
RSNA Press Release

RSNA Celebrates 20 Years of RadLex

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OAK BROOK, Ill. (April 18, 2025) — RadLex, a comprehensive radiology lexicon developed by the Radiological Society of North America (RSNA), celebrates its 20th anniversary this year.

Substantial benefits come from radiologists using common language to communicate diagnostic results. For this reason, RSNA introduced [RadLex](#), a comprehensive set of radiology terms for use in radiology reporting, decision support, data mining, data registries, education and research. RadLex terms are human and machine readable, enabling effective communications and generating data with greater value for clinical processes and research, including effective adoption of artificial intelligence (AI).

RadLex is the gold standard for radiology terminology, transforming how medical imaging is described, reported and analyzed.

"The key purpose of RadLex is interoperability," said Kenneth C. Wang, M.D., Ph.D., acting chief of imaging services at VA Maryland Health Care System and adjunct associate professor of diagnostic radiology at University of Maryland School of Medicine in Baltimore. "Reports that use standardized terminology are clearer to practitioners who use those reports. At the same time, the codes that accompany RadLex terms allow different information systems and artificial intelligence applications to exchange and use health care data." Dr. Wang serves on the RSNA RadLex Committee and Radiology Informatics Council.

Over the years, RadLex has played a crucial role in enhancing interoperability across imaging systems. It enables seamless data exchange between institutions and has fueled AI-driven advancements in diagnostic imaging. Its integration with structured reporting has improved the clarity and precision of radiology reports, benefiting clinicians, researchers and patients.

Today, it has evolved into a robust, structured lexicon encompassing over 75,000 terms, ensuring consistency in image annotation, structured reporting and AI applications.

"It's incredible that a kernel of an idea from 20 years ago has become the de facto standard for representing information in the radiology report and in radiology information systems around the world," said RSNA past president Curtis P. Langlotz, M.D., Ph.D., professor of radiology, medicine and biomedical data science and senior associate vice provost for research at Stanford University, who led the development of RadLex. "It spawned the creation of common data elements, radiology report templates and so much more. It's a shining example of what RSNA and its volunteers can do to address the pressing needs of our specialty."

The development of RadLex has been supported by grants and contracts funded by the National Institute of Biomedical Imaging and Bioengineering (NIBIB), the Veteran's Health Administration and Department of Defense, and the cancer Biomedical Informatics Grid (caBIG) project. RadLex is [licensed](#) freely for commercial and non-commercial users.

RadLex provides the foundation for vital data resources used in radiology, including the LOINC/RSNA Radiology Playbook, RadLex Playbook Series descriptors, RadElement Common Data Elements and RadReport Radiology reporting templates.

The wide variation in the way radiology procedures are named in radiology departments can make ordering and protocoling less efficient and radiology records difficult to aggregate or compare across sites. The LOINC/RSNA Radiology Playbook was created to address this critical problem.

"The Playbook has become a powerful tool to harmonize exam codes across practices and has been used for American College of Radiology registries, for numerous research projects, and for many radiology information systems," Dr. Langlotz said.

Playbook provides a standard system for naming radiology procedures, based on the elements that define an imaging exam such as modality and body part. By providing standard names and codes for radiologic exams, Playbook supports operational and quality improvement efforts, including workflow optimization, chargemaster management,

radiation dose tracking, enterprise integration and image exchange. Playbook has been deployed to support consistent ordering and billing and other process improvements.

After the success of the Playbook project, RSNA's RadLex Committee has launched development of RadLex Playbook Series descriptors, which provides a standardized format for common series description elements to achieve consistency of data across scanners and institutions and support process enhancements like automated hanging protocols.

Facilities can incorporate RadLex in their reporting process by implementing reporting templates that incorporate RadLex terms and codes. A library of such templates is available at RadReport.org.

As RadLex celebrates this 20-year milestone, it represents the power of standardized language in radiology—bridging past innovations with the future of precision medicine and intelligent imaging.

"As a standard imaging terminology and ontology recognized by practitioners and researchers around the world, RadLex provides a framework for working with radiology concepts, formulating new terms, creating conceptual relationships between terms, automating information processing, and developing new intelligent applications in radiology," Dr. Wang said. "RSNA's consistent support for this resource over the past 20 years has benefited the global radiology community, and positions radiology for further innovation in the era of artificial intelligence."

RSNA is an association of radiologists, radiation oncologists, medical physicists and related scientists promoting excellence in patient care and healthcare delivery through education, research and technologic innovation. The Society is based in Oak Brook, Ill. (RSNA.org)