

CURRICULUM VITAE

**Dipan J. Shah, M.D., F.A.C.C.**

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**A. GENERAL INFORMATION**

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Citizenship: USA

**B. EDUCATIONAL BACKGROUND**

<i>Degree</i>	<i>Institution name, city and state</i>	<i>Dates Attended</i>	<i>Year Awarded</i>
M.D.	Medical College of Wisconsin	1990 – 1994	1994
B.S.	University of Wisconsin, Milwaukee Medical Science (Minor, economics)	1987 –1990	1991

**C. PROFESSIONAL POSITIONS AND EMPLOYMENT**

**Post-doctoral training including residency/fellowship**

<i>Title</i>	<i>Institution Name, city and state</i>	<i>Dates</i>
Fellowship:	Cardiovascular Magnetic Resonance Imaging Duke University Medical Center	2001 – 2002
Fellowship:	Advanced Echocardiography Northwestern University	2000 – 2001
Fellowship: Chief Cardiology Fellow	Cardiovascular Disease Illinois Masonic Medical Center	1997 – 2000 1999 – 2000
Residency:	Internal Medicine Medical College of Wisconsin	1994 – 1997

**Academic positions (teaching and research)**

<i>Title</i>	<i>Institution Name, city and state</i>	<i>Dates</i>
Professor of Medicine	Weill Cornell Medical College Houston Methodist Hospital Houston, TX	1/2021-present

Associate Professor of Clinical Medicine	Weill Cornell Medical College Houston Methodist Hospital Houston, TX	12/2013-1/2021
Assistant Professor of Medicine	Weill Cornell Medical College Houston Methodist Hospital Houston, TX	1/2008-12/2013
Assistant Consulting Professor of Medicine	Duke University Medical Center	7/2003-12/2007
Associate in Medicine	Duke University Medical Center	7/2002-7/2003

**Hospital positions (attending physician, if applicable)**

<i>Title</i>	<i>Institution Name, city and state</i>	<i>Dates</i>
Courtesy Staff	Houston Methodist Hospital Houston, TX	3/26/2008-present
Founding Director	Cardiovascular MRI Laboratory Houston Methodist DeBakey Heart & Vascular Center	1/2008-present
Director	Cardiovascular Imaging Institute Houston Methodist DeBakey Heart & Vascular Center	9/2018-present

**Employment (other than positions listed above)**

<i>Title</i>	<i>Institution Name, city and state</i>	<i>Dates</i>
Chief, Division of Cardiovascular Imaging	Houston Methodist Hospital	9/2018-present

Lead a diverse group of 20 full time cardiovascular imaging faculty and oversee operations of the Cardiovascular Imaging Institute with approximately 250 clinical staff.

Acting Director	Cardiovascular Imaging Institute Houston Methodist DeBakey Heart & Vascular Center	4/2016-9/2018
Director of Lipid and Vascular Medicine Clinic	Saint Thomas Heart Institute	6/2003 – 12/2007
Director of Cardiovascular MRI	Saint Thomas Heart Institute	6/2003 – 12/2007
Faculty	Duke Cardiovascular Magnetic Resonance Center and Division of Cardiology	7/2002 – 6/2003

**D. LICENSURE, BOARD CERTIFICATION, MALPRACTICE (if applicable)**

**Licensure**

<i>State</i>	<i>Number</i>	<i>Date of Issue</i>	<i>Date of last registration</i>
Texas	M8990	2/2008	2/2022
Tennessee	35856	12/2002	6/2007
Illinois	036095892	7/1997	7/2005
North Carolina	200200073	1/2002	6/2005
Wisconsin	37200	8/1995	10/2000

**Board Certification**

<i>Name of specialty</i>	<i>Date of Certification</i>
American Board of Internal Medicine	8/1997
American Board of Internal Medicine - Cardiovascular Disease	11/2001
American Board of Internal Medicine - Cardiovascular Disease (Recertification)	11/2011

**E. PROFESSIONAL MEMBERSHIPS (medical and scientific societies)**

<i>Member/officer</i>	<i>Name of Organization</i>	<i>Dates held</i>
Fellow	American College of Cardiology	2003 - Present
Member	Society of Cardiovascular Magnetic Resonance	2001 - Present

