Supplementary material 2: Table of studies excluded at full text assessment

Cancer studies

Reference	Reason for exclusion	Comments
Ahn JS, Ebrahimian S, McDermott S, Lee S, Naccarato L, Di Capua JF*, et al.* Association of Artificial Intelligence-Aided Chest Radiograph Interpretation with Reader Performance and Efficiency. *JAMA Network Open* 2022;**5(8)**:E2229289. http://dx.doi.org/10.1001/jamanetworkopen.2022.29289	Population	Software eligible. Radiologist + others using AI and without AI (4 weeks apart), CXR were from two hospital databases (one is an intensive care database) and no details of the referral route of participants or prior cancer status, included nodules as an outcome
Ajmera P, Pant R, Seth J, Ghuwalewala S, Kathuria S, Rathi S*, et al.* Deep-learning-based automatic detection of pulmonary nodules from chest radiographs. *medRxiv* 2022;**23**. http://dx.doi.org/10.1101/2022.06.21.22276691	Intervention	Not a named intervention, CXRs were from tertiary setting with no further details
Aoki T, Oda N, Yamashita Y, Yamamoto K, Korogi Y. Usefulness of computerized method for lung nodule detection on digital chest radiographs using similar subtraction images from different patients. *Eur J Radiol* 2012;**81**(5):1062-7. http://dx.doi.org/10.1016/j.ejrad.2011.02.010	Intervention	Software not stated, doesn't appear to be AI
Bae K, Oh DY, Yun ID, Jeon KN. Bone Suppression on Chest Radiographs for Pulmonary Nodule Detection: Comparison between a Generative Adversarial Network and Dual-Energy Subtraction. *Korean Journal of Radiology* 2022;**23**(1):139-49. http://dx.doi.org/10.3348/kjr.2021.0146	Intervention	Not a named intervention (and no AI component)
Baltruschat IM, Nickisch H, Grass M, Knopp T, Saalbach A. Comparison of Deep Learning Approaches for Multi-Label Chest X-Ray Classification. *Sci Rep* 2019;**9**(1):6381. http://dx.doi.org/10.1038/s41598-019-42294-8	Intervention	Not a named intervention. Also no radiologist and population not reported
Berbaum KS, Krupinski EA, Schartz KM, Caldwell RT, Madsen MT, Hur S*, et al.* The influence of a vocalized checklist on detection of multiple abnormalities in chest radiography. *Acad Radiol* 2016;**23(4)**:413-20. http://dx.doi.org/10.1016/j.acra.2015.12.017	Intervention	Not a named intervention. Also simulated nodules on CXRs
Cha MJ, Chung MJ, Lee JH, Lee KS. Performance of Deep Learning Model in Detecting Operable Lung Cancer With Chest Radiographs. *J Thorac Imaging* 2019;**34**(2):86-91. http://dx.doi.org/10.1097/RTI.0000000000000388	Intervention	Software not stated; CXR from database, population details and referral not clear
Chen B, Li J, Guo X, Lu G. DualCheXNet: dual asymmetric feature learning for thoracic disease classification in chest X-rays. *Biomed Signal Process Control* 2019;**53 (no pagination)**. http://dx.doi.org/10.1016/j.bspc.2019.04.031	Intervention	Not a named intervention (DualCheXNet), CXRs from a database but referral route of participants not known, validation study for the algorithm
Chen S, Han Y, Lin J, Zhao X, Kong P. Pulmonary nodule detection on chest	Intervention	Not a specified software, paper on development of software

radiographs using balanced convolutional neural network and classic candidate detection. *Artif Intell Med* 2020;**107**:101881. http://dx.doi.org/10.1016/j.artmed.2020.101881		
Chen S, Yao L, Chen B. A parameterized logarithmic image processing method with Laplacian of Gaussian filtering for lung nodule enhancement in chest radiographs. *Med Biol Eng Comput* 2016;**54**(11):1793-806.	Intervention	Not a named intervention. CXRs from a database, referral route not reported, no radiologist input reported, also investigated another non named intervention, validation study for the algorithm
Chetan MR, Dowson N, Price NW, Ather S, Nicolson A, Gleeson FV. Developing an understanding of artificial intelligence lung nodule risk prediction using insights from the Brock model. *Eur Radiol* 2022;**32(8)**:5330-8. http://dx.doi.org/10.1007/s00330-022-08635-4	Intervention	CT scan AI, also screening population
Cho Y, Kim YG, Lee SM, Seo JB, Kim N. Reproducibility of abnormality detection on chest radiographs using convolutional neural network in paired radiographs obtained within a short-term interval. *Sci Rep* 2020;**10**(1):17417. http://dx.doi.org/10.1038/s41598-020-74626-4	Intervention	Not a named intervention
Choi S, Lee O, Kim M. The cut-off values for auto-detection of lung cancer in chest radiography: An example using an unsupervised method. *Biomedical Engineering - Applications, Basis and Communications* 2012;**24(6)**:525-36. http://dx.doi.org/10.4015/S1016237212500482	Intervention	Not a named intervention ('Principle Component Analysis' and 'Texture Information Analysis'), referral route of participants not known
Choi SY, Park S, Kim M, Park J, Choi YR, Jin KN. Evaluation of a deep learning-based computer-aided detection algorithm on chest radiographs: Case-control study. *Medicine* 2021;**100**(16):e25663. http://dx.doi.org/10.1097/MD.0000000000025663	Population	Software eligible. Population referral route not reported but included health screening unit or oncology unit with normal CXRs and not described where those with nodules came from except 'consecutive' cases which were abnormal cases with localized consolidation selected from subjects who visited the emergency department or respiratory medicine
De Boo DW, van Hoorn F, van Schuppen J, Schijf L, Scheerder MJ, Freling NJ*, et al.* Observer training for computer-aided detection of pulmonary nodules in chest radiography. *Eur Radiol* 2012;**22**(8):1659-64. http://dx.doi.org/10.1007/s00330-012-2412-7	Intervention	Software: IQQA Chest, EDDA Technology, Princeton Junction, NJ, USA
Dellios N, Teichgraeber U, Chelaru R, Malich A, Papageorgiou IE. Computer-aided Detection Fidelity of Pulmonary Nodules in Chest Radiograph. *J Clin Imaging Sci* 2017;**7**:8. http://dx.doi.org/10.4103/jcis.JCIS_75_16	Intervention	Riverain manufacturer, but software includes SoftView (bone suppression imaging) and OnGuard (nodule detection) possible version of ClearRead Detect; population with known pulmonary lesions
Dissez G, Tay N, Dyer T, Tam M, Dittrich R, Doyne D*, et al. Enhancing Early Lung Cancer Detection on Chest Radiographs with AI-assistance: A Multi-Reader Study [preprint]*. arXiv.org; 2022. URL:	Population	Software eligible. Was AI+clinician vs clinician. Population from retrospective CXRs collected in one hospital during 2020, referral route not reported

https://arxiv.org/ftp/arxiv/papers/2208/2208.14742.pdf (Accessed 3 January 2023).		
Do Q, Seo W, Shin CW. Automatic algorithm for determining bone and soft-tissue factors in dual-energy subtraction chest radiography. *Biomed Signal Process Control* 2023;**Part 2. 80 (no pagination)**. http://dx.doi.org/10.1016/j.bspc.2022.104354	Intervention	Not a named intervention, also simulation study
Dorri Giv M, Haghighi Borujeini M, Seifi Makrani D, Dastranj L, Yadollahi M, Semyari S*, et al.* Lung Segmentation using Active Shape Model to Detect the Disease from Chest Radiography. *Journal of Biomedical Physics & Engineering* 2021;**11**(6):747-56. http://dx.doi.org/10.31661/jbpe.v0i0.2105-1346	Intervention	Not a specified software, query AI, population from database no details
Dyer T, Dillard L, Harrison M, Morgan TN, Tappouni R, Malik Q*, et al.* Diagnosis of normal chest radiographs using an autonomous deep-learning algorithm. *Clin Radiol* 2021;**76**(6):473.e9-.e15. http://dx.doi.org/10.1016/j.crad.2021.01.015	Population	Not a named intervention (authors employed by behold.ai') but population also not clear (includes A&E, GP, outpatient)
Dyer T, Smith J, Dissez G, Tay N, Malik Q, Morgan TN*, et al. Robustness of an Artificial Intelligence Solution for Diagnosis of Normal Chest X-Rays [preprint]*. arXiv.org; 2022. URL: https://arxiv.org/ftp/arxiv/papers/2209/2209.09204.pdf (Accessed 3 January 2023).	Intervention	Software eligible but stand-alone AI. Study was AI to find normal CXRs. CXRs from retrospective collection and chosen to represent a diverse dataset of NHS patients and care settings. AI vs clinician. No relevant outcomes
Endo K, Kaneko A, Horiuchi Y, Kasuga N, Ishizaki U, Sakai S. Detectability of pulmonary nodules on chest radiographs: bone suppression versus standard technique with single versus dual monitors for visualization. *Japanese Journal of Radiology* 2020;**38**(7):676-82. http://dx.doi.org/10.1007/s11604-020-00952-2	Intervention	Bone suppression imaging using software developed with a deep-learning pattern recognition algorithm
Fischer G, De Silvestro A, Muller M, Frauenfelder T, Martini K. Computer-Aided Detection of Seven Chest Pathologies on Standard Posteroanterior Chest X-Rays Compared to Radiologists Reading Dual-Energy Subtracted Radiographs. *Acad Radiol* 2022;**29**(8):e139-e48. http://dx.doi.org/10.1016/j.acra.2021.09.016	Population	Inpatients and outpatients, most had CXR pre-surgery so unlikely 90% were referred (and Intervention not an adjunct to clinician)
Ghali R, Akhloufi MA. ARSeg: An Attention RegSeg Architecture for CXR Lung Segmentation. Paper presented at: 2022 IEEE 23rd International Conference on Information Reuse and Integration for Data Science (IRI); San Diego, CA, USA. URL: https://doi.org/10.1109/IRI54793.2022.00068	Intervention	Not eligible software
Govindarajan A, Govindarajan A, Tanamala S, Chattoraj S, Reddy B, Agrawal R*, et al.* Role of an Automated Deep Learning Algorithm for Reliable Screening of Abnormality in Chest Radiographs: A Prospective Multicenter Quality Improvement Study. *Diagnostics* 2022;**12**(11):07. http://dx.doi.org/10.3390/diagnostics12112724	Population	qXR but stand alone, population age > 6 years, subgroup results reported but only for normal/abnormal (not nodule), referral status unknown, states 'routine screening'
Guo W, Li Q, Boyce SJ, McAdams HP, Shiraishi J, Doi K*, et al.* A computerized scheme for lung nodule detection in multiprojection chest radiography. *Med*	Intervention	Software not specified, population from database no details

