Title	Source	Journal/ MICCAI volume	Publication Year	Authors	DOI	Diagnosis focus	Classification task	Test set	Class balance of test set	Main classification performance metric	Other classification performance metrics REPORTED	Calibration reported or discussed	Calibration metric	Standardized metrics	Has minority metric	Calibration measured	Standarized main metric	Balance binary
A Coherent Cooperative Learning Framework Based on Transfer Learning for Unsupervised Cross-Domain Classification	MICCAI Proceedings	Computer Aided Diagnosis	2021	Xinxin Shan, Ying Wen, Qingli Li, Yue Lu, and Haibin Cai	10.1007/978-3-030-87240-3 10	Tuberculosis	Binary	Three public datasets, inlcuding Chest-XRay14	Imbalance	Accuracy	Precision, Recall , F1 score	No		['vpp', 'sens', 'f1score']	TRUE	No	Accuracy	Imbalanced
AnaXNet: Anatomy Aware Multi-label Finding Classification in Chest X-Ray	MICCAI Proceedings	Outcome/Disease Prediction	2021	Nkechinyere N. Agu, Joy T. Wu, Hanqing Chao, Ismini Lourentzou, Arjun Sharma, Mehdi Moradi, Pingkun Yan, and James Hendler	10.1007/978-3-030-87240-3_77	9 findings	Multiple binary tasks	Chest ImaGenome dataset	Imbalance	AUC-ROC	-	No		[']	FALSE	No	AUC-ROC	Imbalanced
RATCHET: Medical Transformer for Chest X-ray Diagnosis and Reporting	MICCAI Proceedings	Clinical Applications - Lung	2021	Benjamin Hou, Georgios Kaissis, Ronald M. Summers, and Bernhard Kainz	10.1007/978-3-030-87234-2_28	Report generation for multiple findings	Multiple binary tasks	MIMIC CXR	Imbalance	Other	-	No		[']	FALSE	No	Other	Imbalanced
CheXRelNet: An Anatomy-Aware Model for Tracking Longitudinal Relationships Between Chest X-Ray	MICCAI Proceedings	Heart and Lung Imaging	2022	Gaurang Karwande, Amarachi B. Mbakwe, Joy T. Wu, Leo A. Celi, Mehdi Moradi, and Ismini Lourentzou	10.1007/978-3-031-16431-6 55	Improved or worsened pathologies in two cronological chest x-rays	Multiple binary tasks	Chest ImaGenome dataset	Imbalance	Accuracy	-	No		[']	FALSE	No	Accuracy	Imbalanced
Computer-Aided Tuberculosis Diagnosis with Attribute Reasoning Assistance	MICCAI Proceedings	Heart and Lung Imaging	2022	Chengwei Pan, Gangming Zhao, Junjie Fang, Baolian Qi, Jiaheng Liu, Chaowei Fang, Dingwen Zhang, Jinpeng Li and Yizhou Yu	10.1007/978-3-031-16431-6_59	Tuberculosis	Binary	TBX11K dataset	Imbalance	Accuracy	F1score	No		['f1score']	TRUE	No	Accuracy	Imbalanced
A Comprehensive Study of Modern Architectures and Regularization Approaches on CheXpert5000	MICCAI Proceedings	Heart and Lung Imaging	2022	Sontje Ihler , Felix Kuhnke, and Svenja Spindeldreier	10.1007/978-3-031-16431-6_62	5 findings	Multiple binary tasks	Chexpert5000	Imbalance	AUC-ROC	AUC-PR	Yes	ECE	['auc-pr']	FALSE	No	AUC-ROC	Imbalanced
Consistency-Based Semi-supervised Evidential Active Learning for Diagnostic Radiograph Classification	MICCAI Proceedings	Heart and Lung Imaging	2022	Shafa Balaram, Cuong M. Nguyen, Ashraf Kassim, and Pavitra Krishnaswamy	10.1007/978-3-031-16431-6 64	Multiple findings	Multiple binary tasks	Chest X-Ray14	Imbalance	AUC-ROC	AUC-PR	No		['auc-pr']	FALSE	No	AUC-ROC	Imbalanced
Self-Rating Curriculum Learning for Localization and Segmentation of Tuberculosis on Chest Radiograph	MICCAI Proceedings	Heart and Lung Imaging	2022	Kunlei Hong, Lin Guo, and Yuan-ming Fleming Lure	10.1007/978-3-031-16431-6_65	Tuberculosis	Binary	Private set	Imbalance	AUC-ROC	-	No		[']	FALSE	No	AUC-ROC	Imbalanced
Did You Get What You Paid For? Rethinking Annotation Cost of Deep Learning Based Computer AidedDetection in Chest Radiographs	MICCAI Proceedings	Computer Aided Diagnosis	2022	Tae Soo Kim, Geonwoon Jang, Sanghyup Lee, and Thijs Kooi	10.1007/978-3-031-16437-8_25	Multiple findings	Multiple binary tasks	Private set	Imbalance	AUC-ROC	-	No		[']	FALSE	No	AUC-ROC	Imbalanced
Self-Ensembling Vision Transformer (SEViT) for Robust Medical Image Classification	MICCAI Proceedings	Computer Aided Diagnosis	2022	Faris Almalik , Mohammad Yaqub , and Karthik Nandakumar	10.1007/978-3-031-16437-8_36	Tuberculosis	Binary	Rahman et al	Balance	Accuracy	AUC-ROC	No		['auc-roc']	FALSE	No	Accuracy	Balanced
NVUM: Non-volatile Unbiased Memory for Robust Medical Image Classification	MICCAI Proceedings	Computer Aided Diagnosis	2022	Fengbei Liu, Yuanhong Chen, Yu Tian, Yuyuan Liu, Chong Wang, Vasileios Belagiannis, and Gustavo Carneiro	10.1007/978-3-031-16437-8_52	Multiple findings	Multiple binary tasks	OpenI and PadChest	Imbalance	AUC-ROC	-	Yes	Custom loss function	[']	FALSE	Yes	AUC-ROC	Imbalanced
Dual-Distribution Discrepancy for Anomaly Detection in Chest X-Rays	MICCAI Proceedings	Computer Aided Diagnosis	2022	Yu Cai, Hao Chen, Xin Yang, Yu Zhou, and Kwang-Ting Cheng	10.1007/978-3-031-16437-8_56	Abnormality	Binary	RSNA Pneumonia, VinBigData, Chest X-ray Anomaly Detection	Balance	AUC-ROC	-	No		[']	FALSE	No	AUC-ROC	Balanced
GazeRadar: A Gaze and Radiomics-Guided Disease Localization Framework	MICCAI Proceedings	Computer Aided Diagnosis	2022	Moinak Bhattacharya, Shubham Jain, and Prateek Prasanna	10.1007/978-3-031-16437-8_66	Multiple findings	Multiple binary tasks	RSNA Pneumonia, SIIM-FISABIO-RSNA COVID19, Chest X-ray14, VinBigData	Imbalance	AUC-ROC	-	No		[']	FALSE	No	AUC-ROC	Imbalanced
TUNA-Net: Task-Oriented UNsupervised Adversarial Network for Disease Recognition in Cross-domain Chest X-rays	MICCAI Proceedings	X-Ray Imaging	2019	Yuxing Tang, Youbao Tang, Veit Sandfort, Jing Xiao, Ronald M. Summers	10.1007/978-3-030-32226-7_48	Pneumonia	Binary	Guangzhou and Kaggle Pneumonia	Imbalance	AUC-ROC	Accuracy;sens;spec;f1score	No	no	['accuracy', 'sens', 'spec', 'f1score']	TRUE	No	AUC-ROC	Imbalanced
GraphX NET Chest X-Ray Classification Under Extreme Minimal Supervision	MICCAI Proceedings	X-Ray Imaging	2019	Angelica I. Aviles-Rivero, Nicolas Papadakis, Ruoteng Li, Philip Sellars, Qingnan Fan, Robby T. Tan	10.1007/978-3-030-32226-7_56	Several findings	Multilabel	ChestXray-14	Imbalance	AUC-ROC	---	No	no	[']	FALSE	No	AUC-ROC	Imbalanced