**F. HONORS AND AWARDS**

<i>Name of award</i>	<i>Date awarded</i>
Journal of Cardiovascular Magnetic Resonance Gold Star Reviewer	2020
Houston Methodist Academic Institute, Presidents Award for Excellence in Peer-Reviewed Publication	2020
Houston Methodist Graduate Medical Education Exemplary Faculty Teaching Award	2020
Beverly B. and Daniel C. Arnold Distinguished Centennial Chair in the Department of Cardiology	2020
Journal of Cardiovascular Magnetic Resonance Gold Star Reviewer	2019
System Quality & Patient Safety Performance Award, Houston Methodist Hospital System	2019
Houston Methodist Graduate Medical Education Faculty Teaching Award	2019
Houston Methodist Hospital Institute for Academic Medicine Award for Excellence in Peer-Reviewed Publication	2018
Houston Methodist Graduate Medical Education Faculty Teaching Award	2017

Houston Methodist Graduate Medical Education Faculty Teaching Award	2016
Houston Methodist Research Institute, President's Award for Transformational Excellence	2013
Methodist DeBakey Heart and Vascular Center Research Award	2013
Methodist DeBakey Heart & Vascular Center – Leadership & Commitment Award	2011
Methodist DeBakey Heart and Vascular Center Research Award	2011
American Association of Cardiologists of Indian Origin Young Investigator Award	2005
Tenth Annual Astra Zeneca Cardiovascular Young Investigators' Forum – 2 <sup>nd</sup> Place Junior Faculty Clinical Section	2004

**G. CURRENT AND PAST INSTITUTIONAL RESPONSIBILITIES AND PERCENT EFFORT**

**Teaching (list courses and your role)**

**Dates**

Course Co-Director: Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-on Heart Specimens	2011-present
Course Director: Houston Methodist Annual Cardiovascular MRI Workshop	2013-2021
Course Director: Weekly Multimodality Imaging Conference	2016-present
Course Director: Weekly Advanced CV Imaging Conference	2016-present
Course Director: Heart & Vascular Center Grand Rounds	2018-2022

**Mentoring:** [These are individuals who have spent one or more year(s) with me conducting research and/or training in cardiovascular MRI. I meet with these individuals at least on a weekly basis to guide their research or training progress].

1. Olga James, MD	Post-Doctoral Research Fellow	2004-2006
2. Omar Cheema, MD	Cardiovascular MRI fellow	2008-2009
3. Ankit Patel, MD	Cardiovascular MRI fellow	2008-2009
4. Jeffrey Dela Cruz, MD	Cardiovascular MRI fellow	2009-2010
5. Lucien Abboud, MD	Cardiovascular MRI fellow	2010-2011
6. Kamran Shaikh, MD	Cardiovascular MRI fellow	2011-2012
7. Venkat Polsani, MD	Cardiovascular MRI fellow	2011-2013
8. Mohammed Ghosn, PhD	Post-Doctoral Research Fellow	2011-2013
9. Juan Lopez-Mattei, MD	Cardiovascular MRI fellow	2012-2013
10. Dan Le, MD	Cardiovascular MRI fellow	2013-2014
11. Danai Kitkungvan, MD	Cardiovascular MRI fellow	2014-2015
12. Dimitrios Maragiannis	Cardiovascular MRI fellow	2014-2015
13. Gerd Brunner, PhD	NIH K-25 Mentee	2015-2019
14. Nickalaus Gramze, MD	Cardiovascular MRI fellow	2015-2016
15. Eric Yang, MD PhD	Cardiovascular MRI fellow	2015-2017
16. Bader Alshammari, MD	Cardiovascular MRI fellow	2016-2017
17. Mohammad A. Khan, MD	Post-Doctoral Research Fellow	2016-2018
18. Mohammed Chamsi-pasha, MD	Cardiovascular MRI fellow	2017-2018
19. Yang Zhan, MD	Cardiovascular MRI fellow	2017-2018

