

DR SAMER ALABED

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SUMMARY

I actively drive the advancement of machine learning applications and report generation in cardiac imaging. I have published my work in prestigious journals, influenced European guidelines, and earned awards from the UK Parliament, the Radiological Society of North America, and the Royal College of Radiologists.

I led the development of a cardiac MR segmentation tool, integrating my expertise in big data, coding, and evidence-based medicine. Already used in over 5,000 MRI scans at Sheffield Teaching Hospitals, it saves thousands by reducing manual segmentation costs and eliminating the need for commercial solutions, demonstrating my commitment of bridging research with clinical practice.

In tandem with my research, my clinical focus is on cardiac imaging, particularly the assessment of ischaemic heart disease with stress perfusion cardiac MR and coronary CT angiography. I completed an advanced cardiac imaging fellowship at the Royal Papworth Hospital and hold high-level accreditations in both cardiac MR and CT.

Teaching is integral in my career. I have organised national conferences and courses, such as the BSCI annual meeting, BCS cardiac CT course, and BSCMR webinar series. I teach at various levels, including international courses, supervising PhD students, mentoring juniors, and contributing to the departmental radiology teaching program. The positive feedback from the BSCMR webinar series prompted its continuation, highlighting its impact on learners. I received an Educational Award from Health Education England, earned a Postgraduate-Certificate in Medical Education and became a Fellow of the Higher Education Academy.

Leadership is central to my professional identity. I represented doctors and postgraduate students, and served as the co-chair of the BSCI and BSCMR trainee committees and Trainee Editorial Board of *Radiology: Cardiothoracic Imaging*, actively driving the education of cardiac imagers. On the RCR academic committee and AI working group, I helped develop RCR guidelines for evaluating AI deployment in radiology. Over six years, I managed the on-call registrars' rota at the Sheffield Radiology Training Scheme, ensuring smooth operations during the transition to the new junior doctors' contract and the COVID-19 pandemic.

PROFESSIONAL MEMBERSHIPS

GMC	General Medical Council
RCR	Royal College of Radiologists
ESR	European Society of Radiology
ESC	European Society of Cardiology
ERS	European Respiratory Society
BSCMR	British Society of Cardiovascular Magnetic Resonance
BSCI	British Society of Cardiovascular Imaging
RSNA	Radiological Society of North America
SCMR	Society for Cardiovascular Magnetic Resonance
ESCR	European Society of Cardiovascular Radiology
EACVI	European Association of Cardiovascular Imaging

QUALIFICATIONS

2024	CCT - Certificate of Completion of Training in Radiology	General Medical Council
2023	PhD - AI in cardiac MRI » Thesis: AI in cardiac MRI to predict prognosis and treatment response » Supervisors: Professor Andy Swift and Professor Haiping Lu	University of Sheffield
2021	FHEA - Fellow of the Higher Education Academy	Higher Education Academy
2020	PgCert - Medical Education	University of Dundee
2019	MSc - Clinical Research Methods (Distinction)	University of Sheffield
2018	FRCR - Fellow of the Royal College of Radiologists	Royal College of Radiologists
2013	MSc - Evidence Based Health-Care	University of Oxford
2011	MD - Medical Degree	Damascus University

RESEARCH EXPERIENCE

2024-	Senior Clinical Research Fellow in Radiology	University of Sheffield
2022-24	NIHR Clinical Lecturer in Radiology	University of Sheffield
2019-22	Wellcome Trust Research Fellow in Cardiac MRI » Data scientist of the ASPIRE cardiac MRI and CT database » Helped train, validate and audit deep learning cardiac MRI segmentation	University of Sheffield
2014-19	NIHR Academic Clinical Fellow in Radiology » Performing and evaluating diagnostic accuracy studies in radiology	University of Sheffield
2010-	Cochrane Systematic Reviewer	Cochrane Heart

CLINICAL EXPERIENCE

2024-	Consultant Cardio Radiologist » Cardiac MRI level 3 accreditation - SCMR » Cardiac CT level 3 accreditation - BSCI	Sheffield Teaching Hospitals
2023-24	Advanced Cardiothoracic Imaging Fellowship » Supervisors: Dr Bobby Agrawal and Dr Jonathan Weir-Mccall	Royal Papworth Hospital
2022-23	Cardiothoracic Radiology Training » + 3 months Cardiac CT experience - Leeds University Hospitals	Sheffield Teaching Hospitals
2019-22	Out-of-Programme for Research (OOPR) » Acute and trauma CT and diagnostic and interventional ultrasound	Sheffield Teaching Hospitals
2014-19	Core Radiology Training » ST4 Acute and general CT, Oncology imaging, US intervention » ST3 Chest, Uro & Gynae, Paediatric and Vascular radiology » ST2 Neuroradiology, GI, MSK, Breast and Nuclear imaging » ST1 Plain radiography, US, CT, Fluoroscopy	Sheffield Teaching Hospitals
2013-14	Clinical Foundation Training » Cardiology including coronary care unit, heart failure and valve clinics	Buckinghamshire Healthcare Trust

