

## **Diagnostic Medical Sonographer**

Diagnostic Medical Sonographers, also called *Diagnostic Imaging Workers*, operate special imaging equipment to create images or conduct tests. The images and test results help Physicians assess and diagnose medical conditions. Sonographers may work closely with Physicians and Surgeons before, during, and after procedures.

*Diagnostic Medical Sonographers typically do the following:*

- Prepare patients for procedures by taking their medical history and answering any questions about the procedure
- Prepare and maintain diagnostic imaging equipment
- Operate equipment to obtain diagnostic images or to conduct tests
- Review images or test results to check for quality and adequate coverage of the areas needed for diagnoses
- Recognize the difference between normal and abnormal images, and identify other diagnostic information
- Analyze diagnostic information to provide a summary of findings for physicians
- Record findings and keep track of patients' records

Diagnostic Medical Sonographers specialize in creating images of the body's organs and tissues. The images are known as sonograms or ultrasounds. Sonograms are often the first imaging tests performed when disease is suspected.

Diagnostic sonography uses high-frequency sound waves to produce images of the inside of the body. The sonographer uses an instrument called an ultrasound transducer to scan parts of the patient's body that are being examined. The transducer emits pulses of sound that bounce back, causing echoes. The echoes are then sent to an ultrasound machine, which processes them and displays them as images used by physicians for diagnosis.

The following are examples of types of Diagnostic Medical Sonographers:

*Abdominal Sonographers* specialize in imaging a patient's abdominal cavity and nearby organs, such as the kidney, liver, gallbladder, pancreas, or spleen. Abdominal sonographers may assist with biopsies or other examinations requiring ultrasound guidance.

*Breast Sonographers* specialize in imaging a patient's breast tissues. Sonography can confirm the presence of cysts and tumors that may have been detected by the patient, the physician, or a mammogram. Breast sonographers work closely with physicians and assist with procedures that track tumors and help to provide information that will aid doctors in making decisions about the best treatment options for breast cancer patients.

*Cardiac Sonographers (Echocardiographers)* specialize in imaging a patient's heart. They use ultrasound equipment to examine the heart's chambers, valves, and vessels. The images obtained are known as echocardiograms. An echocardiogram may be performed either while the patient is resting or after the patient has been physically active. Cardiac sonographers also may take echocardiograms of fetal hearts so that physicians can diagnose cardiac conditions during pregnancy. Cardiac sonographers work closely with physicians or surgeons before, during, and after procedures.

*Musculoskeletal Sonographers* specialize in imaging muscles, ligaments, tendons, and joints. These sonographers may assist with ultrasound guidance for injections, or during surgical procedures, that deliver medication or treatment directly to affected tissues.

*Pediatric Sonographers* specialize in imaging children and infants. Many of the medical conditions they image are associated with premature births or birth defects. Pediatric sonographers may work closely with pediatricians and other caregivers.

*Obstetric and Gynecologic Sonographers* specialize in imaging the female reproductive system. Many pregnant women receive sonograms to track the baby's growth and health. Obstetrical sonographers work closely with physicians in detecting congenital birth defects.

*Vascular Technologists (Vascular Sonographers)* create images of blood vessels and collect data that help physicians diagnose disorders affecting blood flow. Vascular technologists often measure a patient's blood pressure and the volume of blood in their arms, legs, fingers, and toes in order to evaluate blood flow and identify blocked arteries or blood clots in the body.

### **Work Environment**

Most diagnostic imaging workers are employed in hospitals, while most of the rest worked in physicians' offices or medical and diagnostic laboratories.

Diagnostic Medical Sonographers complete most of their work at diagnostic imaging machines in dimly lit rooms. They may perform procedures at patients' bedsides. Diagnostic imaging workers may be on their feet for long periods and may need to lift or turn patients who are ill or disabled.

*Watch a video about being a Diagnostic Medical Sonographer*

**Top Local Employers:** Sutter Health, Med Travelers, Stanford Children's Health, Stanford Health Care, Kaiser Permanente

### **Median Pay**

\$107,765

### **Job Growth (2020-2025)**

16%

### **Education and Training**

Diagnostic Medical Sonographers need formal education, such as an associate degree or a postsecondary certificate. Many employers also require professional certification.



**Local Education:**

Foothill College

Gurnick Academy

**For More Information:**

Bureau of Labor Statistics

Society of Diagnostic Medical Sonography



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