The One with Important Moments in MR History

1882 – Physicist Nikola Tesla discovers the rotating magnetic field.

1937 – Isidor Rabi, a physics professor at Columbia University, develops a method for measuring the movements of atomic nuclei, which he named nuclear magnetic resonance.

1971 – American doctor and scientist Raymond Damadian discovers that images created using MRI technology could be used to make a medical diagnosis.

1972 – Paul Lauterbur determines that a gradient magnetic field would allow observers to take two-dimensional images of an object, which could then be stacked to create a three-dimensional view.

1977 – Raymond Damadian built the first whole-body MRI scanner for medical use and produces the first image of the human body.

1977 – English physicist Peter Mansfield discovers how to complete scans in 15-20 minutes rather than hours.

1983 – The world's first commercial MRI machine – a Siemens MAGNETOM – went into operation at the Mallinckrodt Institute in St. Louis, Missouri.

1990 – Seiji Ogawa discovers the technique that underlies Functional MRI (fMRI).

2003 – Lauterbur and Mansfield are awarded the Nobel Prize for their development of MRI.

2017 – The world's first 7 Tesla (7T) MRI, developed by Siemens, is cleared for clinical imaging by the Food and Drug Administration.

Raymond Damadian, Larry Minkoff and Michael Goldsmith with the first MRI scanner, "Indomitable" (Credit: FONAR)

2020 – Siemens Healthineers introduces the world to High-V MRI with a .55T wide-bore system known as the MAGNETOM Free.Max.

2023 – Siemens Healthineers introduces MAGNETOM Viato.Mobile 1.5T system bringing high-quality diagnostic imaging to offsite locations.

2024 – Siemens Healthineers introduces the industries strongest gradients on a clinically available 3T MR scanner known as the MAGNETOM Cima.X

About MRI Exams

Magnetic resonance imaging (MRI) uses a powerful magnetic field, radio waves and a computer to produce detailed pictures of the body's internal structures that are clearer, more detailed and more likely in some instances to identify and accurately characterize disease than other imaging methods. It is used to evaluate the body for a variety of conditions, including tumors and diseases of the liver, heart and bowel. MRI is noninvasive and does not use ionizing radiation.

Fast Facts:

Originally, the MRI was called nuclear magnetic resonance (NMR). The term was changed to MRI because of the presumed negative connotation of the word "nuclear."

Brain and spine studies make up more than 50% of all MRI scans.

The strength of the magnetic field is rated using a unit of measurement known as a Tesla. Modern MRI equipment ranges from 0.55T to 7T.

Sources:
American Registry of Magnetic Resonance Imaging Technologists: http://www.armrit.org/about.php
The American Institute of Medical Sciences and Education: https://www.aimseducation.edu/blog/the-evolution-of-mri-imaging-equipment/
Electronic Component News (ECN): https://www.envrad.com/facts-about-mris/
National Library of Medicine: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6295297/
Siemens Healthineers: https://www.siemens-healthineers.com/perspectives/history-of-mri
https://www.magnetic-resonance.org/ch/21-01.html

Cassling

13810 FNB Pkwy | Suite 200 | Omaha, NE 68154 | 800.228.5462 | 402.334.5000 | www.Cassling.com