GRANTS & AWARDS

Principal Investigator

£92,000	AI-enhanced medical imaging reporting	NIHR
£50,000	SYDHH Innovation Pipeline - Patient Friendly Reports	South Yorkshire Digital Health Hub
£27,500	Clinical Lecturer Starter Grant: Automating Cardiac Imaging	Academy of Clinical Sciences
£15,000	Topol Digital Fellowship: AI-enhanced medical imaging reports	NHS England
£3,000	Education, Research and Innovation Grant - 2018	Health Education England
£3,000	Constance Thornton Grant for Radiology Research - 2017	RCR
£23,500	University of Oxford MSC Scholarship - 2011	The Saïd Foundation

Co-Investigator

£469,272	Pulmonary hypertension induced Right heart failure	British Heart Foundation
£49,998	AI-Assisted Diagnosis of Pulmonary Hypertension	NIHR i4i
£199,946	Building a database of imaging in suspected PH	Janssen Pharmaceuticals
£114,354	Automatic Echo assessment to improve PH diagnosis	Janssen Pharmaceuticals
£10,000	NOAC for myocardial infarction - a network meta-analysis	NIHR Cochrane Incentive Award
£7,500	NOAC for atrial fibrillation - a network meta-analysis	NIHR Cochrane Incentive Award

Awards

£1500	AI-NET Fellowship - Excellence in AI Research - 2023	DAAD
Winner	NHS Parliamentary Awards - National Awards - 2023	NHS England
Winner	The Future of NHS Award - North East & Yorkshire - 2023	NHS England
Finalist	Digital Innovator of the Year - 2023	HSJ Awards
Distinction	Radiology Editor's Recognition Award - 2022 & 2023	Radiology: RCTI
£5000	NHS Innovation Award - 2022	Medipex
1st prize	Oral Abstract Winner at RCR Global - 2022	RCR
£500	British Thoracic Society Conference Award - 2022	BTS
£250	European Congress of Radiology Travel Award - 2022	RCR
1st prize	School of Radiology - Yorkshire & Humber - 2022	Health Education England
\$1000	RSNA Trainee Research Prize - 2021	RSNA
£500	The Sir Ernest Finch Travelling Fellowship - 2021	Sheffield Teaching Hospitals
1st prize	Professor Ronald Grainger Prize - 2021, 2020 & 2018	Sheffield Teaching Hospitals
1st prize	George and Vera Ansell Radiology Prize - 2018	RCR

IMPACT AND RECOGNITION

Citations in Guidelines

2022	Diagnosis and treatment of pulmonary hypertension	ESC & ERS
2019	Management of patients with supraventricular tachycardia	ESC
2015	Diagnosis and management of pericardial diseases	ESC

Media Coverage

Mar 2025	Fixing the NHS: What Will It Take	BBC Panorama
Aug 2023	AI heart disease tool scoops NHS award	RAD Magazine
Jul 2023	MP visits finalists for transformative AI heart disease technology.	The Star
Jun 2023	Sheffield Hospitals heart diagnosis AI technology announced as regional winner of Future NHS Award.	The Star
May 2023	NHS doctors want ChatGPT AI to write patient heart reports so they can see more people.	The Daily Mail
Mar 2023	Artificial intelligence can save NHS time and money with heart scans.	The Mirror
Dec 2022	NHS heart patients to receive quicker diagnosis due to Sheffield University and Teaching Hospitals innovation.	The Star
Dec 2022	AI spots damage on heart scans in seconds.	The Daily Mail
Oct 2022	Validation of AI Cardiac MRI Measurements.	RSNA Radiology Podcast

Public Engagement

Sep 2024	"Cor_alis_Choralis" - Festival of the Mind	Sheffield City Centre
Jul 2023	"Heart Art Images" - Shaping the Future	Sheffield Winter Gardens