Automated Detection and Type Classification of Central Venous Catheters in Chest X-Rays	MICCAI Proceedings	X-Ray Imaging	2019	Vaishnavi Subramanian, Hongzhi Wang, Joy T. Wu, Ken C. L. Wong, Arjun Sharma, Tanveer Syeda-Mahmood	10.1007/978-3-030-32226-7_58	Catheter	Binary/Multiclass	ChestXray-14	Imbalance	Accuracy	Precision;recall;AUC-ROC	No	NO	['vpp', 'sens', 'auc-roc']	FALSE	No	Accuracy	Imbalanced
Adaptive Image-Feature Learning for Disease Classification Using Inductive Graph Networks	MICCAI Proceedings	X-Ray Imaging	2019	Hendrik Burwinkel, Anees Kazi, Gerome Vivar, Shadi Albarqouni, Guillaume Zahnd, Nassir Navab	10.1007/978-3-030-32226-7_71	Several findings	Multilabel	ChestXray-14	Imbalance	Accuracy	---	No	no	[']	FALSE	No	Accuracy	Imbalanced
Quantifying and Leveraging Classification Uncertainty for Chest Radiograph Assessment	MICCAI Proceedings	X-Ray Imaging	2019	Florin C. Ghesu, Bogdan Georgescu, Eli Gibson, Sebastian Guendel, Mannudeep K. Kalra, Ramandeep Singh	10.1007/978-3-030-32226-7_75	Several findings	Multilabel	ChestXray-14 and PLCO	Imbalance	AUC-ROC	f1score	Yes	Predictive uncertainty	['f1score']	TRUE	Yes	AUC-ROC	Imbalanced
Automatic Radiology Report Generation Based on Multi-view Image Fusion and Medical Concept Enrichment	MICCAI Proceedings	X-Ray Imaging	2019	Jianbo Yuan, Haofu Liao, Rui Luo, Jiebo Luo	10.1007/978-3-030-32226-7_80	Several findings	Multilabel	CheXpert and ChestXray14	Imbalance	AUC-ROC	---	No	no	[']	FALSE	No	AUC-ROC	Imbalanced
Multi-label Thoracic Disease Image Classification with Cross-Attention Networks	MICCAI Proceedings	X-Ray Imaging	2019	Congbo Ma, Hu Wang, Steven C. H. Hoi	10.1007/978-3-030-32226-7_81	Several findings	Multilabel	ChestXray-14	Imbalance	AUC-ROC	---	No	no	[']	FALSE	No	AUC-ROC	Imbalanced
InfoMask: Masked Variational Latent Representation to Localize Chest Disease	MICCAI Proceedings	X-Ray Imaging	2019	Saeid Asgari Taghanak, Mohammad Havaei, Tess Berthier, Francis Dutil, Lisa Di Jorio, Ghassan Hamarneh	10.1007/978-3-030-32226-7_82	Several findings	Multilabel	ChestXray-14	Imbalance	Accuracy	AUC-ROC	No	no	['auc-roc']	FALSE	No	Accuracy	Imbalanced
Longitudinal Change Detection on Chest X-rays Using Geometric Correlation Maps	MICCAI Proceedings	X-Ray Imaging	2019	Dong Yul Oh, Jihang Kim, Kyong Joon Lee	10.1007/978-3-030-32226-7_83	Longitudinal change	Binary	Private set	Imbalance	AUC-ROC	sens;spec	No	no	['sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Semi-supervised Learning by Disentangling and Self-ensembling over Stochastic Latent Space	MICCAI Proceedings	X-Ray Imaging	2019	Prashnna Kumar Gyawali, Zhiyuan Li, Sandesh Ghimire, Linwei Wang	10.1007/978-3-030-32226-7_85	Several findings	Multilabel	CheXpert	Imbalance	AUC-ROC	---	No	NO	[']	FALSE	No	AUC-ROC	Imbalanced
Endotracheal Tube Detection and Segmentation in Chest Radiographs Using Synthetic Data	MICCAI Proceedings	X-Ray Imaging	2019	Maayan Frid-Adar, Rula Amer, Hayit Greenspan	10.1007/978-3-030-32226-7_87	Endotracheal tube	Binary	ChestXray-14	Balance	AUC-ROC	sens;spec	No	no	['sens', 'spec']	FALSE	No	AUC-ROC	Balanced
Learning Interpretable Features via Adversarially Robust Optimization	MICCAI Proceedings	X-Ray Imaging	2019	Ashkan Khakza, Shadi Albarqouni, Nassir Navab	10.1007/978-3-030-32226-7_88	Several findings	Multilabel	ChestXray-14	Imbalance	AUC-ROC	---	No	NO	[']	FALSE	No	AUC-ROC	Imbalanced
Learning Semantics-Enriched Representation via Self-discovery, Self-classification, and Self-restoration	MICCAI Proceedings	Machine Learning Methodologies	2020	Fatemeh Haghighi1, Mohammad Reza Hosseinzadeh Taher1, Zongwei Zhou1,Michael B. Gotway2, and Jianming Liang1	10.1007/978-3-030-59710-8_14	Several findings (assumed ChestX-Ray14 classes)	Multilabel	ChestXray-14	Imbalance	AUC-ROC	---	No	NO	[']	FALSE	No	AUC-ROC	Imbalanced
DECAPS: Detail-Oriented Capsule Networks	MICCAI Proceedings	Machine Learning Methodologies	2020	Aryan Mobiny, Pengyu Yuan, Pietro Antonio Cicalese and Hien Van Nguyen	10.1007/978-3-030-59710-8_15	Several findings (CheXpert main 5 classes)	Multilabel	CheXpert and RSNA Pneumonia	Imbalance	AUC-ROC	---	No	NO	[']	FALSE	No	AUC-ROC	Imbalanced
Domain Aware Medical Image Classifier Interpretation by Counterfactual Impact Analysis	MICCAI Proceedings	Machine Learning Methodologies	2020	Dimitrios Lenis, David Major, Maria Wimmer, Astrid Berg, Gert Sluiter, and Katja B�hler	10.1007/978-3-030-59710-8_31	Tuberculosis	Binary	Private set	Balance	AUC-ROC	---	No	NO	[']	FALSE	No	AUC-ROC	Balanced
Comparing to Learn: Surpassing ImageNet Pretraining on Radiographs by Comparing Image Representations	MICCAI Proceedings	Machine Learning Methodologies	2020	Hong-Yu Zhou, Shuang Yu, Cheng Bian, Yifan Hu, Kai Ma, Yefeng Zheng	10.1007/978-3-030-59710-8_39	Several findings	Multilabel	Multiple public datasets	Imbalance	AUC-ROC	---	No	NO	[']	FALSE	No	AUC-ROC	Imbalanced
SALAD: Self-supervised Aggregation Learning for Anomaly Detection on X-Rays	MICCAI Proceedings	Machine Learning Methodologies	2020	Behzad Bozorgtaba, Dwarikanath Mahapatra, Guillaume Vray, Jean-Philippe Thiran	10.1007/978-3-030-59710-8_46	Abnormal vs normal	Binary	ChestXray-14	Imbalance	AUC-ROC, AUC-PR	---	No	NO	[']	FALSE	No	AUC-ROC	Imbalanced
Semi-supervised Medical Image Classification with Global Latent Mixing	MICCAI Proceedings	Machine Learning Methodologies	2020	Prashnna Kumar Gyawali, Sandesh Ghimire, Pradeep Bajracharya, Zhiyuan Li, Linwei Wang	10.1007/978-3-030-59710-8_59	Several findings	Multilabel	CheXpert	Imbalance	AUC-ROC	---	Yes	Reliability plots	[']	FALSE	Yes	AUC-ROC	Imbalanced
Characterizing Label Errors: Confident Learning for Noisy-Labeled Image Segmentation	MICCAI Proceedings	Machine Learning Methodologies	2020	Minqing Zhang, Jiantao Gao, Zhen Lyu, Weibing Zhao, Qin Wang, Weizhen Ding, Sheng Wang, Zhen Li, Shuguang Cui	10.1007/978-3-030-59710-8_70	Noisy mask labels	Binary	JSRT	Imbalance	F1-score	Recall;precision	No	no	['sens', 'vpp']	FALSE	No	Other	Imbalanced
Joint Modeling of Chest Radiographs and Radiology Reports for Pulmonary Edema Assessment	MICCAI Proceedings	Machine Learning Applications	2020	Geeticka Chauhan, Ruizhi Liao, William Wells, Jacob Andreas, Xin Wang, Seth Berkowitz, Steven Horng, Peter Szolovits, Polina Golland	10.1007/978-3-030-59713-9_51	Pulmonary edema	Binary	MIMIC-CXR	Imbalance	AUC-ROC	f1score	No	no	['f1score']	TRUE	No	AUC-ROC	Imbalanced
