clinics and practice

Review

Artificial Intelligence in Clinical Medicine: Challenges Across Diagnostic Imaging, Clinical Decision Support, Surgery, Pathology, and Drug Discovery

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Supplementary Table S1. PubMed Search Queries and Corresponding Hit Counts.

Domain	Search String (MeSH + Keywords)	Filters Applied	Records Retrieved
Diagnostic Imaging	("artificial intelligence"[MeSH] OR "machine learning" OR "deep learning" OR "neural network") AND ("radiology" OR "medical imaging" OR "CT" OR "MRI" OR "ultrasound" OR "X-ray")	Clinical trials, Human studies, Reviews	812
Clinical Decision Support	("artificial intelligence" OR "machine learning" OR "deep learning") AND ("clinical decision support" OR "CDSS" OR "electronic health records" OR "EHR" OR "risk prediction")	RCTs, Human studies, Reviews	456
Surgery	("artificial intelligence" OR "machine learning" OR "deep learning") AND ("surgery" OR "robotics" OR "intraoperative guidance" OR "surgical planning")	Clinical trials, Human studies	315
Pathology	("artificial intelligence" OR "machine learning" OR "deep learning") AND ("pathology" OR "histopathology" OR "digital pathology" OR "computational pathology")	Human studies, Reviews	229
Drug Discovery	("artificial intelligence" OR "machine learning" OR "deep learning") AND ("drug discovery" OR "drug development" OR "drug design" OR "virtual screening" OR "protein structure")	Reviews, Human studies	235
Total (before duplicates removed)	–	–	2,047

Supplementary Table S2. Categorization of Included Studies by Domain and Level of Evidence.

Domain	No. of Studies	Level I (RCTs)	Level II (Cohort)	Level III (Case-Control)	Level IV (Case Series)	Level V (Expert Opinion / Reviews)	Level VI (Mechanistic/Preclinical)
Diagnostic Imaging	80	12	25	18	15	10	0
Clinical Decision Support	20	4	6	4	3	3	0
Surgery	25	2	7	6	5	5	0
Pathology	20	3	5	4	5	3	0
Drug Discovery	25	0	5	3	7	10	0
Total	150	21	48	35	35	31	0

(Based on the Oxford Centre for Evidence-Based Medicine, 2011 – see: ***https://www.ncbi.nlm.nih.gov/books/NBK470182/***).

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