Phys 2012;**39**(4):2001-12. http://dx.doi.org/10.1118/1.3694096		
Hao R, Qiang Z, Qiang Y, Ge L, Zhao J. Automatic diagnosis of pulmonary nodules using a hierarchical extreme learning machine model. *Int J Bio-Inspired Comput* 2018;**11**(3):192–201. http://dx.doi.org/10.1504/ijbic.2018.091748	British library not available	
Homayounieh F, Digumarthy S, Ebrahimian S, Rueckel J, Hoppe BF, Sabel BO*, et al.* An Artificial Intelligence-Based Chest X-ray Model on Human Nodule Detection Accuracy From a Multicenter Study. *JAMA Network Open* 2021;**4**(12):e2141096. http://dx.doi.org/10.1001/jamanetworkopen.2021.41096	Population	Software eligible. Population referral route not reported (retrospective). Was AI+clinician vs clinician
Htike ZZ, Naing WYN, Win SL, Khan S. Computer-Aided Diagnosis of Pulmonary Nodules from Chest X-Rays Using Rotation Forest. Paper presented at: Proceedings of the 2014 International Conference on Computer and Communication Engineering. URL: https://doi.org/10.1109/ICCCE.2014.38	Intervention	Not a named intervention ('proposed system'), CXRs from a database so referral route of participants not known
Huang X, Fang Y, Lu M, Yan F, Yang J, Xu Y. Dual-ray net: Automatic diagnosis of thoracic diseases using frontal and lateral chest x-rays. *Journal of Medical Imaging and Health Informatics* 2020;**10(2)**:348-55. http://dx.doi.org/10.1166/jmihi.2020.2901	Intervention	Not a named intervention, also CXRs from two databases but referral route of participants not known, validation study for the algorithm
Hwang EJ, Park S, Jin KN, Kim JI, Choi SY, Lee JH*, et al.* Development and Validation of a Deep Learning-Based Automated Detection Algorithm for Major Thoracic Diseases on Chest Radiographs. *JAMA Network Open* 2019;**2**(3):e191095. http://dx.doi.org/10.1001/jamanetworkopen.2019.1095	Intervention	Software not stated; CXR datasets from 4 hospitals, referral and details unclear
Jang S, Song H, Shin YJ, Kim J, Lee KW, Lee SS*, et al.* Deep Learning-based Automatic Detection Algorithm for Reducing Overlooked Lung Cancers on Chest Radiographs. *Radiology* 2020;**296(3)**:652-61. http://dx.doi.org/10.1148/radiol.2020200165	Population	Eligible software (Lunit Insight); Population referral status unclear, people with lung cancer and cancer visible on CXR prior to diagnosis, unclear if symptomatic or incidental, control group normal CXR, reason for CXR unclear. AI+clinician vs AI
Jin KN, Kim EY, Kim YJ, Lee GP, Kim H, Oh S*, et al.* Diagnostic effect of artificial intelligence solution for referable thoracic abnormalities on chest radiography: a multicenter respiratory outpatient diagnostic cohort study. *Eur Radiol* 2022;**32**(5):3469-79. http://dx.doi.org/10.1007/s00330-021-08397-5	Population	Software eligible. Population those seen in respiratory outpatients for any lung diseases, nodule/cancer included, no details of referral route and results include any identifiable lesion (nodules or masses, lung consolidation, and pneumothorax) not nodule/cancer specifically
Kao EF, Liu GC, Lee LY, Tsai HY, Jaw TS. Computer-aided detection system for chest radiography: Reducing report turnaround times of examinations with abnormalities. *Acta Radiol* 2015;**56(6)**:696-701. http://dx.doi.org/10.1177/0284185114538017	Intervention	Not a named intervention ('homemade CAD'), referral route of participants not known
Kaviani P, Digumarthy SR, Bizzo BC, Reddy B, Tadepalli M, Putha P*, et al.* Performance of a Chest Radiography AI Algorithm for Detection of Missed or	Population	Population not described, CXRs taken from a database and no information that these would be primary care

Mislabeled Findings: A Multicenter Study. *Diagnostics* 2022;**12**(9):28. http://dx.doi.org/10.3390/diagnostics12092086		referrals, intervention not an adjunct to clinician
Kaviani P, Kalra MK, Digumarthy SR, Gupta RV, Dasegowda G, Jagirdar A*, et al.* Frequency of Missed Findings on Chest Radiographs (CXRs) in an International, Multicenter Study: Application of AI to Reduce Missed Findings. *Diagnostics* 2022;**12**(10):30. http://dx.doi.org/10.3390/diagnostics12102382	Population	Software eligible (Qure.ai). Population not described, not clear if referred with symptoms but only those with 'normal' CXRs were used, intervention not an adjunct to clinician
KCT. *A single-center, randomized, crossover and retrospective pivotal trial to evaluate the efficacy of VUNO Med - Chest X-ray in screening of abnormalities on chest radiograph*. WHO ICTRP; 2019. URL: https://trialsearch.who.int/Trial2.aspx?TrialID=KCT0004147 (Accessed 20 January 2023).	Population	Software eligible. Screening population. Ongoing study no results
KCT. *Diagnosis of lung nodule and lung cancer on screening chest radiographs: comparative clinical trial for evaluation of artificial intelligence-integrated PACS versus conventional PACS*. WHO ICTRP; 2020. URL: https://trialsearch.who.int/Trial2.aspx?TrialID=KCT0005051 (Accessed 20 January 2023).	Population	Software eligible. Screening population (those with respiratory symptoms when CXR performed excluded). Ongoing study no results
Ke Q, Zhang J, Wei W, Połap D, Woźniak M, Kośmider L*, et al.* A neuro-heuristic approach for recognition of lung diseases from X-ray images. *Expert Syst Appl* 2019;**126**(C):218–32. http://dx.doi.org/10.1016/j.eswa.2019.01.060	Intervention	Not a named intervention, CXRs from 3 databases but referral route of participants not known, validation study for the algorithm
Kim EY, Kim YJ, Choi WJ, Jeon JS, Kim MY, Oh DH*, et al.* Concordance rate of radiologists and a commercialized deep-learning solution for chest X-ray: Real-world experience with a multicenter health screening cohort. *PLoS ONE [Electronic Resource]* 2022;**17**(2):e0264383. http://dx.doi.org/10.1371/journal.pone.0264383	Population	Health screening population, no description of referral route or reason for CXR other than for a screening test, outcomes were broad groups of thoracic abnormalities (inactive, insignificant abnormal, and significant abnormal lesions)
Kim H, Park CM, Goo JM. Test-retest reproducibility of a deep learning-based automatic detection algorithm for the chest radiograph. *Eur Radiol* 2020;**30**(4):2346-55. http://dx.doi.org/10.1007/s00330-019-06589-8	Population	Eligible software, Population undergoing pre-op CXR, comparator not eligible
Kligerman S, Cai L, White CS. The effect of computer-aided detection on radiologist performance in the detection of lung cancers previously missed on a chest radiograph. *J Thorac Imaging* 2013;**28**(4):244-52. http://dx.doi.org/10.1097/RTI.0b013e31826c29ec	Intervention	OnGuard (Riverain)+ radiologist vs radiologist alone, population were lung cancer previously missed on CXR (CXR from before diagnosis) - referral status unknown, unclear if incidental or symptomatic
Koo YH, Shin KE, Park JS, Lee JW, Byun S, Lee H. Extravalidation and reproducibility results of a commercial deep learning-based automatic detection algorithm for pulmonary nodules on chest radiographs at tertiary hospital. *J Med Imaging Radiat Oncol* 2021;**65**(1):15-22. http://dx.doi.org/10.1111/1754-9485.13105	Population	Software eligible. Population referral route not reported but from a tertiary centre and included CXRs with known nodules and without, the prevalence of nodules was 46.5%, includes AI+clinician vs AI alone

