The History of **Computed Tomography**

The prototype of the first CT scanner set a new course for the development of X-ray technology.
(Credit: Science Museum/Science and Society Picture Library)

1900 – Italian radiologist Alessandro Vallebona invents tomography, using radiographic film to see a single slice of the body.

1960s – Increased power and availability of computers spark new research to create practical computational tomographic images.

1967 – Sir Godfrey Hounsfield invents the first CT scanner at EMI Central Research Laboratories using X-ray technology.

1971 – The first patient brain CT is performed in Wimbledon, England, and publicized a year later.

1973 – The first CT scanners are installed in the United States.

1980s – Three million CT examinations are being performed.

1990s – Portable/mobile CT scanners begin growing in popularity.

2005 – The annual number of CT examinations grows to 68 million.

2007 – Half of the CT scanners installed in the U.S. are multi-slice CT scanners with more than 64-slice capability.

2008 – A new generation of CT scanners are developed and can take images of beating hearts or coronary arteries in less than one second.

2009 – Dr. Mathias Prokop discusses the clinical implications of the 16-cm wide detector CT. The wider coverage per gantry rotation enables more dynamic scanning and the ability to do multiple acquisitions in less time.

2010 – The FDA launches their Initiative to Reduce Unnecessary Radiation Exposure from Medical Imaging, which brought more attention to reducing radiation dose with CT scans.

2021 – Siemens Healthineers introduces the world's first photon-counting CT, the NAEOTOM Alpha with Quantum Technology.

2023 – Modern CT systems increasingly use AI and deep neural networks to automate scan protocols, enhance image reconstruction, suppress noise, and even assist with real-time lesion detection.

About Computed Tomography Exams

A CT scan combines a series of X-ray images taken at different angles and uses a computer to create cross-sectional images (slices) of the bones, blood vessels and soft tissues inside the body. CT scans are more detailed than X-rays.

CT scans have many different uses but are best for quickly examining patients who may have sustained internal injuries. CT scans are used to visualize any part of the body, diagnose diseases and planning for treatment.

Fast Facts:

A CAT Scan has nothing to do with cats. The word CAT stands for computerized axial tomography. These days, most people just say CT which stands for computed tomography.

A CT scan is the first imaging technique used to look for brain injury or skull fractures because it is faster than an MRI, allows radiologists to see the bones better, and it's a good way to see small amounts of blood.

3D printing allows radiologists to print CT data in three dimensions, assisting in surgical planning and prototyping implants.

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