

Global Trends in Artificial Intelligence Research Productivity in Radiology (2022-2026): A Bibliometric Analysis

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Background

- Artificial intelligence (AI) has rapidly transformed medical imaging and radiology research. The increasing integration of machine learning, deep learning, and automated diagnostic systems has accelerated scientific output in this field.
- Understanding global research productivity trends helps identify leading contributors, emerging research areas, and potential gaps in radiology AI research.

Purpose

The purpose of this study was to evaluate United States and global trends in artificial intelligence research productivity in radiology and its subspecialties.

Specifically, this study examined:

- Publication growth trends
- Country-level contributions
- Types of publications
- Radiology subspecialty involvement

Methods

Data Source

A comprehensive bibliographic database searching major scholarly journals including the PubMed database was used.

Search Strategy

Publications from 2022–2026 were retrieved using the following search terms: “Artificial Intelligence” “Radiodiagnosis”

Data Analysis

The resulting publication database was categorized by:

- Country of origin
- Publication type
- Journal source

Results

Overall Publications

- 28,700 AI-related radiology publications were identified globally between 2022 and 2026.

Leading Countries

- United States**
 - Largest contributor
 - 35–50% of global publications
- China**
 - Second largest contributor
 - 18% of total output

Publication Type	Percentage
Articles	53.7%
Proceedings Papers	38.0%
Meeting Abstracts	6.8%

Discussion

- The results highlight the rapid expansion of AI research in radiology globally.
- The number of AI-related radiology publications demonstrated exponential growth worldwide during the study period.
- Key observations include:
 - The United States remains the dominant contributor to AI radiology research.
 - China has rapidly increased its output, supported by strong government funding and specialized AI research infrastructure.
 - The large proportion of proceedings papers indicates the fast-moving and innovation-driven nature of the AI research field.
 - These findings emphasize the importance of continued research investment and infrastructure support.

Conclusions

- AI research in radiology has experienced significant exponential growth worldwide from 2022 to 2026.
- Key conclusions:
 - The United States leads global AI radiology research productivity.
 - China is the second largest contributor, driven by strong governmental and institutional support.
 - Continued government funding and prioritization of AI research will be critical for maintaining future research leadership.

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