Laksshmi KSG, Umagandhi R. False Positive Reduction Based on Anatomical Characterization Using Deep Learning Neural Network in Lung Nodule Detection. *European Journal of Molecular and Clinical Medicine* 2020;**7(8)**:5296-303.	Intervention	Not eligible software
Lee KH, Goo JM, Park CM, Lee HJ, Jin KN. Computer-aided detection of malignant lung nodules on chest radiographs: effect on observers' performance. *Korean Journal of Radiology* 2012;**13**(5):564-71. http://dx.doi.org/10.3348/kjr.2012.13.5.564	Intervention	CAD: IQQA-Chest, EDDA Technology, Princeton Junction, NJ, USA; population: retrospective selection of malignant nodules and normal cases
Lee YW, Huang SK, Chang RF. CheXGAT: A disease correlation-aware network for thorax disease diagnosis from chest X-ray images. *Artif Intell Med* 2022;**132 (no pagination)**. http://dx.doi.org/10.1016/j.artmed.2022.102382	Intervention	Not eligible software
Li F, Engelmann R, Armato SG, 3rd, MacMahon H. Computer-aided nodule detection system: results in an unselected series of consecutive chest radiographs. *Acad Radiol* 2015;**22**(4):475-80. http://dx.doi.org/10.1016/j.acra.2014.11.008	Intervention	ClearRead Detect (eligible) and SoftView v2.4 (bone suppression imaging), not with radiologist; population unclear - had CT on same day, outcomes for nodule detection but comparator is radiologist+CXR+CT
Li X, Shen L, Luo S. A Solitary Feature-Based Lung Nodule Detection Approach for Chest X-Ray Radiographs. *IEEE Journal of Biomedical & Health Informatics* 2018;**22**(2):516-24. http://dx.doi.org/10.1109/JBHI.2017.2661805	Intervention	Not a named intervention. CXRs from two databases and referral route not reported, no radiologist reported, validation study of the algorithm
Li X, Shen L, Xie X, Huang S, Xie Z, Hong X*, et al.* Multi-resolution convolutional networks for chest X-ray radiograph based lung nodule detection. *Artif Intell Med* 2020;**103**:101744. http://dx.doi.org/10.1016/j.artmed.2019.101744	Intervention	Population from databases, no details of referral; software not named
Liang CH, Liu YC, Wu MT, Garcia-Castro F, Alberich-Bayarri A, Wu FZ. Identifying pulmonary nodules or masses on chest radiography using deep learning: external validation and strategies to improve clinical practice. *Clin Radiol* 2020;**75**(1):38-45. http://dx.doi.org/10.1016/j.crad.2019.08.005	Intervention	Population referral unclear, software not eligible (QUIBIM)
Liu H, Wang L, Nan Y, Jin F, Wang Q, Pu J. SDFN: Segmentation-based deep fusion network for thoracic disease classification in chest X-ray images. *Comput Med Imaging Graph* 2019;**75**:66-73. http://dx.doi.org/10.1016/j.compmedimag.2019.05.005	Intervention	From known SR not in Endnote. Not a named intervention (DenseNet), CXRs from databases, referral route of participants not known, validation study for the algorithm
Louati H, Louati A, Bechikh S, Said LB. Design and Compression Study for Convolutional Neural Networks Based on Evolutionary Optimization for Thoracic X-Ray Image Classification. Paper presented at: Computational Collective Intelligence: 14th International Conference, ICCCI 2022, Hammamet, Tunisia, September 28–30, 2022, Proceedings; Hammamet, Tunisia. URL: https://doi.org/10.1007/978-3-031-16014-1_23	Intervention	Not a named intervention, also no details of where CXRs were from, validation study for the algorithm
Majkowska A, Mittal S, Steiner DF, Reicher JJ, McKinney SM, Duggan GE*, et al.* Chest radiograph interpretation with deep learning models: Assessment with	Intervention	Not a named intervention. Referral route unclear but one database consecutive inpatient and outpatient images and

radiologist-adjudicated reference standards and population-adjusted evaluation. *Radiology* 2020;**294(2)**:421-31.		the other all CXRS from multiple different hospitals
Malik H, Anees T, Mui Zzud D. BDCNet: multi-classification convolutional neural network model for classification of COVID-19, pneumonia, and lung cancer from chest radiographs. *Multimedia Systems* 2022;**28**(3):815-29. http://dx.doi.org/10.1007/s00530-021-00878-3	Intervention	Compares 4 named ineligible software
Martinez-Machado E, Perez-Diaz M, Orozco-Morales R. Automated System for the Detection of Lung Nodules. Paper presented at: Progress in Artificial Intelligence and Pattern Recognition: 7th International Workshop on Artificial Intelligence and Pattern Recognition, IWAIPR 2021, Havana, Cuba, October 5–7, 2021, Proceedings; Havana, Cuba. URL: https://doi.org/10.1007/978-3-030-89691-1_33	Intervention	Not a named intervention. Retrospective database of CXRs with no discussion of referral route of pts, and unclear if radiologist input, validation study of the algorithm
Mathew TE, Sugelanandh O. Lung Cancer Classification Using Extreme-Anfiswith Red Fox Optimization Algorithm. *Neuroquantology* 2022;**20(6)**:1839-46. http://dx.doi.org/10.14704/nq.2022.20.6.NQ22183	Intervention	Not a named intervention, also no details of where CXRs were from, validation study for the algorithm
Mazzone PJ, Obuchowski N, Phillips M, Risius B, Bazerbashi B, Meziane M. Lung cancer screening with computer aided detection chest radiography: design and results of a randomized, controlled trial. *PLoS ONE [Electronic Resource]* 2013;**8**(3):e59650. http://dx.doi.org/10.1371/journal.pone.0059650	Intervention	OnGuard 5.0 (Riverain), vs placebo CXR (RCT), screening of a high-risk population
Meraj T, Rauf HT, Zahoor S, Hassan A, Lali MI, Ali L*, et al.* Lung nodules detection using semantic segmentation and classification with optimal features. *Neural Comput Appl* 2021;**33**(17):10737–50. http://dx.doi.org/10.1007/s00521-020-04870-2	Intervention	CT images
Messerli M, Kluckert T, Knitel M, Rengier F, Warschkow R, Alkadhi H*, et al.* Computer-aided detection (CAD) of solid pulmonary nodules in chest x-ray equivalent ultralow dose chest CT - first in-vivo results at dose levels of 0.13mSv. *Eur J Radiol* 2016;**85**(12):2217-24. http://dx.doi.org/10.1016/j.ejrad.2016.10.006	Intervention	Not CXR
Meziane M, Mazzone P, Novak E, Lieber ML, Lababede O, Phillips M*, et al.* A comparison of four versions of a computer-aided detection system for pulmonary nodules on chest radiographs. *J Thorac Imaging* 2012;**27**(1):58-64. http://dx.doi.org/10.1097/RTI.0b013e3181f240bc	Intervention	Compares 4 generations of CAD software: RapidScreen1.1andOnGuard3.0, 4.0, and5.0 (RiverainMedical)
Miyoshi T, Yoshida J, Aramaki N, Matsumura Y, Aokage K, Hishida T*, et al.* Effectiveness of Bone Suppression Imaging in the Detection of Lung Nodules on Chest Radiographs: Relevance to Anatomic Location and Observer's Experience. *J Thorac Imaging* 2017;**32**(6):398-405. http://dx.doi.org/10.1097/RTI.0000000000000299	Intervention	Not a named intervention and not AI. Also referral route of participants CXRs not reported

Multicenter, multi-reader, multicase (MRMC) study on the performance of AI for pulmonary nodule detection on chest radiographs with accompanying chest CT for ground trothing [Ongoing study. AIC data from CS]. In.,	Population	Software eligible. AIC data from CS. Ongoing study. Was AI+clinician vs clinician. Referral route of CXRs unclear were from academic health centres with CT on the same day
Nam JG, Hwang EJ, Kim DS, Yoo SJ, Choi H, Goo JM*, et al.* Undetected Lung Cancer at Posteroanterior Chest Radiography: Potential Role of a Deep Learning-based Detection Algorithm. *Radiology Cardiothoracic Imaging* 2020;**2**(6):e190222. http://dx.doi.org/10.1148/ryct.2020190222	Population	Software eligible. CXRs from people with confirmed lung CA initially undetected on CXR - unclear referral route or if CXR for symptoms or no symptoms, also unclear where the 'normal' X-rays are from, is algorithm + radiologist vs radiologist
Nam JG, Kim M, Park J, Hwang EJ, Lee JH, Hong JH*, et al.* Development and validation of a deep learning algorithm detecting 10 common abnormalities on chest radiographs. *Eur Respir J* 2021;**57**(5). http://dx.doi.org/10.1183/13993003.03061-2020	Population	Software named as DLAD-10, company submission states is INSIGHT. CXRs from retrospective databases, referral route unknown, but had CT on the same day. Also simulation validation from CXRs from emergency department CXRs. Intervention looking at 10 different lung conditions. Only the simulation validation set was AI+clinician vs clinician.
Nam JG, Park S, Hwang EJ, Lee JH, Jin KN, Lim KY*, et al.* Development and Validation of Deep Learning-based Automatic Detection Algorithm for Malignant Pulmonary Nodules on Chest Radiographs. *Radiology* 2019;**290**(1):218-28. http://dx.doi.org/10.1148/radiol.2018180237	Intervention	Funded by Lunit but software not stated; retrospective data set, population and referral unclear, comparison not eligible (for nodule detection observers asked if decision changed with results of software)
Napoleon D, Kalaiarasi I. Classifying Lung Cancer as Benign and Malignant Nodule Using ANN of Back-Propagation Algorithm and GLCM Feature Extraction on Chest X-Ray Images. *Wirel Pers Commun* 2022;**126**(1):167–95. http://dx.doi.org/10.1007/s11277-022-09594-1	Intervention	Not a named intervention, also CXRs with known abnormalities to distinguish between malignant and benign with no details of referral route
Nasser AA, Akhloufi MA. Chest Diseases Classification Using CXR and Deep Ensemble Learning. Paper presented at: Proceedings of the 19th International Conference on Content-based Multimedia Indexing; Graz, Austria. URL: https://doi.org/10.1145/3549555.3549581).	Intervention	Not a named intervention, also not lung cancer or nodules
Nasser AA, Akhloufi MA. Classification of CXR Chest Diseases by Ensembling Deep Learning Models. Paper presented at: 2022 IEEE 23rd International Conference on Information Reuse and Integration for Data Science (IRI); San Diego, CA, USA. URL: https://doi.org/10.1109/IRI54793.2022.00062	Intervention	Not a named intervention, also not lung cancer or nodules
NCT. *xrAI - Improving Quality and Efficiency in Chest Radiograph Interpretation*. ClinicalTrials.gov; 2019. URL: https://clinicaltrials.gov/show/NCT04153045 (Accessed 20 January 2023).	Intervention	Not a named intervention, study completed but no results posted
NCT. *xrAI - Improving Quality and Efficiency in Chest Radiograph Interpretation by Radiologists*. ClinicalTrials.gov; 2020. URL:	Duplicate	Duplicate