SERVICE TO RESEARCH COMMUNITY

Journal Editor Roles

Deputy	Radiology: Cardiothoracic Imaging
Contact	Cochrane Heart

Peer Review

12 reviews	Radiology: Cardiothoracic Imaging
8 reviews	European Heart Journal - Cardiovascular Imaging
7 reviews	Clinical Radiology
2 reviews	JACC: Cardiovascular Imaging
2 reviews	Insights Into Imaging
2 review	Magnetic Resonance Imaging
1 review	Clinical Pediatrics
3 reviews	RCR Seed Grant
2 reviews	RCR Kodak Fellowship
1 review	RCR Roentgen Professorship
1 review	UKRI Doctoral Fellowship

Invited Faculty

2025	BCS Annual Conference
2025	UKIO Annual Conference
2025	BSCI Annual Conference
2024	ECR Annual Conference
2023	BSCI Annual Conference
2023	BSCMR Annual Conference

LEADERSHIP AND MANAGEMENT

National Leadership Roles

- » Executive Committee - British Society of Cardiovascular Imaging (2025-)
- » Academic Committee - RCR (2022-)
- » Co-Chair Trainee Committee - British Society of Cardiovascular Imaging
- » Co-Chair Trainee Committee - British Society of Cardiac Magnetic Resonance
- » AI working group - RCR
- » Expert Panel for Radiology Research - RCR RADIANT

Local Committee Membership

- » Research Excellence Framework (REF) 2024 Committee for Clinical Medicine
- » Co-Lead Imaging and omics AI interest group - University of Sheffield
- » Radiology Training committee - Sheffield Teaching Hospitals

Rota Management

- » Radiology on-call coordinator working closely with HR since 2018
- » Developed code to calculate fair on-call shifts for the radiology department
- » Performed a cost-effectiveness analysis for multiple on-call rota scenarios
- » Improved on-call cover by introducing Twilight shifts for junior trainees
- » Responded to Covid-19 pressure with a double cover system described as a "stroke of genius" by the Clinical Director

Student and Trainee Representation

- » Representative of less than full-time radiology trainees
- » Student councillor - University of Sheffield (2014/15)
- » Student representative - University of Oxford (2012/13)

Management Courses

- » Intensive Course on Leadership - University of Sheffield
- » Decision Making - University of Oxford
- » Making Decisions Based on Data - Udacity University
- » Economic Evaluation & Healthcare Financing - University of Sheffield

TEACHING

National Teaching Organisation

- » Co-Organiser of the BSCI 2025 Webinar series
- » Programme Chair of the BSCI/BSCCT 2024 annual conference at Sheffield
- » Co-Organiser of the BSCMR 2023 Webinar series
- » Co-Organiser of the BSCI/BSCCT Cardiac CT workshop at BCS 2022

Post-Graduate Teaching Experience

- » PhD co-supervisor at University of Sheffield: Turki Nasser and Khalid Ghamdi
- » Lecturer MRes Cardiovascular Medicine - "How to write Systematic Reviews"
- » Mentor to junior radiology registrars and research trainees
- » Tutor - International Critical Appraisal Skills Programme, University of Oxford
- » Regular one-to-one and small group departmental radiology teaching
- » Educational Advisor - RadiGo radiology teaching website

Undergraduate Teaching Experience

- » Anatomy Demonstrator, Medical School, University of Sheffield
- » Co-Supervisor - Medical School Student Selected components
- » Supervisor - Summer Programme for International Research Internship
- » Lecturer - SAMS virtual EBM courses with > 40,000 views on YouTube

Teaching Courses

- » FHEA - Fellow of the Higher Education Academy
- » PGCert in Medical Education for Radiology - University of Dundee
- » Gateway Course in Medical Education - University of Sheffield
- » Teaching and Learning skills - University of Oxford
- » Training the Trainer course - University of Oxford