Chest X-Ray Report Generation Through Fine-Grained Label Learning	MICCAI Proceedings	Machine Learning Applications	2020	Tanveer Syeda-Mahmood, Ken C. L. Wong, Yaniv Gur, Joy T. Wu, Ashutosh Jadhav, Satyananda Kashyap, Alexandros Karargyris, Anup Pillai, Arjun Sharma, Ali Bin Syed, Orest Boyko, Mehdi Moradi	10.1007/978-3-030-59713-9_54	Several findings	Multilabel	MIMIC-CXR and ChestX-Ray14	Imbalance	AUC-ROC	f1score;precision	No	no	['f1score', 'vpp']	TRUE	No	AUC-ROC	Imbalanced
Abnormality Detection in Chest X-Ray Images Using Uncertainty Prediction Autoencoders	MICCAI Proceedings	Heart and Lung Imaging	2020	Yifan Mao, Fei-Fei Xue, Ruixuan Wang, Jianguo Zhang, Wei-Shi Zheng, Hongmei Liu	10.1007/978-3-030-59725-2_51	Pneumonia	Binary	Kaggle pneumonia and pediatric	Imbalance	AUC-ROC	f1score;equal error rate	Yes	Uncertainty score	['f1score', 'equal error rate']	TRUE	Yes	AUC-ROC	Imbalanced
Development and Validation of a Deep Learning-based Automatic Detection Algorithm for Active Pulmonary Tuberculosis on Chest Radiographs	Pubmed search	Clin Infect Dis	2019	Hwang EJ, Park S, Jin KN, Kim JI, Choi SY, Lee JH, Goo JM, Aum J, Yim JJ, Park CM; Deep Learning-Based Automatic Detection Algorithm Development and Evaluation Group.	10.1093/cid/ciy967	TB	Binary	Institutional+Montgomery+Shenzhen	Balance	AUC-ROC	sens;spec	No	---	['sens', 'spec']	FALSE	No	AUC-ROC	Balanced
Deep Learning Algorithms with Demographic Information Help to Detect Tuberculosis in Chest Radiographs in Annual Workers' Health Examination Data	Pubmed search	Int J Environ Res Public Health	2019	Heo SJ, Kim Y, Yun S, Lim SS, Kim J, Nam CM, Park EC, Jung I, Yoon JH.	10.3390/ijerph16020250	TB	Binary	Institutional	Imbalance	AUC-ROC	sens;spec	No	---	['sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Comparison of Deep Learning Approaches for Multi-Label Chest X-Ray Classification	Pubmed search	Sci Rep	2019	Baltruschat IM, Nickisch H, Grass M, Knopp T, Saalbach A.	10.1038/s41598-019-42294-8	14 abnormalities	Multilabel	ChestX-Ray14	Imbalance	AUC-ROC	sens;spec	No	---	['sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Performance of Deep Learning Model in Detecting Operable Lung Cancer With Chest Radiographs	Pubmed search	J Thorac Imaging	2019	Cha MJ, Chung MJ, Lee JH, Lee KS.	10.1097/RTI.0000000000000388	Nodules	Binary	Institutional	Imbalance	AUC-FROC	sens;spec;	No	---	['sens', 'spec', '']	FALSE	No	AUC-ROC	Imbalanced

Using deep-learning techniques for pulmonary-thoracic segmentations and improvement of pneumonia diagnosis in pediatric chest radiographs	Pubmed search	Pediatr Pulmonol	2019	E L, Zhao B, Guo Y, Zheng C, Zhang M, Lin J, Luo Y, Cai Y, Song X, Liang H.	10.1002/ppul.24431	Pneumonia type	Binary	Guangzhou WCMC + JSRT	Imbalance	AUC-ROC	segmentation metrics	No	---	['segmentation metrics']	FALSE	No	AUC-ROC	Imbalanced
Deep Learning to Assess Long-term Mortality From Chest Radiographs	Pubmed search	JAMA Netw Open	2019	Lu MT, Ivanov A, Mayrhofer T, Hosny A, Aerts HJWL, Hoffmann U.	10.1001/jamanetworkopen.2019.7416	Mortality	Binary	Institutional	Imbalance	AUC-ROC	sens;spec	Yes	Calibration slope	['sens', 'spec']	FALSE	Yes	AUC-ROC	Imbalanced
Using artificial intelligence to read chest radiographs for tuberculosis detection: A multi-site evaluation of the diagnostic accuracy of three deep learning systems	Pubmed search	Sci Rep	2019	Qin ZZ, Sander MS, Rai B, Titahong CN, Sudrungrot S, Laah SN, Adhikari LM, Carter EJ, Puri L, Codlin AJ, Creswell J.	10.1038/s41598-019-51503-3	TB	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;accuracy	No	---	['sens', 'spec', 'accuracy']	FALSE	No	AUC-ROC	Imbalanced
Development and Validation of Deep Learning-based Automatic Detection Algorithm for Malignant Pulmonary Nodules on Chest Radiographs	Pubmed search	Radiology	2019	Nam JG, Park S, Hwang EJ, Lee JH, Jin KN, Lim KY, Vu TH, Sohn JH, Hwang S, Goo JM, Park CM.	10.1148/radiol.2018180237	Nodules	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;F1score;JAFROC-FOM	No	---	['sens', 'spec', 'f1score', 'jafroc-fom']	TRUE	No	AUC-ROC	Imbalanced
Development and Validation of a Deep Learning-Based Automated Detection Algorithm for Major Thoracic Diseases on Chest Radiographs	Pubmed search	JAMA Netw Open	2019	Hwang EJ, Park S, Jin KN, Kim JI, Choi SY, Lee JH, Goo JM, Aum J, Yim JJ, Cohen JG, Ferretti GR, Park CM; DLAD Development and Evaluation Group.	10.1001/jamanetworkopen.2019.1095	Major thoracic disease	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;F1score;AUC-JAFROC	No	---	['sens', 'spec', 'f1score', 'auc-jafroc']	TRUE	No	AUC-ROC	Imbalanced
Application of deep learning-based computer-aided detection system: detecting pneumothorax on chest radiograph after biopsy	Pubmed search	Eur Radiol	2019	Park S, Lee SM, Kim N, Choe J, Cho Y, Do KH, Seo JB.	10.1007/s00330-019-06130-x	Pneumothorax	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;accuracy; PPV; NPV	No	---	['sens', 'spec', 'accuracy', 'ppv', 'npv']	TRUE	No	AUC-ROC	Imbalanced
Deep Learning Method for Automated Classification of Anteroposterior and Posteroanterior Chest Radiographs	Pubmed search	J Digit Imaging	2019	Kim TK, Yi PH, Wei J, Shin JW, Hager G, Hui FK, Sair HI, Lin CT.	10.1007/s10278-019-00208-0	AP/PA	Binary	ChestX-Ray14	Imbalance	AUC-ROC	accuracy;sens;spec;PPV;NPV	No	---	['accuracy', 'sens', 'spec', 'ppv', 'npv']	TRUE	No	AUC-ROC	Imbalanced
Deep Learning for Chest Radiograph Diagnosis in the Emergency Department	Pubmed search	Radiology	2019	Hwang EJ, Nam JG, Lim WH, Park SJ, Jeong YS, Kang JH, Hong EK, Kim TM, Goo JM, Park S, Kim KH, Park CM.	10.1148/radiol.2019191225	Abnormal	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;PPV;NPV	No	---	['sens', 'spec', 'ppv', 'npv']	TRUE	No	AUC-ROC	Imbalanced
Assessment of an ensemble of machine learning models toward abnormality detection in chest radiographs	Pubmed search	Annu Int Conf IEEE Eng Med Biol Soc	2019	Rajaraman S, Sornapudi S, Kohli M, Antani S.	10.1109/EMBC.2019.8856715	Abnormal	Binary	Kaggle	Imbalance	Accuracy	AUC-ROC, f1score; MCC	No	---	['auc-roc', 'f1score', 'mcc']	TRUE	No	Accuracy	Imbalanced
