



Newsletter



GETTING STARTED WITH TELERADIOLOGY

1 CONSULTATION

Call us at 1877 225-3EYE or email us at info@tetradiology.com for a free consultation.

2 Q & A

Review a variety of pricing options and ways to benefit your practice, including full time coverage, vacation coverage and subspecialty consultations

3 NETWORK SETUP

Let our IT team setup our state of the art PACS and reporting system to seamlessly integrate into your hospital RIS or practice information system.

4 RELAX

Our skilled team of subspecialty radiologists will provide fast and accurate expert reports. We will communicate directly with your referring physicians, and give you peace of mind.

Imaging Update: Radiation Safety Takes Center Stage

Not long after Wilhelm Roentgen demonstrated the medical use of x-rays in 1895, the world learned that such came with inherent risks. In fact, Thomas Edison's assistant purportedly died from a radiation induced tumor. In the early days of medical imaging, radiologists had a shorter lifespan than other physicians due to a lack of equipment shielding.

While a significant portion of a radiology residents training is dedicated to the physics of medical imaging, radiobiology, and radiation safety, it has only been in the last several years that the concept of 'radiation induced disease' in *patients* has been considered with any alacrity. In fact, in that short time frame, the government, regulatory bodies, equipment manufacturers and health care professionals have quickly 'jumped' on the concept, and set in motion a race to reduce radiation in imaging, and regulate how it is monitored.



Reducing Radiation

The reality is, the use of CT (the largest source of medically induced radiation) has skyrocketed in the last two decades, with approximately 10 million exams performed in 1990, to more than 60 million exams performed in 2005. Not only that, but while the efficiency of the technology has improved dramatically, the exposure per imaging study has increased greatly. A typical abdominal CT exam 15 years ago consisted of 80 incremental slices. A typical exam today can easily exceed 300 slices, and they are obtained volumetrically.

Many recent articles have sought to illuminate physicians and patients to the real risks of medical radiation. The most widely quoted is Berrington's article in the Archives of Internal Medicine, which claims that 29,000 new cancers and 14,500 cancer deaths will result from the scans performed in the year 2007 alone!

STUDY	ORGAN	ORGAN DOSE (mSv)
DENTAL	Brain	0.005
PA CHEST	Lung	0.01
LATERAL CHEST	Lung	0.15
MAMMO	Breast	3
ADULT ABDOMEN CT	Stomach	10
BARIUM ENEMA	Colon	15
PEDIATRIC ABDOMEN CT	Stomach	20

The veracity of this conclusion is questionable. Projections were based on exposure data from Hiroshima and Nagasaki, where radiation exposures were extremely high and included particulate radiation, as opposed to cumulative low dose exposure to pure x-rays with CT scans.

Nevertheless, the fact remains that radiation exposure causes cancer, and we must ensure that our patients receive the lowest exposures possible. How do we do this? Well, the recent JCAHO sentinel event letter regarding radiation includes many useful ideas:

- 1) Scan patients only when the information obtained is necessary, and when non radiation based testing (like ultrasound) are not of value
- 2) Use equipment that results in the lowest dose possible, maintain the equipment, and test it frequently
- 3) Use techniques that produce the lowest exposure possible to answer the clinical question
- 4) Implement imaging protocols that minimize radiation dose.

Third Eye Teleradiology can bring years of expertise to your practice. Call us, and we will set up your protocols to produce the highest quality images, including 2D, 3D and virtual. In addition, you will always have the peace of mind of knowing that the interpretations we provide will match the quality of the images that we help you to produce.



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