PUBLICATIONS

Highlighted Publications

- [1] **Alabed** S, Garg P, Alandejani F, Dwivedi K, Maiter A, Karunasaagarar K, Rajaram S, Hill C, Thomas S, Gossling R, Sharkey M, Salehi M, Wild JM, Watson L, et al. *Establishing minimally important differences for cardiac MRI endpoints in pulmonary arterial hypertension*. European Respiratory Journal, 2023.
- [2] Zhong L, **Alabed** S, Leng S, Chai P, Teo L, Ruan W, Low TT, Wild JM, Allen JC, Lim ST, Tan JL, Yip JW, Swift AJ, Kiely DG, and Tan RS. *Pulmonary Artery Strain Predicts Prognosis in Pulmonary Arterial Hypertension*. JACC: Cardiovascular Imaging, 2023.
- [3] **Alabed** S, Alandejani F, Dwivedi K, Karunasaagarar K, Sharkey M, Garg P, Koning PJH de, Tóth A, Shahin Y, Johns C, Mamalakis M, Stott S, Capener D, Wood S, et al. *Validation of Artificial Intelligence Cardiac MRI Measurements: Relationship to Heart Catheterization and Mortality Prediction*. Radiology, 2022.
- [4] **Alabed** S, Uthoff J, Zhou S, Garg P, Dwivedi K, Alandejani F, Gosling R, Schobs L, Brook M, Capener D, Johns C, Wild JM, Rothman AM, Geest RJ van der, Condliffe R, Kiely DG, Lu H, and Swift AJ. *Machine Learning cardiac-MRI features predict mortality in newly diagnosed pulmonary arterial hypertension*. European Heart Journal - Digital Health, 2022.
- [5] **Alabed** S, Maiter A, Salehi M, Wild J, Lu H, O'regan D, Van Der Geest R, Garg P, and Swift A. *Quality of reporting in AI cardiac MRI segmentation studies - a systematic review and recommendations for future studies*. Vol. 9. Frontiers in Cardiovascular Medicine, 2022.
- [6] Alandejani F, **Alabed** S, Garg P, Goh ZM, Karunasaagarar K, Sharkey M, Salehi M, Aldabbagh Z, Dwivedi K, Mamalakis M, Metherall P, Uthoff J, Johns C, Rothman A, et al. *Training and clinical testing of artificial intelligence derived right atrial cardiovascular magnetic resonance measurements*. Vol. 24. Journal of Cardiovascular Magnetic Resonance, 2022, p. 25.
- [7] Garg P, Gosling R, Swoboda P, Jones R, Rothman A, Wild JM, Kiely DG, Condliffe R, **Alabed** S, and Swift AJ. *Cardiac magnetic resonance identifies raised left ventricular filling pressure: prognostic implications*. European Heart Journal, May 2022.
- [8] Goh ZM, Balasubramanian N, **Alabed** S, Dwivedi K, Shahin Y, Rothman AMK, Garg P, Lawrie A, Capener D, Thompson AAR, Alandejani F, Wild JM, Johns CS, Lewis RA, Gosling R, Sharkey M, Condliffe R, Kiely DG, and Swift AJ. *Right ventricular remodelling in pulmonary arterial hypertension predicts treatment response*. Heart, 2022.
- [9] Shahin Y, **Alabed** S, Lewis RA, Johns C, Garg P, Wild JM, Condliffe R, Swift AJ, Kiely DG, and al. et. *CMR Measures of Left Atrial Volume Index and Right Ventricular Function Have Prognostic Value in Chronic Thromboembolic Pulmonary Hypertension*. Vol. 9. Frontiers in Medicine, 2022.
- [10] **Alabed** S, Shahin Y, Alandejani F, Johns C, Lewis R, Condliffe R, Wild J, Kiely D, and Swift A. *Cardiac-MRI Predicts Clinical Worsening and Mortality in Pulmonary Arterial Hypertension: A Systematic Review and Meta-Analysis*. JACC Cardiovascular Imaging, 2021.
- [11] **Alabed** S, Saunders L, Garg P, Shahin Y, Rolf A, Puntmann V, Nagel E, Wild J, Kiely D, and Swift A. *Myocardial T1-mapping and extracellular volume in pulmonary arterial hypertension: A systematic review and meta-analysis*. Vol. 79. Magnetic Resonance Imaging, 2021, pp. 66–75.
- [12] **Alabed** S, Garg P, Johns CS, Alandejani F, Shahin Y, Dwivedi K, Wild J, Kiely D, and Swift A. *Cardiac Magnetic Resonance in Pulmonary Hypertension-an Update*. Vol. 13. Current Cardiovascular Imaging Reports, 2020.
- [13] Goh Z, **Alabed** S, Rothman A, Garg P, Lawrie A, Thompson R, Condliffe R, Wild J, Kiely D, Swift A, and al. et. *Right Ventricular Adaptation Assessed Using Cardiac Magnetic Resonance Predicts Survival in Pulmonary Arterial Hypertension*. JACC: Cardiovascular Imaging, 2020.