Human-machine partnership with artificial intelligence for chest radiograph diagnosis	Pubmed search	NPJ Digit Med	2019	Patel BN, Rosenberg L, Willcox G, Baltaxe D, Lyons M, Irvin J, Rajpurkar P, Amrhein T, Gupta R, Halabi S, Langlotz C, Lo E, Mammarappallil J, Mariano AJ, Riley G, Seekins J, Shen L, Zucker E, Lungren M.	10.1038/s41746-019-0189-7	Pneumonia	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;f1score	Yes	Brier; MAE	['sens', 'spec', 'f1score']	TRUE	Yes	AUC-ROC	Imbalanced
Deep learning-based detection system for multiclass lesions on chest radiographs: comparison with observer readings	Pubmed search	Eur Radiol	2020	Park S, Lee SM, Lee KH, Jung KH, Bae W, Choe J, Seo JB.	10.1007/s00330-019-06532-x	Abnormal	Binary	Institutional	Balance	AUC-ROC	sens;spec;JAFROC-FOM	No	---	['sens', 'spec', 'jafroc-fom']	FALSE	No	AUC-ROC	Balanced
Optimal matrix size of chest radiographs for computer-aided detection on lung nodule or mass with deep learning	Pubmed search	Eur Radiol	2020	Kim YG, Lee SM, Lee KH, Jang R, Seo JB, Kim N.	10.1007/s00330-020-06892-9	Nodules	Binary	Institutional	Balance	AUC-ROC	sens	No	---	['sens']	FALSE	No	AUC-ROC	Balanced
Deep learning for automated classification of tuberculosis-related chest X-Ray: dataset distribution shift limits diagnostic performance generalizability	Pubmed search	Heliyon	2020	Sathitratanacheewin S, Sunanta P, Pongpirul K.	10.1016/j.heliyon.2020.e04614	TB	Binary	Institutional+ChestXRay8	Balance	AUC-ROC	sens;spec	No	---	['sens', 'spec']	FALSE	No	AUC-ROC	Balanced
Deep learning to predict elevated pulmonary artery pressure in patients with suspected pulmonary hypertension using standard chest X ray	Pubmed search	Sci Rep	2020	Kusunose K, Hirata Y, Tsuji T, Kotoku J, Sata M.	10.1038/s41598-020-76359-w	Pulmonary arterial pressure	Binary	Institutional+Kaggle	Balance	AUC-ROC	Prognosis	No	---	['prognosis']	FALSE	No	AUC-ROC	Balanced
Chest x-ray analysis with deep learning-based software as a triage test for pulmonary tuberculosis: a prospective study of diagnostic accuracy for culture-confirmed disease	Pubmed search	Lancet Digit Health	2020	Khan FA, Majidulla A, Tavaziva G, Nazish A, Abidi SK, Benedetti A, Menzies D, Johnston JC, Khan AJ, Saeed S.	10.1016/S2589-7500(20)30221-1	TB	Binary	Institutional	Balance	sens;spec	---	No	---	['']	FALSE	No	Other	Balanced
Identifying pulmonary nodules or masses on chest radiography using deep learning: external validation and strategies to improve clinical practice	Pubmed search	Clin Radiol	2020	Liang CH, Liu YC, Wu MT, Garcia-Castro F, Alberich-Bayarri A, Wu FZ.	10.1016/j.crad.2019.08.005	Nodules	Binary	Institutional	Balance	AUC-ROC	sens;spec;PPV;NPV;accuracy;LR	No	---	['sens', 'spec', 'ppv', 'npv', 'accuracy', 'lr']	TRUE	No	AUC-ROC	Balanced
Modality-specific deep learning model ensembles toward improving TB detection in chest radiographs	Pubmed search	IEEE Access	2020	Rajaraman S, Antani SK.	10.1109/access.2020.2971257	TB	Binary	Shenzhen	Balance	Accuracy	AUC-ROC;sens;spec;F1score;MCC	No	---	['auc-roc', 'sens', 'spec', 'f1score', 'mcc']	TRUE	No	Accuracy	Balanced
Potential of deep learning in assessing pneumoconiosis depicted on digital chest radiography	Pubmed search	Occup Environ Med	2020	Wang X, Yu J, Zhu Q, Li S, Zhao Z, Yang B, Pu J.	10.1136/oemed-2019-106386	pneumoconiosis	Binary	Institutional	Balance	AUC-ROC	sens;spec;PPV;NPV;kappa	No	---	['sens', 'spec', 'ppv', 'npv', 'kappa']	TRUE	No	AUC-ROC	Balanced
A promising approach for screening pulmonary hypertension based on frontal chest radiographs using deep learning: A retrospective study	Pubmed search	PLoS One	2020	Zou XL, Ren Y, Feng DY, He XQ, Guo YF, Yang HL, Li X, Fang J, Li Q, Ye JJ, Han LQ, Zhang TT.	10.1371/journal.pone.0236378	Pulmonary arterial pressure	Binary	Institutional	Balance	AUC-ROC	MAE; F1score; sens;spec; PPV;NPV	No	---	['mae', 'f1score', 'sens', 'spec', 'ppv', 'npv']	TRUE	No	AUC-ROC	Balanced
CheXaid: deep learning assistance for physician diagnosis of tuberculosis using chest x-rays in patients with HIV	Pubmed search	NPJ Digit Med	2020	Rajpurkar P, O'Connell C, Schechter A, Asnani N, Li J, Kiani A, Ball RL, Mendelson M, Maartens G, van Hoving DJ, Griesel R, Ng AY, Boyles TH, Lungren MP.	10.1038/s41746-020-00322-2	TB	Binary	Institutional	Balance	Accuracy	sens;spec; AUC-ROC	No	---	['sens', 'spec', 'auc-roc']	FALSE	No	Accuracy	Balanced
Extravalidation and reproducibility results of a commercial deep learning-based automatic detection algorithm for pulmonary nodules on chest radiographs at tertiary hospital	Pubmed search	J Med Imaging Radiat Oncol	2020	Koo YH, Shin KE, Park JS, Lee JW, Byun S, Lee H.	10.1111/1754-9485.13105	Nodules	Binary	Institutional	Balance	AUC-ROC	JAFROC-FOM; sens;spec	No	---	['jafroc-fom', 'sens', 'spec']	FALSE	No	AUC-ROC	Balanced
Deep Learning Using Chest Radiographs to Identify High-Risk Smokers for Lung Cancer Screening Computed Tomography: Development and Validation of a Prediction Model	Pubmed search	Ann Intern Med	2020	Lu MT, Raghu VK, Mayrhofer T, Aerts HJWL, Hoffmann U.	10.7326/M20-1868	Nodules	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;prognosis;	Yes	---	['sens', 'spec', 'prognosis', '']	FALSE	No	AUC-ROC	Imbalanced
Smart chest X-ray worklist prioritization using artificial intelligence: a clinical workflow simulation	Pubmed search	Eur Radiol	2020	Baltruschat I, Steinmeister L, Nickisch H, Saalbach A, Grass M, Adam G, Knopp T, Ittrich H.	10.1007/s00330-020-07480-7	8 anomalies	Multilabel	ChestX-Ray8	Imbalance	AUC-ROC	sens;spec;time to report	No	---	['sens', 'spec', 'time to report']	FALSE	No	AUC-ROC	Imbalanced
Performance of a Deep Learning Algorithm Compared with Radiologic Interpretation for Lung Cancer Detection on Chest Radiographs in a Health Screening Population	Pubmed search	Radiology	2020	Lee JH, Sun HY, Park S, Kim H, Hwang EJ, Goo JM, Park CM.	10.1148/radiol.2020201240	Nodules	Binary	Institutional	Imbalance	AUC-ROC	sens;spec; PPV;NPV; accuracy	No	---	['sens', 'spec', 'ppv', 'npv', 'accuracy']	TRUE	No	AUC-ROC	Imbalanced
