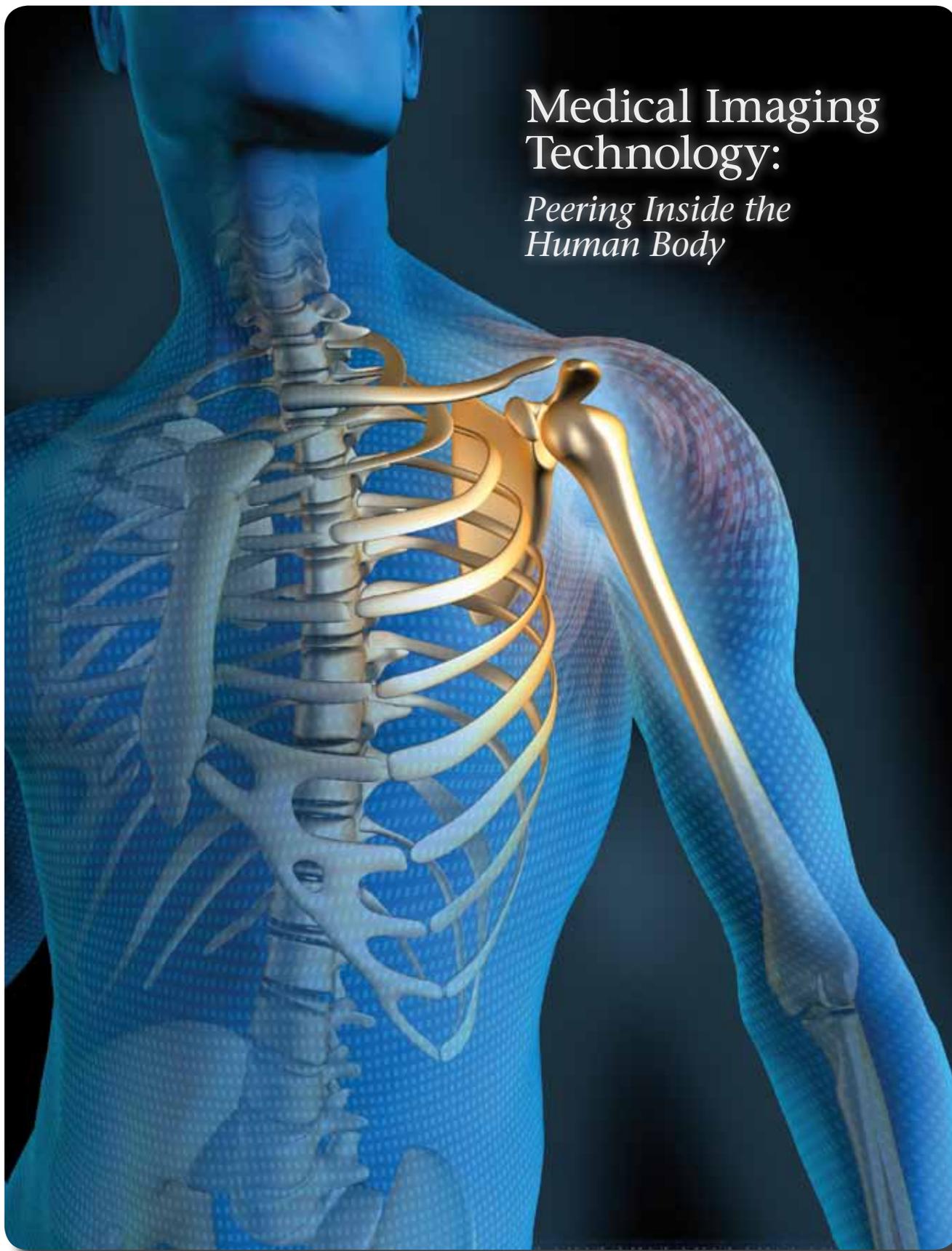


# Medical Imaging Technology:

*Peering Inside the  
Human Body*



Prior to the 1970s, physicians had only X-rays to rely on for examination of the interiors of their patients' bodies. After that time, new technology was developed that allowed physicians to access three-dimensional images of the body, its organs and tissues and provide early diagnoses for many illnesses. With the new technologies came the technologists and technicians who administer the procedures and report findings to physicians.

Cardiovascular technologists conduct tests on pulmonary function, lung capacity, cardiac (heart) and peripheral vascular (blood vessel) ailments. Treatments involve both invasive procedures (those that require incision into the body or removal of tissue) such as cardiac catheterization and angioplasty and non-invasive procedures such as echocardiography. Cardiovascular technicians take EKGs which trace electrical impulses in the heart.

Nuclear medicine technologists prepare and administer radiopharmaceuticals to patients and then monitor the characteristics and functions of tissues or organs in which the drugs localize. Nuclear medicine differs from other diagnostic imaging technologies because it determines the presence of disease on the basis of metabolic changes rather than changes in organ structure.

Radiological technologists specialize in the use of computed tomography (CT), X-rays, Computed Axial Tomography (CAT), Magnetic Resonance Imaging (MRI) or mammography. CT/CAT/MRI scans process cross-sectional

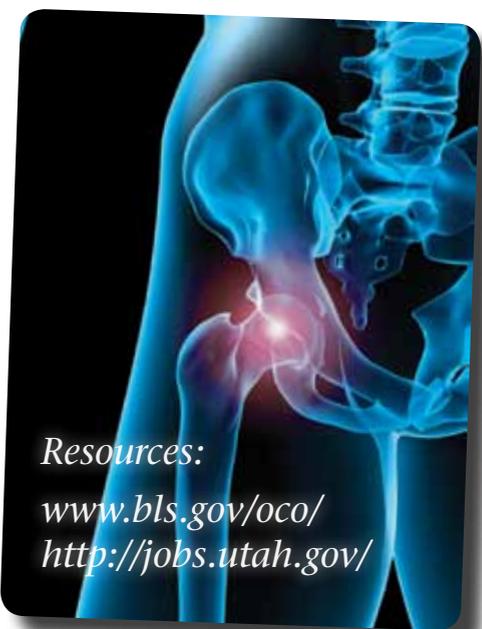
x-rays of an area which yield a three-dimensional image. Mammography uses low dose x-ray systems to produce images.

Diagnostic medical sonographers operate equipment that directs high frequency sound waves into specific areas of a patient's body. Reflected echoes form an image that is videotaped, transmitted, or photographed for interpretation and diagnosis by a physician.

These technologists may specialize in obstetric and gynecologic or abdominal or neurological sonography. The best known use of sonography is the ultrasound, an examination of a fetus to track its growth and health.

The most prevalent level of education attained by all these technologists is the 2-year associate degree at a junior or community college. Most technologists are employed by hospitals some of which may also provide training. Most states require licensure or a professional credential.

Technologists with multiple professional credentials, trained in a variety of procedures, will have the best prospects since competition is keen in most of these occupations. ⓘ



## Utah Occupational Wages for Medical Imaging Technologist

Occupation	Annual Median in Utah
Cardiovascular Technologist	N/A for Utah; \$48,300 for US
Nuclear Medicine	\$64,690
Radiology/MRI Technologist	\$45,040
Diagnostic Medical Sonographer	\$60,820

*Data from May 2009, Utah Occupational Explorer, Department of Workforce Services.*