Peer Reviewed Publications

- [14] Maiter A, **Alabed** S, Allen G, and Alahdab F. "AI in healthcare: an introduction for clinicians". In: *BMJ Evidence-Based Medicine* (2025).
- [15] Alghamdi KS, Maiter A, Hyde GA, Sharkey M, Garg P, Wild JM, Kiely D, Swift AJ, and **Alabed** S. "Pulmonary hypertension and the role of MRI flow assessment: a systematic review". In: *British Journal of Radiology* 98.1172 (2025), tqaf182.
- [16] Newman TAH, Matthews G, Assadi H, Li R, Grafton-Clarke C, Mehmood Z, **Alabed** S, et al. "Cardiac MRI-derived mean right atrial pressure and its prognostic importance". In: *Open Heart* 12 (2025), e003216.
- [17] Alnasser TN, Hokmabadi A, Checkley EW, Sharkey M, Abdulaal L, Alghamdi K, Garg P, Maiter A, Dwivedi K, Salehi M, Taylor J, Metherall P, Hyde GA, Goh ZM, Kiely DG, **Alabed** S, and Swift Andrew J AC. "A fully automated explainable predictive model for diagnosing pre-capillary and post-capillary pulmonary hypertension on routine unenhanced CT: results from the ASPIRE Registry". In: *European Heart Journal - Digital Health* (2025).
- [18] Tapper L, **Alabed** S, Maiter A, Lejawka A, Salehi M, Dwivedi K, Garg P, Kiely DG, Metherall P, Geest RJ van der, Karunasaagarar K, Sharkey M, and Swift AJ. "Enhancing accuracy of detecting left atrial dilatation on CT pulmonary angiography". In: *European Journal of Radiology Open* 15 (2025).
- [19] Smith H, Thompson AR, Akil M, **Alabed** S, Billings C, Charalampopoulos A, Dwivedi K, Elliot CA, Hameed A, Haque A, Hamilton N, Hill C, Hurdman J, Kilding R, et al. "DLco, Kco and FVC/DLco in suspected systemic sclerosis-associated pulmonary hypertension: Insights from the ASPIRE registry". In: *ERJ Open Research* (2025).
- [20] Grafton-Clarke C, Assadi H, Li R, Mehmood Z, Hall R, Matthews G, Tsampasian V, **Alabed** S, Kasmai B, Staff L, Curtin J, Yashoda GK, Sun J, Nair S, et al. "Four-dimensional flow provides incremental diagnostic value over echocardiography in aortic stenosis". In: *Open Heart* 12 (2025).
- [21] Assadi HS, Zhao X, Matthews G, Li R, Broncano Cabrero J, Kasmai B, **Alabed** S, Royuela Del Val J, Spohr H, Gurung-Koney Y, Aung N, Nair S, Swift AJ, Vassiliou VS, Zhong L, Al-Mohammad A, Geest RJ van der, Swoboda PP, Plein S, and Garg P. "Cardiovascular magnetic resonance imaging markers of ageing: a multi-centre, cross-sectional cohort study". In: *European Heart Journal Open* 5.3 (2025).
- [22] Delaney L, **Alabed** S, Maiter A, Salehi M, Goodlad M, Shah H, Checkley E, Matthews S, Kamil M, Evans O, Rajaram S, Johns C, Sreaton NJ, Swift AJ, and Dwivedi K. "Meta-Analysis of Interobserver Agreement in Assessment of Interstitial Lung Disease Using High-Resolution CT". In: *Radiology* 313.1 (2024).
- [23] Al Said S, Kaier K, Sumaya W, Alsaad D, Duerschmied D, Storey R, Gibson C, Westermann D, and **Alabed** S. "Non-vitamin-K-antagonist oral anticoagulants (NOACs) after acute myocardial infarction: a network meta-analysis". In: *Cochrane Database of Systematic Reviews* (2024).
- [24] Salehi M, **Alabed** S, Sharkey M, Maiter A, Dwivedi K, Yardibi T, Selej M, Hameed A, Charalampopoulos A, Kiely DG, and Swift AJ. "Artificial intelligence-based echocardiography assessment to detect pulmonary hypertension". In: *ERJ Open Research* (2024).
- [25] Mastrodicasa D, Gunasekaran S, **Alabed** S, Hanneman K, and Gulsin GS. "Top 2024 Images in Cardiothoracic Imaging". In: *Radiology: Cardiothoracic Imaging* 6.6 (2024).
- [26] Cheng LH, Sun X, Elliot C, Condliffe R, Kiely DG, **Alabed** S, Swift AJ, and van der Geest RJ. "Mean pulmonary artery pressure prediction with explainable multi-view cardiac MR cine series deep learning model". In: *Journal of Cardiovascular Magnetic Resonance* (2024).
- [27] Abdulaal L, Maiter A, Dwivedi K, Sharkey MJ, **Alabed** S, Alkhanfar D, Rothman A, Rajaram S, Condliffe R, Kiely DG, and Swift AJ. "Lung parenchymal and cardiac appearances on CTPA impact survival in chronic thromboembolic pulmonary hypertension: results from the ASPIRE Registry". In: *ERJ Open Research* (2024).
- [28] Fu Q, **Alabed** S, Hoole SP, Abraham G, and Weir-McCall JR. "Prognostic Value of Stress Perfusion Cardiac MRI in Cardiovascular Disease: A Systematic Review and Meta-Analysis of the Effects of the Scanner, Stress Agent, and Analysis Technique". In: *Radiology: Cardiothoracic Imaging* 6.3 (2024).
- [29] Assadi H, **Alabed** S, Li R, Matthews G, Karunasaagarar K, Kasmai B, Nair S, Mehmood Z, Grafton-Clarke C, Swoboda PP, Swift AJ, Greenwood JP, Vassiliou VS, Plein S, Geest RJ van der, and Garg P. "Development and validation of AI-derived segmentation of four-chamber cine cardiac magnetic resonance". In: *European Radiology Experimental* 8.1 (2024), p. 77.
- [30] Aquino GJ, Mastrodicasa D, **Alabed** S, Abohashem S, Wen L, Gill RR, Bardo DME, Abbara S, and Hanneman K. "Radiology: Cardiothoracic Imaging Highlights 2023". In: *Radiology: Cardiothoracic Imaging* 6.2 (2024).