Deep learning, reusable and problem-based architectures for detection of consolidation on chest X-ray images	Pubmed search	Comput Methods Programs Biomed	2020	Behzadi-Khormouji H, Rostami H, Salehi S, Derakhshande-Rishehri T, Masoumi M, Salemi S, Keshavarz A, Gholamrezanezhad A, Assadi M, Batouli A.	10.1016/j.cmpb.2019.105162	Consolidation	Binary	Guangzhou WCMC	Imbalance	AUC-ROC	sens;spec;accuracy	No	---	['sens', 'spec', 'accuracy']	FALSE	No	AUC-ROC	Imbalanced
Augmenting Interpretation of Chest Radiographs With Deep Learning Probability Maps	Pubmed search	J Thorac Imaging	2020	Hurt B, Yen A, Kligerman S, Hsiao A.	10.1097/RTI.0000000000000505	Pneumonia	Binary	Kaggle	Imbalance	AUC-ROC	sens;spec	No	---	['sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Deep Learning-based Automatic Detection Algorithm for Reducing Overlooked Lung Cancers on Chest Radiographs	Pubmed search	Radiology	2020	Jang S, Song H, Shin YJ, Kim J, Kim J, Lee KW, Lee SS, Lee W, Lee S, Lee KH.	10.1148/radiol.2020200165	Nodules	Binary	Institutional	Imbalance	AUC-ROC	sens;spec	No	---	['sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Impact of Confounding Thoracic Tubes and Pleural Dehiscence Extent on Artificial Intelligence Pneumothorax Detection in Chest Radiographs	Pubmed search	Invest Radiol	2020	Rueckel J, Trappmann L, Schachtner B, Wesp P, Hoppe BF, Fink N, Ricke J, Dinkel J, Ingrisch M, Sabel BO.	10.1097/RLI.0000000000000707	Pneumothorax with and without thoracic tube	Binary	Institutional	Imbalance	AUC-ROC	---	No	---	['']	FALSE	No	AUC-ROC	Imbalanced
Development and validation of a deep learning algorithm detecting 10 common abnormalities on chest radiographs	Pubmed search	Eur Respir J	2020	Nam JG, Kim M, Park J, Hwang EJ, Lee JH, Hong JH, Goo JM, Park CM.	10.1183/13993003.03061-2020	10 anomalies	Multilabel		Imbalance	AUC-ROC	time to report; sens; spec; accuracy	No	---	['time to report', 'sens', 'spec', 'accuracy']	FALSE	No	AUC-ROC	Imbalanced
Image-based Deep Learning in Diagnosing the Etiology of Pneumonia on Pediatric Chest X-rays	Pubmed search	Pediatr Pulmonol	2020	Longjiang E, Baisong Zhao, Liu H, Zheng C, Song X, Cai Y, Liang H.	10.1002/ppul.25229	Pneumonia type	Binary	Institutional	Imbalance	AUC-ROC	Kappa; sens; spec; LR	No	---	['kappa', 'sens', 'spec', 'lr']	FALSE	No	AUC-ROC	Imbalanced
Chest Radiograph Interpretation with Deep Learning Models: Assessment with Radiologist-adjudicated Reference Standards and Population-adjusted Evaluation	Pubmed search	Radiology	2020	Majkowska A, Mittal S, Steiner DF, Reicher JJ, McKinney SM, Duggan GE, Eswaran K, Cameron Chen PH, Liu Y, Kalidindi SR, Ding A, Corrado GS, Tse D, Shetty S.	10.1148/radiol.2019191293	Nodules;opacity; pneumothorax; fracture	Multilabel	Institutional+ChestX-Ray14	Imbalance	AUC-ROC	sens;spec;PPV;NPV	No	---	['sens', 'spec', 'ppv', 'npv']	TRUE	No	AUC-ROC	Imbalanced
Prediction of Pulmonary to Systemic Flow Ratio in Patients With Congenital Heart Disease Using Deep Learning-Based Analysis of Chest Radiographs	Pubmed search	JAMA Cardiol	2020	Toba S, Mitani Y, Yodoya N, Ohashi H, Sawada H, Hayakawa H, Hirayama M, Futsuki A, Yamamoto N, Ito H, Konuma T, Shimpo H, Takao M.	10.1001/jamacardio.2019.5620	High pulmonary to systemic flow ratio	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;PPV;NPV;accuracy	Yes	Regression metrics for systemic flow ratio prediction	['sens', 'spec', 'ppv', 'npv', 'accuracy']	TRUE	Yes	AUC-ROC	Imbalanced
Artificial Intelligence Algorithm Detecting Lung Infection in Supine Chest Radiographs of Critically Ill Patients With a Diagnostic Accuracy Similar to Board-Certified Radiologists	Pubmed search	Crit Care Med	2020	Rueckel J, Kunz WG, Hoppe BF, Patzig M, Notohamiprodjo M, Meinel FG, Cyran CC, Ingrisch M, Ricke J, Sabel BO.	10.1097/CCM.0000000000004397	Pneumonia and pleural efussion	Multilabel	Institutional	Imbalance	AUC-ROC	sens;spec;PPV;NPV;accuracy	No	---	['sens', 'spec', 'ppv', 'npv', 'accuracy']	TRUE	No	AUC-ROC	Imbalanced
Clinical Validation of a Deep Learning Algorithm for Detection of Pneumonia on Chest Radiographs in Emergency Department Patients with Acute Febrile Respiratory Illness	Pubmed search	J Clin Med	2020	Kim JH, Kim JY, Kim GH, Kang D, Kim IJ, Seo J, Andrews JR, Park CM.	10.3390/jcm9061981	Pneumonia	Binary	Institutional	Imbalance	AUC-ROC	sens;spec; PPV;NPV;	No	---	['sens', 'spec', 'ppv', 'npv', '']	TRUE	No	AUC-ROC	Imbalanced
An Efficient Method to Predict Pneumonia from Chest X-Rays Using Deep Learning Approach	Pubmed search	Stud Health Technol Inform	2020	Shah U, Abd-Alrazeq A, Alam T, Househ M, Shah Z.	10.3233/SHTI200594	Pneumonia	Binary	Kaggle	Imbalance	Accuracy	f1score; sens;spec; PPV;NPV	No	---	['f1score', 'sens', 'spec', 'ppv', 'npv']	TRUE	No	Accuracy	Imbalanced

Automated identification of chest radiographs with referable abnormality with deep learning: need for recalibration	Pubmed search	Eur Radiol	2020	Hwang EJ, Kim H, Lee JH, Goo JM, Park CM.	10.1007/s00330-020-07062-7	Abnormalities	Binary	Institutional	Imbalance	Brier	AUC-ROC, sens; spec; PPV;NPV;accuracy	Yes	Brier; Spiegelhalter’s Z statistics; Max and mean calibration error	['auc-roc', 'sens', 'spec', 'ppv', 'npv', 'accuracy']	TRUE	Yes	Other	Imbalanced
Deep-Pneumonia Framework Using Deep Learning Models Based on Chest X-Ray Images	Pubmed search	Diagnostics (Basel)	2020	Elshennawy NM, Ibrahim DM.	10.3390/diagnostics10090649	Pneumonia	Binary	kaggle	Imbalance	AUC-ROC	NPV;sens;F1score;accuracy	No	---	['npv', 'sens', 'f1score', 'accuracy']	TRUE	No	AUC-ROC	Imbalanced
Validation of a Deep Learning Algorithm for the Detection of Malignant Pulmonary Nodules in Chest Radiographs	Pubmed search	JAMA Netw Open	2020	Yoo H, Kim KH, Singh R, Digumarthy SR, Kalra MK.	10.1001/jamanetworkopen.2020.17135	Nodules	Binary	Institutional	Imbalance	AUC-ROC	SENS;SPEC;ppv;npv; kappa	No	---	['sens', 'spec', 'ppv', 'npv', 'kappa']	TRUE	No	AUC-ROC	Imbalanced
