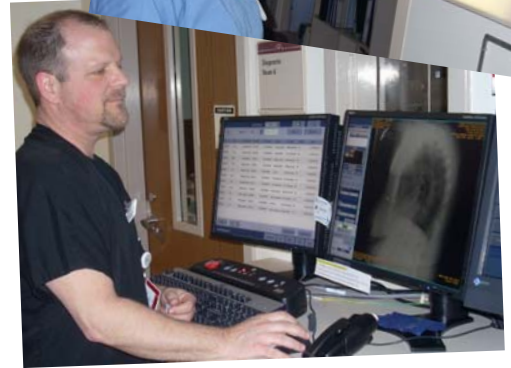
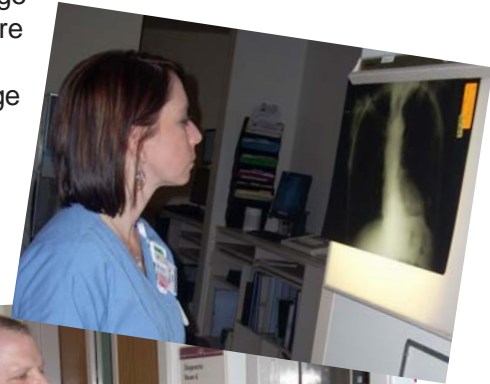
This type of radiography is a great asset when used correctly. The major advantages of digital technology include time efficiency because it enables the bypassing of chemical processing, digital transfer and enhancement of images. It also reduces the radiation used to produce the image! It is important to remember that the primary goal for any facility using radiological equipment is to reduce the dose exposed to the patient.

While digital radiology can reduce patient exposure, the user has to employ some new strategies to effectively achieve that goal.

If you only changed the means of image capture and did not reduce your time, have you reduced dose? No. When changing from traditional to digital imaging, there has to be a reduction in time or technical factors before you can say there has been a reduction in dose. This is where the importance arises in working with your service provider or physicist. A list of all the registered service providers and physicists can be found at: www.ncradiation.net/Xray/servicealpha/rptSrvListingAllClasses.pdf.

It is important as an owner of digital equipment to work with your service company to ensure the technical settings have been adjusted to appropriate settings to produce optimal images using the lowest dose possible. The installer of the digital equipment and equipment service company should be able to help you reduce the technical factors or time used for exams. This reduces the time the patient is exposed and the dosage the patient is exposed to.

Digital X-ray is still X-ray. Radiation is cumulative, so **all** radiation counts.



Quality Assurance Programs

A sound quality assurance program is recommended to consistently produce high-quality imaging and optimized processing conditions. Quality assurance helps minimize the need for unnecessary retakes while reducing exposure to patients.

Go to the branch's Web site at:

www.ncradiation.net/Xray/xray.htm
for a list of links that will assist you in adopting forms and/or procedures for your program.



Always use protective garments, no matter if it is traditional or digital technology that you are using.

Dose Concerns

The U.S. Food and Drug Administration announced the launch of a cooperative initiative to reduce unnecessary radiation exposure from medical imaging on Feb. 9. The goal of the initiative is for the FDA and their partners to take steps to promote safe use of medical imaging devices, support informed clinical decision making and increase patient awareness.

The initiative focuses on reducing unnecessary radiation exposure from three types of medical imaging procedures: computed tomography, nuclear medicine studies and fluoroscopy. According to the FDA, these procedures are the greatest contributors to total radiation exposure within the United States' population. They use much higher radiation doses than other radiographic procedures, such as standard X-rays.

The FDA issued a safety investigation of CT brain perfusion scans after a number of patients were discovered to have been overexposed during this procedure prior to implementing this initiative.

The RPS will continue to notify members of its X-ray news listserv of the initiative's updates. You may register for the listserv at: <http://lists.ncmail.net/mailman/listinfo/xraynews>.

Understanding Written Safety Programs: What are Voluntary Declared Pregnancy and Pregnant Patient Policies?