- [31] Ross J, Hammouche S, Chen Y, Rockall A, **Alabed** S, Chen M, Dwivedi K, Fascia D, Greenhalgh R, Hall M, Halliday K, Harden S, Ramsden W, and Shelmerdine S. "Beyond regulatory compliance: evaluating radiology artificial intelligence applications in deployment". In: *Clinical Radiology* (2024).
- [32] Abdulaal L, Maiter A, Salehi M, Sharkey M, Alnasser T, Garg P, Rajaram S, Hill C, Johns C, Rothman AMK, Dwivedi K, Kiely DG, **Alabed** S, and Swift AJ. "A systematic review of artificial intelligence tools for chronic pulmonary embolism on CT pulmonary angiography". In: *Frontiers in Radiology* 4 (2024).
- [33] Durrington C, Hurdman JA, Elliot CA, Maclean R, Veen JV, Saccucco G, De-Foneska D, Swift AJ, Rajaram S, Hill C, Thomas S, Dwivedi K, **Alabed** S, Wild JM, et al. "Systematic pulmonary embolism follow-up increases diagnostic rates of chronic thromboembolic pulmonary hypertension and identifies less severe disease: results from the ASPIRE Registry". In: *European Respiratory Journal* (2024).
- [34] Dwivedi K, Sharkey M, Delaney L, **Alabed** S, Rajaram S, Hill C, Johns C, Rothman A, Mamalakis M, Thompson AAR, Wild J, Condliffe R, Kiely DG, and Swift AJ. "Improving Prognostication in Pulmonary Hypertension Using AI-quantified Fibrosis and Radiologic Severity Scoring at Baseline CT". In: *Radiology* 310.2 (2024).
- [35] Alnasser TN, Abdulaal L, Maiter A, Sharkey M, Dwivedi K, Salehi M, Garg P, Swift AJ, and **Alabed** S. "Advancements in Cardiac Structures Segmentation: A Comprehensive Systematic Review of Deep Learning in CT Imaging". In: *Frontiers in Cardiovascular Medicine* 11 (2024).
- [36] Salehi M, Maiter A, Strickland S, Karunasaagarar K, Dwivedi K, Sharkey M, Metherall P, Geest R van der, **Alabed** S, and Swift AJ. "Clinical assessment of an AI tool for measuring biventricular parameters on cardiac MR". In: *Frontiers in Cardiovascular Medicine* 11 (2024).
- [37] Garg P, Grafton-Clarke C, Matthews G, Swoboda P, Zhong L, Aung N, Thomson R, **Alabed** S, Demirkiran A, Vassiliou VS, and Swift AJ. "Sex-specific cardiac magnetic resonance pulmonary capillary wedge pressure". In: *European Heart Journal Open* 4.3 (May 2024).
- [38] Mehmood Z, Assadi H, Grafton-Clarke C, Li R, Matthews G, **Alabed** S, Girling R, Underwood V, Kasmal B, Zhao X, Ricci F, Zhong L, Aung N, Petersen SE, Swift AJ, Vassiliou VS, Cavalcante J, Geest RJ van der, and Garg P. "Validation of 2D flow MRI for helical and vortical flows". In: *Open Heart* 11.1 (2024).
- [39] Wang X, Gondal M, **Alabed** S, Hill C, and Barmby D. "Left Main Stem Compression by Intrapericardial Paraganglioma Associated With Succinate Dehydrogenase Mutation". In: *JACC: Case Reports* 29 (2024).
- [40] Weir-McCall J and **Alabed** S. "Myocardial Tissue Characterization With CT-Derived Extracellular Volume". In: *JACC: Cardiovascular Imaging* (2023).
- [41] Dwivedi K, Sharkey M, **Alabed** S, Langlotz CP, Swift AJ, and Bluethgen C. "External validation, radiological evaluation, and development of deep learning automatic lung segmentation in contrast-enhanced chest CT". In: *European Radiology* (2023).
- [42] Mastrodicasa D, Gunasekaran S, **Alabed** S, Gulsin GS, and Hanneman K. "Top 2023 Images in Cardiothoracic Imaging". In: *Radiology: Cardiothoracic Imaging* 5 (2023).
- [43] Maiter A, Hocking K, Matthews S, Taylor J, Sharkey M, Metherall P, **Alabed** S, Dwivedi K, Shahin Y, Anderson E, Holt S, Rowbotham C, Kamil MA, Hoggard N, Balasubramanian SP, Swift A, and Johns CS. "Evaluating the performance of artificial intelligence software for lung nodule detection on chest radiographs in a retrospective real-world UK population". In: *BMJ Open* 13 (2023).
- [44] Assadi H, Matthews G, Zhao X, Li R, **Alabed** S, Grafton-Clarke C, Mehmood Z, Kasmal B, Limbachia V, Gosling R, Yashoda GK, Halliday I, Swoboda P, Ripley DP, Zhong L, Vassiliou VS, Swift AJ, Geest RJ van der, and Garg P. "Cardiac MR modelling of systolic and diastolic blood pressure". In: *Open Heart* 10 (2023).
- [45] Khassafi F, Chelladurai P, Valasarajan C, Nayakanti SR, Martineau S, Kiely DG, Swift AJ, **Alabed** S, Omura J, Breuils-Bonnet S, Kuenne C, Potus F, Günther S, Savai R, et al. "Transcriptional profiling unveils molecular subgroups of adaptive and maladaptive right ventricular remodeling in pulmonary hypertension". In: *Nature Cardiovascular Research* 2 (2023).
- [46] Grafton-Clarke C, Matthews G, Gosling R, Swoboda P, Rothman A, Wild JM, Kiely DG, Condliffe R, **Alabed** S, Swift AJ, and Garg P. "The Left Atrial Area Derived Cardiovascular Magnetic Resonance Left Ventricular Filling Pressure Equation Shows Superiority over Integrated Echocardiography". In: *Medicina* 59 (2023).
- [47] Grafton-Clarke C, Garg P, Swift AJ, **Alabed** S, Thomson R, Aung N, Chambers B, Klassen J, Levett E, Farley J, Greenwood JP, Plein S, and Swoboda PP. "Cardiac magnetic resonance left ventricular filling pressure is linked to symptoms, signs and prognosis in heart failure". In: *ESC Heart Failure* 10 (2023), pp. 3067–3076.
- [48] **Alabed** S. "Artificial Intelligence in Cardiac Magnetic Resonance Imaging to Predict Prognosis and Treatment Response". In: *White-Rose E-Thesis* (2023).