Comparison of Chest Radiograph Interpretations by Artificial Intelligence Algorithm vs Radiology Residents	Pubmed search	JAMA Netw Open	2020	Wu JT, Wong KCL, Gur Y, Ansari N, Karargyris A, Sharma A, Morris M, Saboury B, Ahmad H, Boyko O, Syed A, Jadhav A, Wang H, Pillai A, Kashyap S, Moradi M, Syeda-Mahmood T.	10.1001/jamanetworkopen.2020.22779	72 findings	Multilabel	MIMIC+ChestX-Ray14	Imbalance	AUC-ROC	sens;spec;PPV;kappa;	No	---	['sens', 'spec', 'ppv', 'kappa', '']	TRUE	No	AUC-ROC	Imbalanced
Impact of hybrid supervision approaches on the performance of artificial intelligence for the classification of chest radiographs	Pubmed search	Comput Biol Med	2020	Ellis R, Ellestad E, Elicker B, Hope MD, Tosun D.	10.1016/j.compbiomed.2020.103699	Abnormal	Binary	Institutional	Imbalance	AUC-ROC	Sens;spec;f1Score;NPP;PPV; accuracy	Yes	---	['sens', 'spec', 'f1score', 'npp', 'ppv', 'accuracy']	TRUE	No	AUC-ROC	Imbalanced
Diagnosing Heart Failure from Chest X-Ray Images Using Deep Learning	Pubmed search	Int Heart J	2020	Matsumoto T, Kodera S, Shinohara H, Ieki H, Yamaguchi T, Higashikuni Y, Kiyosue A, Ito K, Ando J, Takimoto E, Akazawa H, Morita H, Komuro I.	10.1536/ihj.19-714	Heart failure	Binary	ChestX-Ray14	Balance	Accuracy	sens;spec	No	no	['sens', 'spec']	FALSE	No	Accuracy	Balanced
Deep learning-based automated detection algorithm for active pulmonary tuberculosis on chest radiographs: diagnostic performance in systematic screening of asymptomatic individuals	Pubmed search	Eur Radiol	2021	Lee JH, Park S, Hwang EJ, Goo JM, Lee WY, Lee S, Kim H, Andrews JR, Park CM.	10.1007/s00330-020-07219-4	TB	Binary	Institutional	Imbalance	AUC-ROC	sens;spec;PPV;NPV	No	---	['sens', 'spec', 'ppv', 'npv']	TRUE	No	AUC-ROC	Imbalanced
Automatically measuring the Cobb angle and screening for scoliosis on chest radiograph with a novel artificial intelligence method	Pubmed search	Am J Transl Res	2022	Xie L, Zhang Q, He D, Wang Q, Fang Y, Ge T, Jiang Y, Tian W.		Scoliosis diagnosis	Binary	Shenzhen	Imbalance	AUC-ROC	ICC/Kappa/Accuracy/Sensitivity/Specificity	No		['icc', 'kappa', 'accuracy', 'sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Deep Learning Models to Predict Fatal Pneumonia Using Chest X-Ray Images	Pubmed search	Can Respir J	2022	Anai S, Hisasue J, Takaki Y, Hara N.	10.1155/2022/8026580	Fatal pneumonia	Binary	Private set	Balance	AUC-PR	sensitivity, specificity, PPV, negative predictive value (NPV), accuracy, and F1 score	No		['sens', 'spec', 'ppv', 'npv', 'accuracy', 'f1score']	TRUE	No	AUC-ROC	Balanced
Chest X-ray-based opportunistic screening of sarcopenia using deep learning	Pubmed search	J Cachexia Sarcopenia Muscle	2023	Ryu J, Eom S, Kim HC, Kim CO, Rhee Y, You SC, Hong N.	10.1002/jcsm.13144	Sarcopenia	Binary	Private set	Imbalance	AUC-ROC	AUC-PR, sensitivity, specificity, PPV, negative predictive value (NPV), accuracy, F1 score, Brier	Yes		['auc-pr', 'sens', 'spec', 'ppv', 'npv', 'accuracy', 'f1score', 'brier']	TRUE	No	AUC-ROC	Imbalanced
Classification of Central Venous Catheter Tip Position on Chest X-ray Using Artificial Intelligence	Pubmed search	J Pers Med	2022	Jung S, Oh J, Ryu J, Kim J, Lee J, Cho Y, Yoon MS, Jeong JY.	10.3390/jpm12101637	Catheter position	Categorical	Private set	Imbalance	Accuracy	recall, precision, recall, and F1-score	No		['sens', 'vpp', 'sens', 'f1score']	TRUE	No	Accuracy	Imbalanced
Deep learning-based classification for lung opacities in chest x-ray radiographs through batch control and sensitivity regulation	Pubmed search	Sci Rep	2022	Chang IY, Huang TY.	10.1038/s41598-022-22506-4	Lung opacities	Binary	ChestX-ray14	Balance	Sensitivity/Specificity	sensitivity, specificity, PPV, negative predictive value (NPV), accuracy, and F1 score	No		['sens', 'spec', 'ppv', 'npv', 'accuracy', 'f1score']	TRUE	No	Other	Balanced
Validation study of machine-learning chest radiograph software in primary and emergency medicine	Pubmed search	Clin Radiol	2023	van Beek EJR, Ahn JS, Kim MJ, Murchison JT.	10.1016/j.crad.2022.08.129	Abnormality and multipathologies	Multiple binary tasks	Private set	Imbalance	AUC-ROC	sensitivity, specificity, accuracy	No		['sens', 'spec', 'accuracy']	FALSE	No	AUC-ROC	Imbalanced
AI-CenterNet CXR: An artificial intelligence (AI) enabled system for localization and classification of chest X-ray disease	Pubmed search	Front Med (Lausanne)	2022	Albahli S, Nazir T.	10.3389/fmed.2022.955765	Multiple findings	Multiple binary tasks	ChestX-ray14	Imbalance	AUC-ROC	Precision Recall Accuracy F1-Score	No		['vpp', 'sens', 'accuracy', 'f1score']	TRUE	No	AUC-ROC	Imbalanced
The effect of an artificial intelligence algorithm on chest X-ray interpretation of radiology residents	Pubmed search	Br J Radiol	2022	Pekçevik Y, Orbatu D, Güngör F, Yıldırım O, Yaşar E, Yimer MA, Şişman AR, Emiroğlu M, Dao L, Cohen JP, Sevinç S.	10.1259/bjr.20210688	Multiple findings	Multiple binary tasks	Private set	Imbalance	AUC-ROC	sensitivity, specificity, Cohen Kappa, precision, NPV,	No		['sens', 'spec', 'kappa', 'vpp', 'npv', '']	TRUE	No	AUC-ROC	Imbalanced
Association of Artificial Intelligence-Aided Chest Radiograph Interpretation With Reader Performance and Efficiency	Pubmed search	JAMA Netw Open	2022	Ahn JS, Ebrahimian S, McDermott S, Lee S, Naccarato L, Di Capua JF, Wu MY, Zhang EW, Muse V, Miller B, Sabzalipour F, Bizzo BC, Dreyer KJ, Kaviani P, Digumarthy SR, Kalra MK.	10.1001/jamanetworkopen.2022.29289	Multiple findings	Multiple binary tasks	MIMIC-CXR + Private set	Imbalance	AUC-ROC	sensitivity, specificiity	No		['sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Development of deep learning chest X-ray model for cardiac dose prediction in left-sided breast cancer radiotherapy	Pubmed search	Sci Rep	2022	Koide Y, Aoyama T, Shimizu H, Kitagawa T, Miyauchi R, Tachibana H, Kodaira T.	10.1038/s41598-022-16583-8	Risk of cardiac irradiation	Binary	Private set	Balance	AUC-ROC	sensitivity, specificity, PPV, negative predictive value (NPV), accuracy	No		['sens', 'spec', 'ppv', 'npv', 'accuracy']	TRUE	No	AUC-ROC	Balanced