https://clinicaltrials.gov/show/NCT04221100 (Accessed 20 January 2023).		
Novak RD, Novak NJ, Gilkeson R, Mansoori B, Aandal GE. A comparison of computer-aided detection (CAD) effectiveness in pulmonary nodule identification using different methods of bone suppression in chest radiographs. *J Digit Imaging* 2013;**26**(4):651-6. http://dx.doi.org/10.1007/s10278-012-9565-4	Intervention	ClearRead Detect (eligible) but unclear if with radiologist, comparison is other CAD image types; Patients with pulmonary nodules confirmed by CT or pathology-proven CA selected, and negative cases selected, referral status of all unclear
Park S, Lee SM, Lee KH, Jung KH, Bae W, Choe J*, et al.* Deep learning-based detection system for multiclass lesions on chest radiographs: comparison with observer readings. *Eur Radiol* 2020;**30**(3):1359-68. http://dx.doi.org/10.1007/s00330-019-06532-x	Intervention	Unclear if referred from primary care, software not named and not as adjunct
Pesce E, Joseph Withey S, Ypsilantis PP, Bakewell R, Goh V, Montana G. Learning to detect chest radiographs containing pulmonary lesions using visual attention networks. *Med Image Anal* 2019;**53**:26-38. http://dx.doi.org/10.1016/j.media.2018.12.007	Intervention	Software not stated; population unclear
Peters AA, Decasper A, Munz J, Klaus J, Loebelenz LI, Hoffner MKM*, et al.* Performance of an AI based CAD system in solid lung nodule detection on chest phantom radiographs compared to radiology residents and fellow radiologists. *J Thorac Dis* 2021;**13**(5):2728-37. http://dx.doi.org/10.21037/jtd-20-3522	Population	Simulation study
Pham HH, Le TT, Tran DQ, Ngo DT, Nguyen HQ. Interpreting chest X-rays via CNNs that exploit hierarchical disease dependencies and uncertainty labels. *Neurocomputing* 2021;**437**:186-94. http://dx.doi.org/10.1016/j.neucom.2020.03.127	Intervention	Not a named intervention, also CXRs from a database but referral route of participants not known, validation study for the algorithm
Pooch EHP, Alva TAP, Becker CDL. A Deep Learning Approach for Pulmonary Lesion Identification in Chest Radiographs. Paper presented at: Intelligent Systems: 9th Brazilian Conference, BRACIS 2020, Rio Grande, Brazil, October 20–23, 2020, Proceedings, Part I; Rio Grande, Brazil. URL: https://doi.org/10.1007/978-3-030-61377-8_14	Intervention	Not a named intervention, also CXRs from a database but referral route of participants not known, validation study for the algorithm
Putha P, Tadepalli M, Reddy B, Raj T, Chiramal JA, Govil S*, et al. Can artificial intelligence reliably report chest x-rays?: Radiologist validation of an algorithm trained on 2.3 million x-rays [Preprint]*. arXiv.org; 2018. URL: https://arxiv.org/pdf/1807.07455.pdf (Accessed 4 January 2023).	Intervention	Software not named, CXRs from databases including participants from inpatient and outpatient and no route of referral known, validation study for the algorithm to identify numerous abnormalities, radiologist vs AI only for nodules
Rajagopalan K, Babu S. The detection of lung cancer using massive artificial neural network based on soft tissue technique. *BMC Med Inform Decis Mak* 2020;**20**(1):282. http://dx.doi.org/10.1186/s12911-020-01220-z	Intervention	Not a named intervention
Rajpurkar P, Irvin J, Ball RL, Zhu K, Yang B, Mehta H*, et al.* Deep learning for chest radiograph diagnosis: A retrospective comparison of the CheXNeXt	Intervention	CheXNeXT, training and validation study using dataset (ChestX-ray-14)no details

algorithm to practicing radiologists. *PLoS Medicine / Public Library of Science* 2018;**15**(11):e1002686. http://dx.doi.org/10.1371/journal.pmed.1002686		
Ridder K, Preuhs A, Mertins A, Joerger C. *Routine Usage of AI-based Chest X-ray Reading Support in a Multi-site Medical Supply Center [Preprint]*. arXiv.org; 2022. URL: https://arxiv.org/ftp/arxiv/papers/2210/2210.10779.pdf (Accessed 3 January 2023).	Intervention	Software eligible but standalone. No details of where CXRs were from, abstract only, no comparator
Saba T. Automated lung nodule detection and classification based on multiple classifiers voting. *Microsc Res Tech* 2019;**82**(9):1601-9. http://dx.doi.org/10.1002/jemt.23326	Intervention	Not CXR (CT)
Samei E, Majdi-Nasab N, Dobbins JT, 3rd, McAdams HP. Biplane correlation imaging: a feasibility study based on phantom and human data. *J Digit Imaging* 2012;**25**(1):137-47. http://dx.doi.org/10.1007/s10278-011-9392-z	Intervention	Not a named intervention, simulated cases and some human cases but no details of where from
Schalekamp S, van Ginneken B, Heggelman B, Imhof-Tas M, Somers I, Brink M*, et al.* New methods for using computer-aided detection information for the detection of lung nodules on chest radiographs. *Br J Radiol* 2014;**87**(1036):20140015. http://dx.doi.org/10.1259/bjr.20140015	Population	Intervention: ClearRead Detect with ClearRead Bone Suppression + radiologist; same readers for intervention and comparator; CXR retrospectively selected, derived from clinically indicated examinations, referral route unclear
Schalekamp S, van Ginneken B, Koedam E, Snoeren MM, Tiehuis AM, Wittenberg R*, et al.* Computer-aided detection improves detection of pulmonary nodules in chest radiographs beyond the support by bone-suppressed images. *Radiology* 2014;**272**(1):252-61. http://dx.doi.org/10.1148/radiol.14131315	Population	ClearRead Detect with ClearRead Bone Suppression + radiologist; same readers for intervention and comparator; referral route unclear: patients retrospectively selected with presence of a solid solitary lesion and CT within 3 months, control patients negative CXR and CT within 6 months
Seyyed-Kalantari L, Liu G, McDermott M, Chen IY, Ghassemi M. CheXclusion: Fairness gaps in deep chest X-ray classifiers. *Pac Symp Biocomput* 2021;**26**:232-43. https://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=med19&AN=33691020	Intervention	Not a named intervention
Shi Z, Ma J, Feng Y, He L, Suzuki K. Evaluation of MTANNs for eliminating false-positive with different computer aided pulmonary nodules detection software. *Pak J Pharm Sci* 2015;**28**(6 Suppl):2311-6.	Intervention	Additional algorithm applied to named interventions but on simulations
Shi Z, Xu B, Zhao M, Zhao J, Wang Y, Liu Y*, et al.* A joint ROI extraction filter for computer aided lung nodule detection. *Biomed Mater Eng* 2015;**26(Supplement 1)**:S1491-S9. http://dx.doi.org/10.3233/BME-151448	Intervention	CT scan
Shimazaki A, Ueda D, Choppin A, Yamamoto A, Honjo T, Shimahara Y*, et al.* Deep learning-based algorithm for lung cancer detection on chest radiographs using the segmentation method. *Sci Rep* 2022;**12**(1):727.	Intervention	Not a named interventions, also confirmed lung cancer cases only and not clear when CXRs performed