There are questions that are frequently asked as newer versions of the facility's written radiation safety program are being developed or revised. The most common ones are about pregnancy policies for workers and patients.

This is your "own" policy. As a facility operator, you must have a policy that refers to the pregnant worker and a separate policy that refers to the pregnant patient. What do you do as a facility when a pregnant worker declares their pregnancy? What do you do prior to exams to make sure the patient isn't pregnant? For reference material and rule reference you can visit: www.ncradiation.net/Xray/documents/pregguide.pdf.

Remember that the reference guides found on the Radiation Protection Section's Web site can aid you in writing your own individual policy concerning pregnancy. It is important to remember that the policy concerning workers is voluntary and must be in writing.

If you have specific questions about your policies, please visit: www.ncradiation.net/Xray/regions.htm. Click on your region and the individual inspector's information will be listed. Feel free to call or e-mail your respective regional inspector as he/she will be glad to assist and answer any questions you may have.

Improved Safety Programs

As of January 2009, facility staff are required to write a safety program specific to their facility. This program had to be consistent with the safety practices in the facility at the time of its inspection.

In 2009, 613 facilities were inspected. Of that number, 309 facilities had completed programs, meaning only 304 needed additional revision.

The Radiology Compliance Branch has worked through the Allied Health Education Centers to provide guidance on writing, developing and implementing a safety program. Materials to aid facilities in the development or revision of such programs can be found online at: www.ncradiation.net.

If your facility has not updated its safety program, please visit the branch's Web site for more information. The branch's staff is also willing to share guidance through visits and presentations. If you are interested, please contact your regional inspector. For a list of regional inspectors, go to www.ncradiation.net and click on your region. The inspector's name and contact information will be provided.

News flash! Soon the Radiology Compliance Branch will offer webinars for your convenience. This is a work in progress, and updates on its status will be provided to you as they develop. Subscribing to the X-ray listserv (<http://lists.ncmail.net/mailman/listinfo/xraynews>) will enable you to get the latest information.

X-ray Fee Schedule

As of Jan. 1, 2009, all X-ray units that are designated as “not in use” on your registration will be billed in accordance to 15A NCAC 11 .1105. Fees are determined based on the facility and number of X-ray units that each facility possesses.

If you dispose of or remove the unit(s) that are not in use from your registration prior to July 1, you will not be billed for these machines.

When disposing of or removing the equipment, please use your Notification of Registration to notify the Radiation Protection Section of the disposition of the X-ray units. You are required to provide the name, address and phone number to whom the equipment has been transferred.

2010-2011 Fees. The following fees were mandated by the N.C. General Assembly and signed into law by Gov. Perdue.			
Type of Facility	Bill Code	Facility plus first X-ray tube	Additional Tubes
Chiropractors	C	\$165.00	\$22.00
Dentists	D	\$165.00	\$22.00
Educational	E	\$120.00	\$20.00
Government	G	\$120.00	\$20.00
Podiatrists	H	\$165.00	\$22.00
Industrial	I	\$165.00	\$22.00
Health Departments	L	\$240.00	\$30.00
Hospitals	M	\$360.00	\$40.00
Physicians	P	\$165.00	\$22.00
Industrial Radiography	R	\$360.00	\$40.00
Services	S	\$240.00	\$0.00
Veterinarians	V	\$120.00	\$20.00
Other	Z	\$165.00	\$22.00

Any new registration issued on or after Jan. 1 will be prorated. The prorated facility fee and tubes/equipment fee each will be half of the listed price above.

You will be billed for your facility and the equipment until you notify the RPS office in writing as to the disposition of the facility and equipment. Closing the facility and placing the units as not in use does not negate the fees.

RPS Annual Fee

You will be billed in entirety every July 1 for your facility and the tubes/equipment you have registered. If you have questions regarding your fee amount or the disposition of your facility and equipment, please contact the RPS office.

If there is a change in ownership that the new owner needs to complete a new application, he should not pay the old owner's invoice since a new invoice is generated for the new ownership.

Check out the RPS Web site @ www.ncradiation.net