- [49] Maiter A, Salehi M, Swift A, and **Alabed** S. "How should studies using AI be reported? Lessons from a systematic review in cardiac MRI". In: *Frontiers in Radiology* 3 (2023).
- [50] Alkhanfar D, Dwivedi K, Alandejani F, Shahin Y, **Alabed** S, Johns C, Garg P, Thompson AAR, Rothman AMK, Hameed A, Charalampopoulos A, Wild JM, Condliffe R, Kiely DG, and Swift AJ. "Non-invasive detection of severe PH in lung disease using magnetic resonance imaging". In: *Frontiers in Cardiovascular Medicine* 10 (2023).
- [51] Garg P, Javed W, Assadi H, **Alabed** S, Grafton-Clarke C, Swift AJ, Williams G, Al-Mohammad A, Sawh C, Vassiliou VS, Khanji MY, Ricci F, Greenwood JP, Plein S, and Swoboda P. "An acute increase in Left Atrial volume and left ventricular filling pressure during Adenosine administered myocardial hyperaemia: CMR First-Pass Perfusion Study". In: *BMC Cardiovascular Disorders* 23 (2023), p. 246.
- [52] Macdonald A, Salehi M, **Alabed** S, Maiter A, Goh ZM, Dwivedi K, Johns C, Coglianese M, Alandejani F, Condliffe R, Wild JM, Kiely DG, Garg P, and Swift AJ. "Semi-automatic thresholding of RV trabeculation improves repeatability and diagnostic value in suspected pulmonary hypertension". In: *Frontiers in Cardiovascular Medicine* 9 (2023).
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ORAL PRESENTATIONS