http://dx.doi.org/10.1038/s41598-021-04667-w		
Sim Y, Chung MJ, Kotter E, Yune S, Kim M, Do S*, et al.* Deep Convolutional Neural Network-based Software Improves Radiologist Detection of Malignant Lung Nodules on Chest Radiographs. *Radiology* 2020;**294**(1):199-209. http://dx.doi.org/10.1148/radiol.2019182465	Population	Eligible software (and with radiologist on re-read); Population includes normal CXR from health screening population and CXR with lung cancer at tertiary hospital - referral unclear
Singh A, Lall B, Panigrahi BK, Agrawal A, Thangakunam B, Christopher DJ. Deep LF-Net: Semantic lung segmentation from Indian chest radiographs including severely unhealthy images. *Biomed Signal Process Control* 2021;**68 (no pagination)**. http://dx.doi.org/10.1016/j.bspc.2021.102666	Intervention	Not eligible software, population from three datasets, referral status unknown
Singh R, Kalra MK, Nitiwarangkul C, Patti JA, Homayounieh F, Padole A*, et al.* Deep learning in chest radiography: Detection of findings and presence of change. *PLoS ONE [Electronic Resource]* 2018;**13**(10):e0204155. http://dx.doi.org/10.1371/journal.pone.0204155	Intervention	Employees of Qure.ai and software referred to as Qure AI, appears to be stand alone; population from CHestX-ray8 datatset, no details; outcome not nodules or cancer
Sirshar M, Hassan T, Akram MU, Khan SA. An incremental learning approach to automatically recognize pulmonary diseases from the multi-vendor chest radiographs. *Comput Biol Med* 2021;**134**(C):9. http://dx.doi.org/10.1016/j.compbiomed.2021.104435	Intervention	Not a named intervention, also CXRs from various databases but referral route of participants not known, validation study for the algorithm
Stubblefield JW, Cooksey L, Causey J, Qualls J, Bellis E, Ashby C*, et al. Artificial Intelligence Algorithms for Medical Imaging and Healthcare*: Arkansas State University; 2021.	Study design	Thesis, full text not retrieved
Szucs-Farkas Z, Schick A, Cullmann JL, Ebner L, Megyeri B, Vock P*, et al.* Comparison of dual-energy subtraction and electronic bone suppression combined with computer-aided detection on chest radiographs: effect on human observers' performance in nodule detection. *AJR American Journal of Roentgenology* 2013;**200**(5):1006-13. http://dx.doi.org/10.2214/AJR.12.8877	Intervention	Riverain manufacturer, but software includes SoftView (bone suppression imaging) and OnGuard (nodule detection) – query early version of ClearRead Detect; population retrospectively selected with pulmonary nodules
Tam M, Dyer T, Dissez G, Morgan TN, Hughes M, Illes J*, et al.* Augmenting lung cancer diagnosis on chest radiographs: positioning artificial intelligence to improve radiologist performance. *Clin Radiol* 2021;**76**(8):607-14. http://dx.doi.org/10.1016/j.crad.2021.03.021	Population	Software eligible. Population referral route not reported. Includes CXRs with difficult to locate nodules and CXRs with no nodules. includes AI+clinician vs AI alone but is simulating what might happen if the AI alone was used as triage
Teng PH, Liang CH, Lin Y, Alberich-Bayarri A, Gonzalez RL, Li PW*, et al.* Performance and educational training of radiographers in lung nodule or mass detection: Retrospective comparison with different deep learning algorithms. *Medicine* 2021;**100**(23):e26270. http://dx.doi.org/10.1097/MD.0000000000026270	Intervention	QUIBIM Chest X-ray Classifier (stated in abstract)
Toda N, Hashimoto M, Iwabuchi Y, Nagasaka M, Takeshita R, Yamada M*, et al.*	Intervention	Not a named intervention

Validation of deep learning-based computer-aided detection software use for interpretation of pulmonary abnormalities on chest radiographs and examination of factors that influence readers' performance and final diagnosis. *Japanese Journal of Radiology* 2022;**19**:19. http://dx.doi.org/10.1007/s11604-022-01330-w		
Ueda D, Yamamoto A, Shimazaki A, Walston SL, Matsumoto T, Izumi N*, et al.* Artificial intelligence-supported lung cancer detection by multi-institutional readers with multi-vendor chest radiographs: a retrospective clinical validation study. *BMC Cancer* 2021;**21**(1):1120. http://dx.doi.org/10.1186/s12885-021-08847-9	Intervention	Not a named intervention, also population unclear referral route as retrospectively collected and includes CXRs from confirmed lung cancer cases and those without nodules
van Beek EJR, Ahn JS, Kim MJ, Murchison JT. Validation study of machine-learning chest radiograph software in primary and emergency medicine. *Clin Radiol* 2022;**25**:25. http://dx.doi.org/10.1016/j.crad.2022.08.129	Intervention	Intervention eligible (Lunit INSIGHT CXR (Lunit)) but not an adjunct to clinician, CXRs from referrals from primary care and ED and reported separately, compares AI alone vs human reader alone
Wang H, Jia H, Lu L, Xia Y. Thorax-Net: An Attention Regularized Deep Neural Network for Classification of Thoracic Diseases on Chest Radiography. *IEEE J Biomed Health Inform* 2020;**24**(2):475-85. http://dx.doi.org/10.1109/jbhi.2019.2928369	Intervention	From known SR not in Endnote. Not a named intervention.
Wang Q, Kang W, Wu C, Wang B. Computer-aided detection of lung nodules by SVM based on 3D matrix patterns. *Clin Imaging* 2013;**37**(1):62-9. http://dx.doi.org/10.1016/j.clinimag.2012.02.003	Intervention	Not CXR
Wozniak M, Polap D, Capizzi G, Sciuto GL, Kosmider L, Frankiewicz K. Small lung nodules detection based on local variance analysis and probabilistic neural network. *Comput Methods Programs Biomed* 2018;**161**:173-80. http://dx.doi.org/10.1016/j.cmpb.2018.04.025	Intervention	Software not stated, no details on population
Xu Y, Ma D, He W. Assessing the use of digital radiography and a real-time interactive pulmonary nodule analysis system for large population lung cancer screening. *Eur J Radiol* 2012;**81**(4):e451-6. http://dx.doi.org/10.1016/j.ejrad.2011.04.031	Intervention	Software: IQQA®-Chest Workstation
Yates EJ, Yates LC, Harvey H. Machine learning "red dot": open-source, cloud, deep convolutional neural networks in chest radiograph binary normality classification. *Clin Radiol* 2018;**73**(9):827-31. http://dx.doi.org/10.1016/j.crad.2018.05.015	Intervention	Intervention not relevant, ChestX-ray14 dataset
Yoo H, Kim EY, Kim H, Choi YR, Kim MY, Hwang SH*, et al.* Artificial Intelligence-Based Identification of Normal Chest Radiographs: A Simulation Study in a Multicenter Health Screening Cohort. *Korean Journal of Radiology*	Population	Health "screening" population, aim was to help remove normal CXRs so unlikely referred symptomatic or incidental

2022;**23**(10):1009-18. http://dx.doi.org/10.3348/kjr.2022.0189		
Yoo H, Lee SH, Arru CD, Doda Khera R, Singh R, Siebert S*, et al.* AI-based improvement in lung cancer detection on chest radiographs: results of a multi-reader study in NLST dataset. *Eur Radiol* 2021;**31**(12):9664-74. http://dx.doi.org/10.1007/s00330-021-08074-7	Population	Health screening population from an RCT of lung cancer screening
Zhang Z, Yang J, Zhao J. An automatic detection model of pulmonary nodules based on deep belief network. *Int J Wire Mob Comput* 2019;**16**(1):7–13.	British library not available	
Zheng S, Shen Z, Pei C, Ding W, Lin H, Zheng J*, et al.* Interpretative computer-aided lung cancer diagnosis: From radiology analysis to malignancy evaluation. *Comput Methods Prog Biomed* 2021;**210**(C):11. http://dx.doi.org/10.1016/j.cmpb.2021.106363	Intervention	Not eligible software, R2MNet, for CT not CXR

Non-Cancer:

Reference	**Reason for exclusion**	**Comments**
Adu K, Yu Y, Cai J, Tattrah VD, Ansere JA, Tashi N. S-CCCapsule: Pneumonia detection in chest X-ray images using skip-connected convolutions and capsule neural network. *J Intell Fuzzy Syst* 2021;**41**(1):757–81. http://dx.doi.org/10.3233/jifs-202638	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Afzali A, Babapour Mofrad F, Pouladian M. Contour-based lung shape analysis in order to tuberculosis detection: modeling and feature description. *Med Biol Eng Comput* 2020;**58**(9):1965-86. http://dx.doi.org/10.1007/s11517-020-02192-y	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Albahli S. A deep neural network to distinguish COVID-19 from other chest diseases using X-ray images. *Current Medical Imaging* 2021;**17(1)**:109-19. http://dx.doi.org/10.2174/1573405616666200604163954	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance although nodules included
Anter AM, Oliva D, Thakare A, Zhang Z. AFCM-LSMA: New intelligent model based on Lévy slime mould algorithm and adaptive fuzzy C-means for identification of COVID-19 infection from chest X-ray images. *Adv Eng Inform* 2021;**49**(C):13. http://dx.doi.org/10.1016/j.aei.2021.101317	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Bharati S, Podder P, Mondal MRH. Hybrid deep learning for detecting lung diseases from X-ray images. *Informatics in Medicine Unlocked* 2020;**20 (no pagination)**. http://dx.doi.org/10.1016/j.imu.2020.100391	Intervention	Not named commercial software, not AI+clinician
Bhardwaj P, Kaur A. A novel and efficient deep learning approach for COVID-19 detection using X-ray imaging modality. *International Journal of Imaging Systems & Technology* 2021;**31**(4):1775-91.	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance

http://dx.doi.org/10.1002/ima.22627		
Codlin AJ, Dao TP, Vo LNQ, Forse RJ, Van Truong V, Dang HM*, et al.* Independent evaluation of 12 artificial intelligence solutions for the detection of tuberculosis. *Sci Rep* 2021;**11**(1):23895. http://dx.doi.org/10.1038/s41598-021-03265-0	Outcome	AI outcomes were abnormal opacities/cavitation/lesions possibly caused by TB or normal which included abnormal non-tubercular origin
Damania K, Pawar PM, Pramanik R. Convolutional Neural Networks for Detection of COVID-19 From Chest X-Rays. *Int J Ambient Comput Intell* 2022;**13**(1):1–21. http://dx.doi.org/10.4018/ijaci.300793	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
El-Bana S, Al-Kabbany A, Sharkas M. A multi-task pipeline with specialized streams for classification and segmentation of infection manifestations in COVID-19 scans. *PeerJ Computer Science* 2020;**6**:e303. http://dx.doi.org/10.7717/peerj-cs.303	Outcome	Simulation study, not commercial named software, no outcomes of relevance
Engle E, Gabrielian A, Long A, Hurt DE, Rosenthal A. Performance of Qure.ai automatic classifiers against a large annotated database of patients with diverse forms of tuberculosis. *PLoS ONE [Electronic Resource]* 2020;**15**(1):e0224445. http://dx.doi.org/10.1371/journal.pone.0224445	Intervention	Incidental population. Retrospective evaluation of CXRs of people with TB, nodules was an outcome, unclear referral route and not AI+clinician
Ezzat D, Hassanien AE, Ella HA. An optimized deep learning architecture for the diagnosis of COVID-19 disease based on gravitational search optimization. *Applied Soft Computing* 2021;**98**:106742. http://dx.doi.org/10.1016/j.asoc.2020.106742	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Fehr J, Konigorski S, Olivier S, Gunda R, Surujdeen A, Gareta D*, et al.* Computer-aided interpretation of chest radiography reveals the spectrum of tuberculosis in rural South Africa. *npj Digital Medicine* 2021;**4(1) (no pagination)**. http://dx.doi.org/10.1038/s41746-021-00471-y	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Gayathri JL, Abraham B, Sujarani MS, Nair MS. A computer-aided diagnosis system for the classification of COVID-19 and non-COVID-19 pneumonia on chest X-ray images by integrating CNN with sparse autoencoder and feed forward neural network. *Comput Biol Med* 2022;**141 (no pagination)**. http://dx.doi.org/10.1016/j.compbiomed.2021.105134	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Gipson J, Tang V, Seah J, Kavnoudias H, Zia A, Lee R*, et al.* Diagnostic accuracy of a commercially available deep-learning algorithm in supine chest radiographs following trauma. *Br J Radiol* 2022;**95**(1134):20210979. http://dx.doi.org/10.1259/bjr.20210979	Outcome	Software eligible. Participants were CXR following 'presenting' with blunt trauma, referral route unclear, not AI+clinician, no lung cancer or nodules
Govindarajan S, Swaminathan R. Analysis of Tuberculosis in Chest Radiographs for Computerized Diagnosis using Bag of Keypoint Features. *J Med Syst* 2019;**43**(4):1–9. http://dx.doi.org/10.1007/s10916-019-1222-8	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Gupta A, Sheth P, Xie P. Neural architecture search for pneumonia diagnosis	Outcome	Not named commercial software, not AI+clinician, no

from chest X-rays. *Sci Rep* 2022;**12**(1):11309. http://dx.doi.org/10.1038/s41598-022-15341-0		outcomes of relevance
Haghanifar A, Majdabadi MM, Choi Y, Deivalakshmi S, Ko S. COVID-CXNet: Detecting COVID-19 in frontal chest X-ray images using deep learning. *Multimedia Tools Appl* 2022;**81**(21):30615–45. http://dx.doi.org/10.1007/s11042-022-12156-z	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Hajjej F, Ayouni S, Hasan M, Abir T, Kaur A. Automatic Detection of Cases of COVID-19 Pneumonia from Chest X-ray Images and Deep Learning Approaches. *Intell Neuroscience* 2022;**2022**:8. http://dx.doi.org/10.1155/2022/7451551	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Hipolito Canario DA, Fromke E, Patetta MA, Eltilib MT, Reyes-Gonzalez JP, Rodriguez GC*, et al.* Using artificial intelligence to risk stratify COVID-19 patients based on chest X-ray findings. *Intelligence-Based Medicine* 2022;**6**:100049. http://dx.doi.org/10.1016/j.ibmed.2022.100049	Outcome	Not commercial software (modified Qxr), not AI+clinician, no outcomes of lung cancer or nodules
Hong W, Hwang EJ, Lee JH, Park J, Goo JM, Park CM. Deep Learning for Detecting Pneumothorax on Chest Radiographs after Needle Biopsy: Clinical Implementation. *Radiology* 2022;**303**(2):433-41. http://dx.doi.org/10.1148/radiol.211706	Outcome	Software eligible (Lunit Insight), AI+clinician vs AI, no nodule or lung cancer outcomes
Hwang EJ, Kim H, Yoon SH, Goo JM, Park CM. Implementation of a Deep Learning-Based Computer-Aided Detection System for the Interpretation of Chest Radiographs in Patients Suspected for COVID-19. *Korean Journal of Radiology* 2020;**21**(10):1150-60. http://dx.doi.org/10.3348/kjr.2020.0536	Outcome	Software eligible (Lunit Insight), AI+clinician vs AI, outcomes presence versus absence of any suggestion of pneumonia. Nodules could be a reason for a false positive - N(%) are reported but this is not against a reference standard /any diagnostic accuracy outcomes
Irmak E. Implementation of convolutional neural network approach for COVID-19 disease detection. *Physiol Genomics* 2020;**52**(12):590-601. http://dx.doi.org/10.1152/physiolgenomics.00084.2020	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Jaeger S, Karargyris A, Candemir S, Folio L, Siegelman J, Callaghan F*, et al.* Automatic tuberculosis screening using chest radiographs. *IEEE Trans Med Imaging* 2014;**33(2)**:233-45. http://dx.doi.org/10.1109/TMI.2013.2284099	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Jangam E, Barreto AAD, Annavarapu CSR. Automatic detection of COVID-19 from chest CT scan and chest X-Rays images using deep learning, transfer learning and stacking. *Applied intelligence (Dordrecht, Netherlands)* 2022;**52**(2):2243-59. http://dx.doi.org/10.1007/s10489-021-02393-4	Outcome	Not named commercial software, not AI+clinician, no outcomes of relevance
Kagujje M, Kerkhoff AD, Nteeni M, Dunn I, Mateyo K, Muyoyeta M. The performance of computer-aided detection digital chest X-ray reading technologies for triage of active Tuberculosis among persons with a history of previous Tuberculosis. *Clin Infect Dis* 2022;**25**:25.	Outcome	Software eligible (Qxr) but not AI+clinician, no nodule or lung cancer outcomes

http://dx.doi.org/10.1093/cid/ciac679		
Kapoor A, Kapoor A, Mahajan G. Use of Artificial Intelligence to Triage Patients with Flu-Like Symptoms Using Imaging in Non-COVID-19 Hospitals during COVID-19 Pandemic: An Ongoing 8-Month Experience. *Indian J Radiol Imaging* 2021;**31**(4):901-9. http://dx.doi.org/10.1055/s-0041-1741103	Outcome	Not a named software (COVID-19 AI, Quibim) or with clinician
Kim S, Lin CW, Tseng GC. MetaKTSP: a meta-analytic top scoring pair method for robust cross-study validation of omics prediction analysis. *Bioinformatics* 2016;**32**(13):1966-73. http://dx.doi.org/10.1093/bioinformatics/btw115	Outcome	Not a named software, not AI for CXR, no radiologists, no relevant outcomes
Kim W, Lee SM, Kim JI, Ahn Y, Park S, Choe J*, et al.* Utility of a Deep Learning Algorithm for Detection of Reticular Opacity on Chest Radiography in Patients With Interstitial Lung Disease. *AJR American Journal of Roentgenology* 2022;**218**(4):642-50. http://dx.doi.org/10.2214/AJR.21.26682	Outcome	Software eligible (VUNO Med-Chest X-Ray, VUNO) and AI+clinican vs clinican, no outcomes of nodules or lung cancer, those with nodules were excluded from the CXRs being investigated
Kör H, Erbay H, Yurttakal AH. Diagnosing and differentiating viral pneumonia and COVID-19 using X-ray images. *Multimedia Tools Appl* 2022;**81**(27):39041–57. http://dx.doi.org/10.1007/s11042-022-13071-z	Outcome	Not eligible software, pneumonia and covid, no cancer outcomes
Lee YW, Huang SK, Chang RF. CheXGAT: A disease correlation-aware network for thorax disease diagnosis from chest X-ray images. *Artif Intell Med* 2022;**132 (no pagination)**. http://dx.doi.org/10.1016/j.artmed.2022.102382	Intervention	Not eligible software, population unclear, from CHestX-ray8 dataset; thorax disease
Louati H, Louati A, Bechikh S, Masmoudi F, Aldaej A, Kariri E. Topology optimization search of deep convolution neural networks for CT and X-ray image classification. *BMC Med Imaging* 2022;**22**(1):120. http://dx.doi.org/10.1186/s12880-022-00847-w	Outcome	Not a named commercial software, not AI+clinician, single arm study compared with historical studies, no relevant outcomes
MacPherson M, Muthuswamy K, Amlani A, Hutchinson C, Goh V, Montana G. Assessing the Performance of Automated Prediction and Ranking of Patient Age from Chest X-rays Against Clinicians. Medical Image Computing and Computer Assisted Intervention – MICCAI 2022; Cham, abstract no. 302, p. 255-65.	Intervention	Not a symptomatic or asymptomatic population looking for lung cancer / nodules, not commercial software, not AI+clinician vs clinician, no outcomes
Maheshwari S, Sharma RR, Kumar M. LBP-based information assisted intelligent system for COVID-19 identification. *Comput Biol Med* 2021;**134**(C):8. http://dx.doi.org/10.1016/j.compbiomed.2021.104453	Outcome	Not eligible software, covid, no cancer outcomes
Manokaran J, Zabihollahy F, Hamilton-Wright A, Ukwatta E. Detection of COVID-19 from chest x-ray images using transfer learning. *Journal of Medical Imaging* 2021;**8(S1) (no pagination)**. http://dx.doi.org/10.1117/1.JMI.8.S1.017503	Outcome	Not eligible software, covid, no cancer outcomes
Masud M. A light-weight convolutional Neural Network Architecture for classification of COVID-19 chest X-Ray images. *Multimedia Systems* 2022;**28**(4):1165-74. http://dx.doi.org/10.1007/s00530-021-00857-8	Outcome	Not an eligible software or outcomes
Mushtaq J, Pennella R, Lavalle S, Colarieti A, Steidler S, Martinenghi CMA*, et al.*	Intervention	Software eligible (Qxr) but AI alone. Participants

