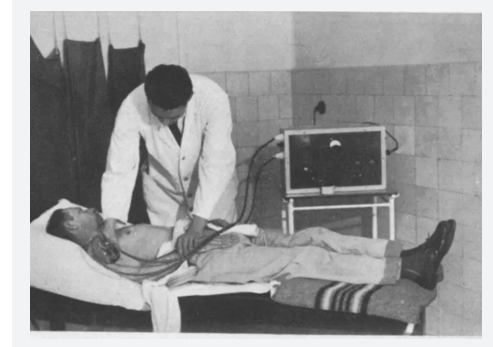


The History of Ultrasound

- 1794** – Lazzaro Spallanzani, Italian physiologist, began studying the way bats navigated in the dark. This understanding became the basis for modern ultrasound physics.
- 1826** – Swiss physicist Jean Daniel Colladon measures the speed of sound through water.
- 1842** – Christian Doppler publishes the theory of the Doppler Effect.
- 1880** – Jacques and Pierre Curie discover the piezoelectric effect, which will later transmit ultrasound.
- 1912** – The sinking of the Titanic inspires Paul Langevin and Constantin Chilowsky to invent a high frequency ultrasound machine to detect icebergs.
- 1942** – Karl Dussik, MD, is generally regarded as the first physician to use ultrasound for medical diagnosis (of brain tumors).
- 1947** – George Ludwig, MD, uses ultrasound for the detection of gallstones.
- 1953** – The first ultrasound use in cardiology was by Inge Edler and Carl Hertz, who measured heart activity by employing an echo test control device from a Siemens shipyard.
- 1958** – Ultrasound was incorporated into the OB/GYN field of medicine by Dr. Ian Donald.
- 1963** – The first handheld ultrasound scanner was used in the United States.
- 1968** – Articulated arm scanners are the most popular format in ultrasound imaging.
- 1970** – The Society of Diagnostic Medical Sonography (SDMS) was founded to promote, advance and educate the medical community in the science of diagnostic medical sonography.
- 1973** – Computer processing revolutionizes measurements, as analog scan converters enable images to be displayed in grayscale on a standard television monitor.
- 1982** – Real-time scanner resolution surpasses static image equipment and a new trend begins.
- 1989** – First commercial 3D ultrasound scanner is used. Also, continuous wave and pulsed Doppler, including color flow, are standard.
- 2002** – Diagnostic medical sonography becomes a permanent fixture on the International Space Station (ISS).
- 2013** – With a transducer that plugs into a smartphone or tablet, sonography becomes even more portable.
- 2016** – The FDA approves the use of an ultrasound contrast agent for liver imaging complementing the more than 10 years of use of contrast in cardiac sonography.
- 2020** – Lung ultrasound used as a complementary tool to identify infection and staging of COVID-19.
- 2021** – With the help of the AI systems, radiologists decrease their false positive rates by 37.3%. This highlights the potential of AI in improving the accuracy, consistency, and efficiency of breast ultrasound diagnosis.
- 2022** – Ultrasound Derived Fat Fraction (UDFF) is used to aid physicians in the overall assessment of hepatic steatosis.



What is Ultrasound?

Medical ultrasound uses high-frequency sound waves that pass through the body to create images in real-time. A diagnostic medical sonographer performs an examination by moving a hand-held ultrasound transducer over the skin. The transducer both generates the sound waves and detects them as internal organs and tissues reflect the sound waves.

A computer records the reflected sound waves and a monitor displays the resulting images, which are used to view, monitor and diagnose various medical conditions. Ultrasound is not an ionizing radiation and is considered a safe medical imaging tool when used by a properly trained and certified sonographer.

About Medical Ultrasound Awareness Month

MUAM is held annually in October to create awareness of the role diagnostic medical sonographers play in the medical community and to educate the public about medical ultrasound and its many uses in healthcare.



Sources: Society of Diagnostic Medical Sonography | www.ultrasoundschoolsinfo.com/history/ | www.nationalultrasound.com/ultrasound-just-facts/ | www.siemens-healthineers.com/en-us/ultrasound/news-stories/history | <https://www.nature.com/articles/s41467-021-26023-2>