A multichannel EfficientNet deep learning-based stacking ensemble approach for lung disease detection using chest X-ray images	Pubmed search	Cluster Comput	2023	Ravi V, Acharya V, Alazab M.	10.1007/s10586-022-03664-6	Pneumonia, tuberculosis and COVID-19	Multiple binary tasks	Multiple public datasets	Imbalance	Accuracy	sensitivity, specificity, PPV, negative predictive value (NPV), accuracy, and F1 score	No		['sens', 'spec', 'ppv', 'npv', 'accuracy', 'f1score']	TRUE	No	Accuracy	Imbalanced
An efficient deep learning-based framework for tuberculosis detection using chest X-ray images	Pubmed search	Tuberculosis (Edinb)	2022	Iqbal A, Usman M, Ahmed Z.	10.1016/j.tube.2022.102234	Tuberculosis	Binary	Montgomery & Shenzen, ChestX-ray14, Belarus	Balance	AUC-ROC	precision, recall, F1 score, accuracy	Yes	Monte Carlo Dropout	['vpp', 'sens', 'f1score', 'accuracy']	TRUE	Yes	AUC-ROC	Balanced
Performance Evaluation of the Deep Learning Based Convolutional Neural Network Approach for the Recognition of Chest X-Ray Images	Pubmed search	Front Oncol	2022	Sharma S, Gupta S, Gupta D, Rashid J, Juneja S, Kim J, Elarabawy MM.	10.3389/fonc.2022.932496	Pneumonia	Binary	ChestX-ray14	Balance	Accuracy	AUC-ROC, sensitivity, specificity, cross entropy, precision	No		['auc-roc', 'sens', 'spec', 'cross entropy', 'vpp']	FALSE	No	Accuracy	Balanced
Use data augmentation for a deep learning classification model with chest X-ray clinical imaging featuring coal workers' pneumoconiosis	Pubmed search	BMC Pulm Med	2022	Dong H, Zhu B, Zhang X, Kong X.	10.1186/s12890-022-02068-x	Coal workers' pneumoconiosis	Binary	Private set	Balance	AUC-ROC	Accuracy, sensitivity, specificity, F1 score, precision	No		['accuracy', 'sens', 'spec', 'f1score', 'vpp']	TRUE	No	AUC-ROC	Balanced
Deep Learning for Detection of Exercise-Induced Pulmonary Hypertension Using Chest X-Ray Images	Pubmed search	Front Cardiovasc Med	2022	Kusunose K, Hirata Y, Yamaguchi N, Kosaka Y, Tsuji T, Kotoku J, Sata M.	10.3389/fcvm.2022.891703	Exercise-induced pulmonary hypertension	Binary	Private set	Balance	AUC-ROC	precision, recall, f-score values, and confusion matrix	No		['vpp', 'sens', 'f-score values', 'confusion matrix']	FALSE	No	AUC-ROC	Balanced
Using Artificial Intelligence to Establish Chest X-Ray Image Recognition Model to Assist Crucial Diagnosis in Elder Patients With Dyspnea	Pubmed search	Front Med (Lausanne)	2022	Liong-Rung L, Hung-Wen C, Ming-Yuan H, Shu-Tien H, Ming-Feng T, Chia-Yu C, Kuo-Song C.	10.3389/fmed.2022.893208	Pneumonia and pulmonary edema	Multiple binary tasks	Private set	Imbalance	AUC-ROC	Accuracy, sensitivity, specificity, F1 score, precision	No		['accuracy', 'sens', 'spec', 'f1score', 'vpp']	TRUE	No	AUC-ROC	Imbalanced
The Contribution of Chest X-Ray to Predict Extubation Failure in Mechanically Ventilated Patients Using Machine Learning-Based Algorithms	Pubmed search	Crit Care Explor	2022	Fukuchi K, Osawa I, Satake S, Ito H, Shibata J, Dohi E, Kasugai D, Miyamoto Y, Ohbe H, Tamoto M, Yamada N, Yoshikawa K, Goto T.	10.1097/CCE.0000000000000718	Extubation failure	Binary	MIMIC-IV	Imbalance	AUC-ROC	AUC-PR, sensitivity, specificity, PPV, NPV	Yes	Calibration curves	['auc-pr', 'sens', 'spec', 'ppv', 'npv']	TRUE	Yes	AUC-ROC	Imbalanced
Diagnostic accuracy of a commercially available, deep learning-based chest X-ray interpretation software for detecting culture-confirmed pulmonary tuberculosis	Pubmed search	Int J Infect Dis	2022	Tavaziva G, Majidulla A, Nazish A, Saeed S, Benedetti A, Khan AJ, Ahmad Khan F.	10.1016/j.ijid.2022.05.037	Tuberculosis	Binary	Private set	Imbalance	Sensitivity/Specificity	AUC-ROC	Yes	Calibration of threshold cut-off	['auc-roc']	FALSE	Yes	Other	Imbalanced
Early severity prediction of BPD for premature infants from chest X-ray images using deep learning: A study at the 28th day of oxygen inhalation	Pubmed search	Comput Methods Programs Biomed	2022	Xing W, He W, Li X, Chen J, Cao Y, Zhou W, Shen Q, Zhang X, Ta D.	10.1016/j.cmpb.2022.106869	Bronchopulmonary dysplasia	Categorical	Private set	Balance	Accuracy	precision, sensitivity, specificity, and F1 score	No		['vpp', 'sens', 'spec', 'f1score']	TRUE	No	Accuracy	Balanced
Tuberculosis detection in chest radiograph using convolutional neural network architecture and explainable artificial intelligence	Pubmed search	Neural Comput Appl	2022	Nafisah SI, Muhammad G.	10.1007/s00521-022-07258-6	Tuberculosis	Binary	Montgomery Shenzhen Belarus	Balance	AUC-ROC	Accuracy, recall, precision, F1 score, Kappa	No		['accuracy', 'sens', 'vpp', 'f1score', 'kappa']	TRUE	No	AUC-ROC	Balanced
Deep Learning in Multi-Class Lung Diseases' Classification on Chest X-ray Images	Pubmed search	Diagnostics (Basel)	2022	Kim S, Rim B, Choi S, Lee A, Min S, Hong M.	10.3390/diagnostics12040915	Three classes of lung diseases	Categorical	ChestX-ray14 & Cheonan Soonchunhyang University Hospital	Balance	Accuracy	Sensitivity, specificity, cross entropy	No		['sens', 'spec', 'cross entropy']	FALSE	No	Accuracy	Balanced
Deep learning-based automatic detection of tuberculosis disease in chest x-ray images	Pubmed search	Pol J Radiol	2022	Showkatian E, Salehi M, Ghaffari H, Reiazi R, Sadighi N.	10.5114/pjr.2022.113435	Tuberculosis	Binary	Montgomery and Shenzhen	Balance	AUC-ROC	accuracy, sensitivity/recall, precision, F1-score.	No		['accuracy', 'sens', 'sens', 'vpp', 'f1score']	TRUE	No	AUC-ROC	Balanced
Concordance rate of radiologists and a commercialized deep-learning solution for chest X-ray: Real-world experience with a multicenter health screening cohort	Pubmed search	PLoS One	2022	Kim EY, Kim YJ, Choi WJ, Jeon JS, Kim MY, Oh DH, Jin KN, Cho YJ.	10.1371/journal.pone.0264383	Abnormaliy level	Categorical	Private set	Imbalance	Other	Concordance rate	No		['concordance rate']	FALSE	No	Other	Imbalanced
Detection of Left Ventricular Systolic Dysfunction Using an Artificial Intelligence-Enabled Chest X-Ray	Pubmed search	Can J Cardiol	2022	Hsiang CW, Lin C, Liu WC, Lin CS, Chang WC, Hsu HH, Huang GS, Lou YS, Lee CC, Wang CH, Fang WH.	10.1016/j.cjca.2021.12.019	left ventricular ejection fraction (LVEF) ≤ 35%	Binary	Private set	Imbalance	AUC-ROC	Kaplan-Meier survival analysis and the Cox proportional hazards	No		['kaplan-meier survival analysis', 'the cox proportional hazards']	FALSE	No	AUC-ROC	Imbalanced