Initial chest radiographs and artificial intelligence (AI) predict clinical outcomes in COVID-19 patients: analysis of 697 Italian patients. *Eur Radiol* 2021;**31**(3):1770-9. http://dx.doi.org/10.1007/s00330-020-07269-8		presenting to ED with positive Covid-19 test, AI vs clinician, no relevant outcomes
Nash M, Kadavigere R, Andrade J, Sukumar CA, Chawla K, Shenoy VP*, et al.* Deep learning, computer-aided radiography reading for tuberculosis: a diagnostic accuracy study from a tertiary hospital in India. *Sci Rep* 2020;**10**(1):210. http://dx.doi.org/10.1038/s41598-019-56589-3	Intervention	Unclear if referred from primary care, software eligible (qXR) is stand alone, outcomes not nodules (but included in 'opacity') or cancer
Patel BN, Rosenberg L, Willcox G, Baltaxe D, Lyons M, Irvin J*, et al.* Human-machine partnership with artificial intelligence for chest radiograph diagnosis. *NPJ Digit Med* 2019;**2**:111. http://dx.doi.org/10.1038/s41746-019-0189-7	Intervention	Not relevant software.
Qin ZZ, Ahmed S, Sarker MS, Paul K, Adel ASS, Naheyan T*, et al.* Tuberculosis detection from chest x-rays for triaging in a high tuberculosis-burden setting: an evaluation of five artificial intelligence algorithms. *The Lancet Digital Health* 2021;**3**(9):e543-e54. http://dx.doi.org/10.1016/S2589-7500(21)00116-3	Outcome	Eligible software (InferRead DR, Lunit INSIGHT, qXR and 2 others not eligible) but stand alone, vs radiologist; population presented or referred for tuberculosis screening but unclear if primary care referrals; no nodule or cancer outcomes
Qin ZZ, Sander MS, Rai B, Titahong CN, Sudrungrot S, Laah SN*, et al.* Using artificial intelligence to read chest radiographs for tuberculosis detection: A multi-site evaluation of the diagnostic accuracy of three deep learning systems. *Sci Rep* 2019;**9**(1):15000. http://dx.doi.org/10.1038/s41598-019-51503-3	Outcome	Eligible software (Lunit INSIGHT, qXR and one not relevant) but appears to be AI alone. Referral status unclear but enrolled in outpatient dept. No relevant outcomes
Rao PS, Bheemavarapu P, Kalyampudi PSL, Rao TVM. An Efficient Method for Coronavirus Detection Through X-rays Using Deep Neural Network. *Current Medical Imaging* 2022;**18(6)**:587-92. http://dx.doi.org/10.2174/1573405617999210112193220	Outcome	Not eligible software, covid, no cancer outcomes
Rathi R, Balayan N, Kumar CNSV. Pneumonia detection using chest X-ray. *International Journal of Pharmaceutical Research* 2020;**12(3)**:1150-3. http://dx.doi.org/10.31838/ijpr/2020.12.03.181	Outcome	Not eligible software, covid, no cancer outcomes
Reis HC, Turk V. COVID-DSNet: A novel deep convolutional neural network for detection of coronavirus (SARS-CoV-2) cases from CT and Chest X-Ray images. *Artif Intell Med* 2022;**134 (no pagination)**. http://dx.doi.org/10.1016/j.artmed.2022.102427	Outcome	Not eligible software, covid, no cancer outcomes
Salama WM, Shokry A, Aly MH. A generalized framework for lung Cancer classification based on deep generative models. *Multimedia Tools Appl* 2022;**81**(23):32705–22. http://dx.doi.org/10.1007/s11042-022-13005-9	Intervention	Not eligible software, population unclear, cancer detection
Santosh KC, Antani S. Automated Chest X-Ray Screening: Can Lung Region Symmetry Help Detect Pulmonary Abnormalities? *IEEE Trans Med Imaging* 2018;**37**(5):1168-77. http://dx.doi.org/10.1109/TMI.2017.2775636	Outcome	Not AI and no outcomes

Singh A, Lall B, Panigrahi BK, Agrawal A, Thangakunam B, Christopher DJ. Deep LF-Net: Semantic lung segmentation from Indian chest radiographs including severely unhealthy images. *Biomed Signal Process Control* 2021;**68 (no pagination)**. http://dx.doi.org/10.1016/j.bspc.2021.102666	Outcome	Not eligible software, databases of different diseases including nodules, no relevant outcomes
Sun W, Wu D, Luo Y, Liu L, Zhang H, Wu S*, et al.* A Fully Deep Learning Paradigm for Pneumoconiosis Staging on Chest Radiographs. *IEEE Journal of Biomedical and Health Informatics* 2022;**26(10)**:5154-64. http://dx.doi.org/10.1109/JBHI.2022.3190923	Outcome	Not eligible software, pneumoconiosis, no cancer outcomes
Sung J, Park S, Lee SM, Bae W, Park B, Jung E*, et al.* Added value of deep learning-based detection system for multiple major findings on chest radiographs: A randomized crossover study. *Radiology* 2021;**299(2)**:450-9. http://dx.doi.org/10.1148/RADIOL.2021202818	Population	Eligible software Med-Chest X-Ray (Vuno) + radiologist; population is inpatients + outpatients, proportions not reported, referral and symptom status unclear, proportion unclear; limited relevant outcomes but includes nodule detection
Tan M, Deklerck R, Cornelis J, Jansen B. Phased searching with NEAT in a Time-Scaled Framework: Experiments on a computer-aided detection system for lung nodules. *Artif Intell Med* 2013;**59**(3):157–67. http://dx.doi.org/10.1016/j.artmed.2013.07.002	Intervention	Not eligible software, population unclear, nodule detection
Tavaziva G, Majidulla A, Nazish A, Saeed S, Benedetti A, Khan AJ*, et al.* Diagnostic accuracy of a commercially available, deep learning-based chest X-ray interpretation software for detecting culture-confirmed pulmonary tuberculosis. *Int J Infect Dis* 2022;**122**:15-20. http://dx.doi.org/10.1016/j.ijid.2022.05.037	Outcome	Eligible software (Lunit Insight) but appears to be stand alone; people presenting with tuberculosis symptoms or household contacts, unclear if referred from primary care; no nodule or cancer outcomes
Vajda S, Karargyris A, Jaeger S, Santosh KC, Candemir S, Xue Z*, et al.* Feature Selection for Automatic Tuberculosis Screening in Frontal Chest Radiographs. *J Med Syst* 2018;**42**(8):146. http://dx.doi.org/10.1007/s10916-018-0991-9	Outcome	Not AI, no outcomes
Vieira P, Sousa O, Magalhães D, Rabêlo R, Silva R. Detecting pulmonary diseases using deep features in X-ray images. *Pattern Recogn* 2021;**119**(C):13. http://dx.doi.org/10.1016/j.patcog.2021.108081	Outcome	Not eligible software, covid and pneumonia, no relevant outcomes
Wang K, Zhang X, Huang S, Chen F. Automatic Detection of Pneumonia in Chest X-Ray Images Using Cooperative Convolutional Neural Networks. Paper presented at: Pattern Recognition and Computer Vision: Second Chinese Conference, PRCV 2019, Xi'an, China, November 8–11, 2019, Proceedings, Part II; Xi'an, China. URL: https://doi.org/10.1007/978-3-030-31723-2_28	Outcome	Not eligible software, pneumonia, no relevant outcomes
Zaglam N, Jouvet P, Flechelles O, Emeriaud G, Cheriet F. Computer-aided diagnosis system for the Acute Respiratory Distress Syndrome from chest radiographs. *Comput Biol Med* 2014;**52**:41–8. http://dx.doi.org/10.1016/j.compbiomed.2014.06.006	Outcome	Not eligible software, acute respiratory distress syndrome, no relevant outcomes

Zhang R, Tie X, Qi Z, Bevins NB, Zhang C, Griner D*, et al.* Diagnosis of Coronavirus Disease 2019 Pneumonia by Using Chest Radiography: Value of Artificial Intelligence. *Radiology* 2021;**298(2)**:E88-E97. http://dx.doi.org/10.1148/RADIOL.2020202944	Outcome	Not eligible software, covid, no relevant outocmes
Zhou W, Cheng G, Zhang Z, Zhu L, Jaeger S, Lure FYM, et al. Deep learning-based pulmonary tuberculosis automated detection on chest radiography: large-scale independent testing. Quantitative Imaging in Medicine & Surgery 2022;12(4):2344-55. http://dx.doi.org/10.21037/qims-21-676	Intervention	Not an eligible software, symptom and referal status unclear, focus is on TB