20. Dany Debs, MD	Post-Doctoral Research Fellow	2017-2019
21. Basil Al-sabeq, MD	Cardiovascular MRI fellow	2018-2019
22. Shaden Khalaf, MD	Cardiovascular MRI fellow	2018-2019
23. Roosha Parikh, MD	Cardiovascular MRI fellow	2018-2019
24. Alpana Senapati, DO	Cardiovascular MRI fellow	2019-2020
25. Vejpongsa Pimprapa, MD	Cardiovascular MRI fellow	2019-2020
26. Maan Malahfji, MD	Cardiovascular MRI fellow	2019-2020
27. Bhupendar Tayal, MD	Post-Doctoral Research Fellow	2019-2020
28. Carlos Kinan El-Tallawi, MD	Cardiovascular MRI fellow	2020-2021
29. George Dibuj, MD	Cardiovascular MRI fellow	2020-2021
30. Valentina L Crudo, MD	Post-Doctoral Research Fellow	2020-2022
31. Thuy Nguyen, MD	Post-Doctoral Research Fellow	2021-2022
32. Andrada Guta, MD, PhD	Post-Doctoral Research Fellow	2021-2023
33. Fatima Qamar, MD	Post-Doctoral Research Fellow	2021-2023
34. Hosam AbuBakar, MD	Cardiovascular MRI fellow	2022-2023
35. Dixitha Anugula, MD	Cardiovascular MRI fellow	2022-2023
36. Mujtaba Saeed, MD	Post-Doctoral Research Fellow	2022-2024
37. Moath Said Alfawara, MD	Post-Doctoral Research Fellow	2023-2024
38. Mohammad Abu Sheikha, MD	Cardiovascular MRI fellow	2023-2024
39. Vivek Modi, MD	Cardiovascular MRI fellow	2023-Present
40. Akila Bersali, MD	Post-Doctoral Research Fellow	2023-Present
41. Aneesh Dore-Patil, MD	Cardiovascular MRI fellow	2023-Present
42. Alba Munoz Estrella, MD	Cardiovascular MRI fellow	2024-Present
43. Leyla Gasimli-Gamache, MD	Cardiovascular MRI fellow	2024-Present
44. Elmoatasem Gabr, MD	Post-Doctoral Research Fellow	2024-Present

### **Clinical Care**

	<b><i>Dates</i></b>
Faculty, Duke Cardiovascular Magnetic Resonance Center, Duke University Medical Center	7/2002 - 6/2003
Faculty, Saint Thomas Heart Institute	6/2003 - 12/2007
Faculty, Houston Methodist Hospital Physician Organization, Cardiology Department	1/2008 - Present
Responsible for developing a clinical and research cardiovascular MRI program at Houston Methodist Hospital	

### **Administrative duties (including committees)**

	<b><i>Dates</i></b>
Director of Cardiovascular MRI, Saint Thomas Heart Institute	6/2003 – 12/2007
Director of Lipid and Vascular Medicine Clinic, Saint Thomas Heart Institute	6/2003 – 12/2007
Director of Cardiovascular MRI, Houston Methodist DeBakey Heart Center, Houston Methodist Hospital	1/2008 – Present
Member, Cardiology Care Management Performance Improvement, Houston Methodist Hospital	1/2011 – 12/2011
Acting Director, Cardiovascular Imaging Institute, Houston Methodist DeBakey Heart Center, Houston Methodist Hospital	3/2016 – 9/2018
Acting Director, Cardiovascular Imaging Institute, Houston Methodist DeBakey Heart Center, Houston Methodist Hospital	3/2016 – 9/2018
Director, Cardiovascular Imaging Institute, Houston Methodist DeBakey Heart Center, Houston Methodist Hospital	9/2018 – Present

