

Radiology: A Century of Innovation

Many of healthcare’s most foundational technologies began in radiology. From early digital workflows and speech recognition to X-rays now used billions of times each year, radiologists have consistently turned emerging tools into everyday clinical practice. Here are selected highlights illustrating how radiology technology has transformed patient care.

1895

X-ray Discovery

Wilhelm Röntgen discovers X-rays, introducing the first method to see inside the human body.



1950s

Diagnostic Ultrasound

Ultrasound was pioneered by Professor Ian Donald and his colleagues in Glasgow, advancing abdominal and obstetric care.



1960s–
1970s

CT Scan Invented

Godfrey Hounsfield’s invention of CT introduced cross-sectional imaging that transformed neurologic and oncologic diagnosis.



1970s

MRI Introduced

Raymond Damadian’s first human MRI scan marks the emergence of high-resolution, non-invasive imaging, advancing neurologic, musculoskeletal, and cardiovascular diagnosis.



1980s

DICOM Standard

The first version of the DICOM Standard (ACR-NEMA 300) was introduced, enabling digital image exchange and interoperability across imaging systems.



1980s

PACS Developed

PACS (Picture Archiving and Communication Systems) are developed and piloted, beginning the shift from film-based storage to digital radiology workflows.



1990s–2000s



Filmless Radiology

Widespread PACS adoption creates “filmless” radiology departments and supports multi-site digital image access.

Speech Recognition Adoption

Speech recognition systems enabled real-time dictation, improving reporting efficiency.

2010s–Present

Cloud and AI

PACS evolve to web and cloud architectures, while AI tools support triage, detection, and reporting.

Interested in learning how Rad AI is driving forward a new era of radiology AI technology by saving time, reducing burnout and improving patient care?

Let’s chat.

Citations:

1. Higher patient doses through X-ray imaging procedures - ScienceDirect
2. Picture archiving and communication systems: past, present, and future - PMC
3. Wilhelm Conrad Röntgen: Finding X - PMC
4. A Short History of Sonography in Obstetrics and Gynaecology - PMC
5. How CT happened: the early development of medical computed tomography - PMC
6. The Nobel prize for MRI: a wonderful discovery and a sad controversy
7. Appropriate Magnetic Resonance Imaging Ordering - StatPearls - NCBI Bookshelf
8. History
9. The Evolution of PACS Radiology: From Film to Digital | PostDICOM
10. Improvement of Report Workflow and Productivity Using Speech Recognition—A Follow-up Study - PMC
11. PACS: 130 Years of Medical Imaging Evolution to Sustain Personalized Care
12. Artificial intelligence in diagnostic and interventional radiology: Where are we now?

