Database	Timespan	Search strategy		Selection criteria	Articles inclued
Pubmed	January 1, 2021 to September 25, 2025	Diagnosis	Pathloogic	Inclusion	
			Tomor grading: "DL" AND "cancer" AND "grading"		N=9
			Tomor subtype: "DL" AND "cancer" AND "subtypes"		N=17
			Tomor metastasis: "DL" AND "cancer" AND "metastasis"		N=12
			Oncologic imaging	(1) Transparent dataset documentation	
			MRI: "DL" AND "diagnosis" AND " magnetic resonance imaging""		N=17
			CT: "DL" AND" diagnosis" AND "computed tomography"		N=9
			Ultrasonography: "DL" AND "diagnosis" AND "ultrasonography"		N=7
			X-ray: "DL" AND "diagnosis" AND "X-ray"	(2) Application of clearly described DL models	N=4
			Laboratory diagnostics		
			Blood cell morphology: "DL" AND "diagnosis" AND "blood cell"		N=9
			Chromosome: "DL" AND "diagnosis" AND "chromosome"	(3) With excellent quantitative performance metrics (eg. AUROC, Accuracy, Sensitivity, C-index)	N=8
			Flow cytometric: "DL" AND "diagnosis" AND "flow cytometric"		N=9
			Next-Generation sequencing: "DL" AND "diagnosis" AND "next-generation sequencing"		N=15
			Fluorescence in stiu hybridization: "DL" AND "diagnosis" AND "fluorescence in situ hybridization"		N=5
			Multi-modal diagnosis: "DL" AND "multi modal" AND "diagnosis"		N=8
		Therapy	Drug combinations: "DL" AND "drug combination"	Excluded	N=6
			Radiotherapy planning: "DL" AND "radiotherapy" OR "radiation therapy"		N=14
			Therapeutic target: "DL" AND "therapeutic target "	(1) Commentaries, review articles, conference abstracts without complete methodological or results	N=4
		Prognosis and disease management	Cancer progression: "DL" AND "cancer progression"		N=6
			Treatment response: "DL" AND "treatment response"		N=12
			Cancer survival: "DL" AND "cancer survival"		N=19
			Gene mutations and oncogene expression: "DL" AND "gene mutations" OR "oncogene expression"		N=12

Supplemental Figure 1. Search terms and numbers of articles identified for inclusion. The total articles captured refers to the PubMed database from the period of January 1, 2021 to September 25, 2025, and from January 2016 to September 25, 2025, using the search terms indicated. The

studies included were strongly associated with the topic and significantly influential in this field. Excluded were commentaries, review articles, conference abstracts lacking complete methodological or results.