## H. RESEARCH SUPPORT (past and present)

<b>PROJECT (ACTIVE)</b>	<b>DATES</b>	<b>FUNDING SOURCE</b>	<b>ROLE</b>	<b>Effort</b>	<b>TOTAL AWARD</b>
Integrated super-resolution CMR-deep learning to deconvolute passive and active causes of impaired relaxation	2025-2029	NIH	Co-investigator	5%	\$3.5M
Sudden Death Risk Assessment and Mechanistic Insights in Arrhythmic Mitral Valve Prolapse Using Cardiac MRI and Circulating Proteomic Biomarkers	2024-2029	NIH	Principle Investigator	25%	\$8.7M
Venous Ethanol Ablation In Ischemic Ventricular Tachycardia – VELVET Trial	2023-2028	NIH	Co-investigator	5%	\$3.5M
Circulating Proteomics to Phenotype the Development and Reversal of Myocardial Remodeling in Aortic Stenosis	2023-2027	NIH	Co-Investigator	5%	\$3.7M
<b>PROJECT (COMPLETED)</b>					
CPS Medium 19-553. Wireless Magnetic Millibot Blood Clot Removal and Navigation in 3-D Printed Patient-Specific Phantoms	2019-2024	NSF	Principle Investigator	2%	\$484K
Photoacoustic Imaging to Guide Catheter Ablation of Cardiac Arrhythmias	2022-2024	NIH	Co-investigator	2%	\$400K
R01HL3776312 Magnetic Resonance Imaging Based Calf Muscle Perfusion To Assess Patients with Symptomatic Peripheral Artery Disease	2017-2024	NIH	Co-investigator	2%	\$248K
Efficacy of Dotarem® (Gd-DOTA) versus Magnevist® (Gd-DTPA) for Late Gadolinium Enhancement Cardiac Magnetic Resonance and relationship to outcomes: A pilot study	2016-2024	Guerbet	Principle Investigator	1%	\$180K
The MITRA-REVERSE FIBROSIS Sub-Study of Effect of MitraClip on Reverse Cardiac Remodeling Assessed by CMR and Echocardiography: - A Prospective Multicenter Investigator Initiated Study	2016-2024	Guerbet	Principle Investigator	5%	\$226K
MR-Visible Bioresorbable Scaffolds for Coronary Artery Disease	2023	Kostas Research Center	Principle Investigator		\$50K
CPS Synergy #1646586 MRI Powered & Guided Tetherless Effectors for Localized Therapeutic Interventions	2017-2021	NSF	Principle Investigator	5%	\$245K
<b>ROHL153447-01.</b> Prospective Sudden Cardiac Death Risk Stratification Using	2020-2022	NIH	Co-investigator	5%	\$350K

Cardiac MRI and Echocardiography Machine Learning in Mitral Valve Prolapse.					
<b>NIH 1K25HL121149-01A1</b> <i>Macrovascular And Microvascular Perfusion Assessment Of Ischemic Diabetic Ulcers Using MRI.</i>	2015-2019	NIH	Co-investigator	1%	\$160K
The MITRA-REVERSE Study: Effect of MitraClip on Reverse Cardiac Remodeling Assessed by CMR and Echocardiography: - A Prospective Multicenter Investigator Initiated Study	2016-2018	Abbott Vascular	Principle Investigator	5%	\$120K
GADACAD 2: Multicenter open-label study to evaluate efficacy of gadobutrol-enhanced cardiac magnetic resonance imaging (CMRI) for detection of significant coronary artery disease (CAD) in subjects with known or suspected CAD by a blinded image analysis	2015-2016	Bayer HealthCare	Principle Investigator	1%	\$600K
Macrovascular And Microvascular Perfusion Assessment Of Ischemic Diabetic Ulcers Using MRI	2015-2018	NIH	Co-Investigator	1%	\$140K
The association of cardiac troponin T measured with a highly sensitive assay and cardiac magnetic resonance measures of cardiac structure, function, and myocardial fibrosis	2013-2016	MDHVC Seed Grant	Principle Investigator	1%	\$50K
Seed Grant Muscle perfusion in PAD using MRI	2012-2016	Society of Vascular Surgery	Co- Principle Investigator	1%	\$15K
RASE Study: Diagnostic value of a rapid protocol regadenosone stress cardiovascular magnetic resonance scan in detection of coronary artery disease - A Prospective Investigator Initiated Study	2012-2016	Astellas Pharmaceuticals	Principle Investigator	1%	\$100K
Quantitative Analysis of Lower Extremity Muscle Perfusion in Peripheral Arterial Disease Using Magnetic Resonance Imaging	2012-2016	MDHVC Seed Grant	Principle Investigator	1%	\$50K
MagnaSafe Registry: Determining the Risks of MRI in the Presence of Pacemakers and Implantable Cardioverter Defibrillators	2013-2014	Scripps	Principle Investigator	1%	\$28K
Contrast Enhanced MRI for Detection of Myocardial Scar and Prediction of Prognosis in Non-Ischemic Cardiomyopathy	2009-2013	Siemens Medical Solutions, Inc	Principle Investigator	1%	\$300K
Utility of cardiovascular MRI in patients with known or suspected cardiac disease	2008-2013	Houston Methodist	Principle Investigator	1%	\$500K