A lightweight deep learning architecture for the automatic detection of pneumonia using chest X-ray images	Pubmed search	Multimed Tools Appl	2022	Trivedi M, Gupta A.	10.1007/s11042-021-11807-x	Pneumonia	Binary	ChestX-ray14	Imbalance	Accuracy	recall, specificity, precision, F1 score, AUC-ROC	No		['sens', 'spec', 'vpp', 'f1score', 'auc-roc']	TRUE	No	Accuracy	Imbalanced
An Artificial Intelligence-Based Chest X-ray Model on Human Nodule Detection Accuracy From a Multicenter Study	Pubmed search	JAMA Netw Open	2021	Homayounieh F, Digumarthy S, Ebrahimian S, Rueckel J, Hoppe BF, Sabel BO, Conjeti S, Ridder K, Sistermanns M, Wang L, Preuhs A, Ghesu F, Mansoor A, Moghbel M, Botwin A, Singh R, Cartmell S, Patti J, Huemmer C, Fieselmann A, Joerger C, Mirshahzadeh N, Muse V, Kalra M.	10.1001/jamanetworkopen.2021.41096	Multiple findings	Multiple binary tasks	Private set	Balance	AUC-ROC	Sensitivity, Specificity, and Accuracy	No		['sens', 'spec', 'accuracy']	FALSE	No	AUC-ROC	Balanced
Evaluation of an artificial intelligence (AI) system to detect tuberculosis on chest X-ray at a pilot active screening project in Guangdong, China in 2019	Pubmed search	J Xray Sci Technol	2022	Liao Q, Feng H, Li Y, Lai X, Pan J, Zhou F, Zhou L, Chen L.	10.3233/XST-211019	Tuberculosis	Binary	Private set	Imbalance	AUC-ROC	specificity, sensitivity, and positive predict value	No		['spec', 'sens', 'ppv']	TRUE	No	AUC-ROC	Imbalanced
Deep Learning and Binary Relevance Classification of Multiple Diseases using Chest X-Ray images	Pubmed search	Annu Int Conf IEEE Eng Med Biol Soc	2021	Blais MA, Akhloufi MA.	10.1109/EMBC46164.2021.9629846	5 findings	Multiple binary tasks	CheXpert	Imbalance	AUC-ROC	-	No		[']	FALSE	No	AUC-ROC	Imbalanced
Using Transfer Learning Method to Develop an Artificial Intelligence Assisted Triaging for Endotracheal Tube Position on Chest X-ray	Pubmed search	Diagnostics (Basel)	2021	Yuan KC, Tsai LW, Lai KS, Teng ST, Lo YS, Peng SJ.	10.3390/diagnostics11101844	Endotracheal Tube Position	Binary	Private set	Balance	AUC-ROC	accuracy, recall, precision, f1 score, cross entropy	No		['accuracy', 'sens', 'vpp', 'f1score', 'cross entropy']	TRUE	No	AUC-ROC	Balanced
Pneumonia detection in chest X-ray images using an ensemble of deep learning models	Pubmed search	PLoS One	2021	Kundu R, Das R, Geem ZW, Han GT, Sarkar R.	10.1371/journal.pone.0256630	Pneumonia	Binary	ChestX-ray14 & Kermany et al	Imbalance	Accuracy	AUC ROC, recall, precision, f1 score	No		['auc-roc', 'sens', 'vpp', 'f1score']	TRUE	No	Accuracy	Imbalanced
Chest X-ray Analysis With Deep Learning-Based Software as a Triage Test for Pulmonary Tuberculosis: An Individual Patient Data Meta-Analysis of Diagnostic Accuracy	Pubmed search	Clin Infect Dis	2022	Tavaziva G, Harris M, Abidi SK, Geric C, Breuninger M, Dheda K, Esmail A, Muyoyeta M, Reither K, Majidulla A, Khan AJ, Campbell JR, David PM, Denkinger C, Miller C, Nathavitharana R, Pai M, Benedetti A, Ahmad Khan F.	10.1093/cid/ciab639	Tuberculosis	Binary	Private set	Imbalance	AUC-ROC	Sensitivity and specificity	No		['sens', 'spec']	FALSE	No	AUC-ROC	Imbalanced
Effect of a comprehensive deep-learning model on the accuracy of chest x-ray interpretation by radiologists: a retrospective, multireader multicase study	Pubmed search	Lancet Digit Health	2021	Seah JCY, Tang CHM, Buchlak QD, Holt XG, Wardman JB, Aimoldin A, Esmaili N, Ahmad H, Pham H, Lambert JF, Hachey B, Hogg SJF, Johnston BP, Bennett C, Oakden-Rayner L, Brotchie P, Jones CM.	10.1016/S2589-7500(21)00106-0	127 clinical findings	Multiple binary tasks	I-MED Radiology Network MIMIC-CXR ChestX-ray14 CheXpert Padchest	Imbalance	AUC-ROC	Positive predictive value, sensitivity, specificity, and Matthews correlation coefficient	No		['ppv', 'sens', 'spec', 'mcc']	TRUE	No	AUC-ROC	Imbalanced
Chest x-ray automated triage: A semiologic approach designed for clinical implementation, exploiting different types of labels through a combination of four Deep Learning architectures	Pubmed search	Comput Methods Programs Biomed	2021	Mosquera C, Diaz FN, Binder F, Rabellino JM, Benitez SE, Beresñak AD, Seehaus A, Ducrey G, Ocantos JA, Luna DR.	10.1016/j.cmpb.2021.106130	Abnormality + 4 findings	Multiple binary tasks	Private set & ChestX-ray14	Balance	AUC-ROC	Sensitivity, specificity, PPV, NPV	No		['sens', 'spec', 'ppv', 'npv']	TRUE	No	AUC-ROC	Balanced
Combining Deep Learning and Knowledge-driven Reasoning for Chest X-Ray Findings Detection	Pubmed search	AMIA Annu Symp Proc	2021	Jadhav A, Wong KCL, Wu JT, Moradi M, Syeda-Mahmood T.		Multiple findings	Multiple binary tasks	MIMIC	Imbalance	Other	Precision Recall F1-Score	No		['vpp', 'sens', 'f1score', '']	TRUE	No	Other	Imbalanced
Deep-Learning-Based Diagnosis of Bedside Chest X-ray in Intensive Care and Emergency Medicine	Pubmed search	Invest Radiol	2021	Niehues SM, Adams LC, Gaudin RA, Erxleben C, Keller S, Makowski MR, Vahldiek JL, Bressem KK.	10.1097/RLI.0000000000000771	8 findings	Multiple binary tasks	Private set	Imbalance	AUC-ROC	sensitivity, specificity, and positive predictive value.	No		['sens', 'spec', 'ppv']	TRUE	No	AUC-ROC	Imbalanced
Deep Learning for Detection of Elevated Pulmonary Artery Wedge Pressure Using Standard Chest X-Ray	Pubmed search	Can J Cardiol	2021	Hirata Y, Kusunose K, Tsuji T, Fujimori K, Kotoku J, Sata M.	10.1016/j.cjca.2021.02.007	elevated pulmonary arterial wedge pressure	Binary	Private set	Imbalance	AUC-ROC	Cohen kappa	No		['kappa']	FALSE	No	AUC-ROC	Imbalanced
Recalibration of deep learning models for abnormality detection in smartphone-captured chest radiograph	Pubmed search	NPJ Digit Med	2021	Kuo PC, Tsai CC, López DM, Karargyris A, Pollard TJ, Johnson AEW, Celi LA.	10.1038/s41746-021-00393-9	Multiple findings	Multiple binary tasks	MIMIC-CXR and CheXpert	Imbalance	AUC-ROC	sensitivity, specificity, f1 score, and accuracy	No	They use the term calibation to refer to domain adaptation	['sens', 'spec', 'f1score', 'accuracy']	TRUE	Yes	AUC-ROC	Imbalanced