2024	Post-Treatment MRI Changes in Pulmonary Hypertension » CMR 2024 - International Cardiac Magnetic Resonance Conference	London
2023	Large Language Model Mortality Prediction in CT Reports » European Society of Cardiac Radiology	Berlin
2023	From automated cardiac measurements to auto reporting » Dragon's Den - Royal College of Radiologists	London
2022	Quality of Reporting of Artificial Intelligence studies » Royal College of Radiologists Global Conference	Dubai, UAE
2022	Cardiac Findings on General CT » Royal College of Radiologists Global Conference	Dubai, UAE
2021	AI Cardiac MRI Measurements Clinical Benchmarking » Radiological Society of North America	Chicago, USA
2021	Using AI to improve pulmonary hypertension assessment » National Pulmonary Hypertension Research Forum	London
2021	The future of cardiac imaging » Yorkshire & Humber Chest and Cardiac Regional Study Day	Sheffield
2021	Clinical Validation of Cardiac MRI AI Segmentation » School of Radiology - Yorkshire & Humber annual meeting » Professor Ronald Grainger Memorial Meeting » Clinical Imaging Clinical Research (CICR) meeting » Department Research in Progress Meeting (DRIP) » Sheffield Medical School Research Conference	Sheffield
2021	Natural Language Processing in Radiology Audit » Yorkshire School of Radiology Annual Conference	Leeds
2017	Cost per MRI diagnosis in developmental impairment » Royal College of Radiologists Annual Conference	Liverpool
2015	CTPA detection rates in spinal cord injury » Society of Radiologists in Training Annual Conference	Bangor
2012	The need for Evidence-Based Medicine in Syria » Saïd Foundation Annual Dinner » Attended by UK Ministers, MPs, Lords and Ambassadors at The V&A Museum	London

INTERNATIONAL POSTER PRESENTATIONS

ESCR 23	Radiology reports of cardiac MRI scans predict prognosis	Berlin
ESCR 22	Outcome prediction with CMR in pulmonary hypertension	Rome
ERS 22	Correlation of emPHasis-10 with clinical tests	Barcelona
EACVI 22	Quality of reporting in AI cardiac MRI segmentation studies	London
ECR 22	Reporting cardiac findings on body CT over the last decade	Vienna
SCMR 22	Time-resolved cardiac MRI prognostic feature extraction	Virtual
ERS 21	Automated CMR assessment in pulmonary hypertension	Virtual
EuroCMR21	High repeatability of deep learnt CMR measurements	Virtual
EuroCMR21	Automated CMR correlates with right heart catheter	Virtual
ECR 21	Deep Learning derived T1-mapping values	Virtual
ECR 21	Natural language processing to audit CT Head reports	Virtual
SCMR 21	Machine Learning in Cardiac MRI Predicts Mortality	Virtual
RSNA 20	Meta-analysis of T ₁ -mapping in pulmonary hypertension	Virtual
ERS 20	Cardiac MRI predicts prognosis in pulmonary hypertension	Virtual
ESC 17	Beta-blockers in children with congestive heart failure	Paris

STATISTICAL & CODING SKILLS

Software skills

- » **Python** fluent command of data management, analysis and visualisation
- » **R Language** used extensively for most common statistical tests
- » **SPSS** used extensively for most common statistical tests
- » **STATA** used extensively for diagnostic accuracy meta-analyses
- » **LaTeX** used the LaTeX typesetting system to write my PhD thesis

Statistics Courses

- » Statistics for Health Care Research - University of Oxford
- » Advanced Statistics for Health Researchers - University of Sheffield
- » Descriptive and exploratory data analysis - University of Hagen
- » Diagnostic accuracy meta-analysis - University of Birmingham
- » Python Data Analysis course - University of Sheffield
- » Data Analysis Skills for Researchers - University of Sheffield

LANGUAGES

Fluent	English
Fluent	German
Fluent	Arabic