Ongoing studies

Title and link	**Reason for exclusion**	**Comments**
Retrospective Study of Carebot AI CXR Performance in Preclinical Practice	Intervention	Not commercial named software, population in hospital, not AI+radiologist
Research and development of artificial intelligence assistant diagnosis and clinical decision system for pulmonary ground glass nodules	Intervention	Not commercial named software, not Xray, population pre surgery or biopsy
Diagnosis of lung nodule and lung cancer on screening chest radiographs: Comparative clinical trial for evaluation of artificial intelligence-integrated PACS versus conventional PACS	Duplicate	In database searches, already screened.
Sensitivity of chest X-ray in patients with suspected acute thoracic diseases in emergency department: Randomized controlled trial to assess efficiency of artificial intelligence-based computer-aided detection system	Duplicate	In database searches, already screened.
To compare the outcome performance of Digital Chest Radiograph and radiologist diagnosis based on chest x ray	Intervention	Exclude – software not named, not AI+radiologist (AI vs radiologist reference standard)
A Study to Assess the Impact of an Artificial Intelligence (AI) System on Chest X-ray Reporting	Duplicate	Found via other sources, already screened.
A study to evaluate the effectiveness of computer artificial inteligence in identifying and classifying abnormalites in chest radiographs	Intervention	Software unclear but no manufacturer specified, non-commercial funding. Includes AI+radiologist vs radiologist alone. Population could include lung cancer but suggests will be subgroup analyses. Study not yet recruiting
Clinical Validation of Machine Learning Triage of Chest Radiographs	Intervention	Software unclear but no manufacturer specified + non-commercial funding.
Artificial Intelligence to Improve Physicians' Interpretation of Chest X-Rays in Breathless Patients	Intervention	Not commercial named software, population presenting to A+E
Multicenter Validation Study of an Artificial Intelligence Tool for Automatic	Intervention	Not commercial named software, not nodules or lung

Classification of Chest X-rays		cancer outcomes
Use of artificial intelligence to interpret chest X-rays	Intervention	Named commercial software (Qure.ai), unclear population and not AI+radiologist, validation study
Evaluation of Computer-Assisted-Detection (CAD) software for Chest X-ray lung Nodule	Intervention	Not a named software (sponsor is lpixel inc), unclear if AI+radiologist. Study is completed and URL links to study already screened
Deep Learning Model for Pure Solid Nodules Classification	Intervention	CT
Deep Learning Signature for Predicting Occult Nodal Metastasis of Clinical N0 Lung Cancer	Intervention	PET/CT
Effects of percutaneous vertebroplasty on respiratory parameters in patients with osteoporotic vertebral compression fractures	Intervention	Percutaneous vertebroplasty
Research on Differential Diagnosis of Pulmonary Nodules Based on Radiomics and Artificial Intelligence	Intervention	CT
Development and validation of AI model to predict the surgical site infection in lung cancer surgery	Intervention	AI-based model to predict the outcome of surgical site infection (SSI)
Constructing a deep learning model for the differentiation of benign and malignant single solid small nodules based on multi-omics features: a prospective, multi-center clinical study	Intervention	CT
Future Health Today: A cluster randomised controlled trial of quality improvement activities in general practice	Intervention	Quality improvement activities in general practice. Technology platform consisting of audit, point of care clinical decision support, and QI templates. Education activities.
A Preliminary Study on the Detection of Plasma Markers in Early Diagnosis for Lung Cancer	Intervention	Machine-learning for Detection of Plasma Markers
Research on the rapid pathological diagnosis of lung nodules based on intraoperative tumor images and preoperative CT images based on deep learning	Intervention	CT
Establishment and Application Research of Early Lung Cancer Prognosis Grading System Based on Machine Learning and New Pathological Features	Intervention	Grading System Based on Machine Learning and New Pathological Features
Automatic PD-L1 immunohistochemistry evaluation system for non-small cell lung cancer based on deep learning	Intervention	immunohistochemistry
Application Research of Artificial Intelligence Assistant System in in Comprehensive Preoperative Evaluation of Early Lung Cancer	Intervention	AI in Preoperative Evaluation. CT already used
The application of artificial intelligence diagnosis system in the pathological greades differentiation in lung adenocarcinoma	Intervention	Deep learning in the pathological grades differentiation
Multicenter clinical study of PET / CT radiomics in predicting gene mutation of lung cancer	Intervention	PET/CT
Study for the combination of medical image artificial intelligence technology and intraoperative frozen pathology can accurately predict the stage and subtypes of	Intervention	CT and pathological diagnosis

lung adenocarcinoma		
Tumor Invasiveness Estimation of Artificial Intelligence System for Subsolid Nodules on Computed Tomography: Diagnostic Performance and Utility Verification in Clinical Practice	Intervention	CT
Technical standard and application of intelligence assisted ultrasound indiagnosis of subpleural lung lesions	Intervention	ultrasound
Lung Nodule Imaging Biobank for Radiomics and AI Research LIBRA	Intervention	CT
Investigation of the BRAF mutation status in the pleural punctate in patients with malignant melanoma, colorectal or lung cancer, that show a BRAF mutation in the primary tumor and the comparison of the result with the conventional cytological / immunohistochemical and molecular cytology findings of the pleural punctate	Intervention	Automatic diagnostic system for malignant pleural effusion
Best Start Trial: early intervention physiotherapy to improve motor outcomes in infants at high risk of cerebral palsy or motor delay	Intervention	Physiotherapy
China Lung Cancer Screening (CLUS) Study Version 2.0	Intervention	CT
Development and Validation of a Three-dimensional Convolutional Neural Network for Automated Detection of Lung Nodule from Computed Tomography Images	Intervention	CT
Evaluation of Use of Diagnostic AI for Lung Cancer in Practice	Intervention	CT (specified in clinicaltrials.gov record)
Diagnostic Performance of Neural Network-Based Artificial Intelligent in Detecting Pulmonary Nodule on Chest CT	Intervention	CT
CT data collection of pulmonary nodules and analysis of artificial intelligence	Intervention	CT
Follow up after curative-intent lung cancer treatment	Intervention	PET-CT or CT surveillance of lung cancer patients
A Phase III Study of MEDI4736, given as Monotherapy or in Combination with Tremelimumab, versus Standard of Care in Patients with Locally Advanced or Metastatic Non-Small Cell Lung Cancer	Intervention	pharmaceutical
Screening for Early Lung Cancer in Shanghai, China	Intervention	CT
Natural History of Lung Nodules Seen on CT Scans From Participants at High-Risk of Developing Lung Cancer	Intervention	CT
Development and Validation of Artificial Intelligence Based Tool to read Chest X-rays in order to detect Pulmonary TB and other lung diseases	Intervention	Software unclear but no manufacturer specified, non-commercial funding, likely screening population, tuberculosis
Feasibility of AI-based Heart Function Prediction Model Using CXR	Population	Patient who visited the emergency room or outpatient clinic due to dyspnea and chest Pain. Outcome Left Ventricular Ejection Fraction < 40%
Rapid Research in Diagnostics Development for TB Network	Intervention	Software not AI, no nodules as outcomes, tuberculosis
Comparative Study of Artificial Intelligence and Radiologists in Assessing Severity of COVID19 Patient Images	Intervention	CT

Novel Artificial Intelligence Algorithm to screen COVID-19 Patients from X-Ray , CT-Scan of Thorax and Voice Sampling through Android App and storage through Cloud	Intervention	Software unclear but no manufacturer specified, non-commercial funding
Development and evaluation of minimally invasive and Dynamic digital radiography	Intervention	Not AI. CXR for evaluation of pulmonary function
Artificial Intelligence Algorithms for Discriminating Between COVID-19 and Influenza Pneumonitis Using Chest X-Rays	Intervention	Software unclear but not a named manufacturer, no outcomes of relevance
Study for the key issues of the diagnosis and treatment of novel coronavirus pneumonia (COVID-19) based on the medical imaging	Intervention	Not AI algorithm / software, no outcomes
Can periodically promoting tuberculosis and HIV testing reduce undiagnosed infectious tuberculosis and tuberculosis transmission in communities?	Intervention	Not AI, no outcomes, population likely screening
MAchine Learning in whole Body Oncology	Intervention	Magnetic resonance (MR) imaging
Clinical trial to evaluate the clinical effectiveness of pneumothorax reading results using artificial intelligence software in chest X-ray images	Intervention	Software unclear but no manufacturer specified, non-commercial funding, no outcomes of relevance
Accuracy of artificial intelligence in CXR screening for pulmonary tuberculosis	Intervention	Not commercial named software
Crowdsourcing an Open COVID-19 Imaging Repository for AI Research	Intervention	Not commercial named software
Predicting morbidity and mortality of preterm infants by analyzing chest x-ray images at admission using deep learning algorithms	Population	Preterm infants
Evaluation of detection of Pulmonary TB by computer aided technology	Intervention	Not named commercial software but Qure.ai are co-sponsors, population referral unclear, not AI+radiologist, no outcomes
The retrospective study for the development of the Artificial Intelligence (AI) regarding with the chest x-ray in pulmonary arterial hypertension	Intervention	Not commercial named software (3M)
Potential of Deep Learning in Assessing Pneumoconiosis Depicted on Digital Chest Radiography	Intervention	Not commercial named software, non-commercial funding, screening population
Evaluation of Pneumoconiosis High Risk Early Warning Models	Intervention	Not commercial named software
Coronavirus: Ventilator Outcomes Using Artificial Intelligence Chest Radiographs & Other Evidence-based Co-variates	Intervention	Not commercial named software, population in hospital
Evaluation of a COVID-19 Pneumonia CXR AI Detection Algorithm	Intervention	Not commercial named software
Advantage of Artificial Intelligence to detect COVID 19 using Chest X-Ray.	Intervention	Not commercial named software
Software for COVID19 Detection from Chest X-Ray, CT or Ultrasonography	Intervention	Not commercial named software
Classification of COVID-19 Infection in Posteroanterior Chest X-rays	Intervention	Not commercial named software

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