		Research Institute			
REVEAL: Randomized, Multi-Center, Double-blind, Placebo Controlled Trial of the Effects of Erythropoietin on Infarct Size and Left Ventricular Remodeling in Survivors of Acute Myocardial Infarctions	2006-2007	National Institutes of Health	Principle Investigator	1%	\$100K
Evaluation of Dotarem-Enhanced MRA Compared to Time-Of-Flight MRA in the Diagnosis of Clinically Significant Non-Coronary Arterial Disease	2005-2006	Guerbet	Principle Investigator	1%	\$135K
Contrast MRI for the detection of Myocardial Scar in Non-Ischemic-Cardiomyopathy	2004-2006	Mallinckrodt, Inc	Principle Investigator	1%	\$156K
Open-label study of the safety and efficacy of Magnevist-enhanced MRA and 2D-TOF MRA in patients with known or suspected renal artery disease undergoing intra-arterial digital subtraction arteriography	2004-2005	Berlex Laboratories	Principle Investigator	1%	\$100K
Utility of cardiovascular MRI in patients with known or suspected cardiac disease	2003-2006	Siemens Medical Solutions, Inc	Principle Investigator	1%	\$300K
A Double-Masked, Randomized, Multicenter, Phase 2, Dose Ranging Study to Evaluate the Safety and Efficacy of OptiMARK to Identify the Presence, Location, and Extent of Acute and Chronic Myocardial Infarction Based on Hyper-enhancement	2003-2004	Mallinckrodt, Inc	Principle Investigator	1%	\$456K

## **I. EXTRAMURAL PROFESSIONAL RESPONSIBILITIES**

### **Manuscript Peer Reviewer**

2002 – present

Circulation  
 Journal of the American College of Cardiology  
 Journal of American Medical Association Cardiology  
 Journal of Cardiovascular Magnetic Resonance  
 Circulation Cardiovascular Imaging  
 JACC Cardiovascular Imaging  
 Journal American Heart Association  
 European Heart Journal Cardiovascular Imaging

### **Guest Associate Editor**

Journal of the American College of Cardiology  
 JACC Imaging

2022 – present  
 2023 – present

American Heart Association (National Center) - Radiology, Imaging, and Surgery Peer Review Study Section; 2004, 2005, and 2006 cycle years.

Abstract Reviewer, American College of Cardiology Scientific Sessions 2006, 2010, 2012, 2013, 2015, 2016, 2020, 2021, 2022, 2023, 2024, 2025

Abstract Reviewer, European Heart Association Cardiovascular Imaging Scientific Sessions 2025

ACC Workgroup, development of model local coverage document (LCD) for cardiovascular MRI – 2007 to 2008

Member, American College of Cardiology Imaging Council – 2012 to 2014

Texas Chapter American College of Cardiology	
Executive Committee	2011 – 2018
Educational Committee	2011 – 2018
Co-Chair, Annual CME Meeting	2011 – 2018

American Society of Echocardiography  
Guideline Writing Committee, "Recommendations for Non Invasive Evaluation of Native Valvular Regurgitation: Echocardiography and CMR", published 2017.

Society of Cardiovascular Magnetic Resonance	
Membership Committee	2004-2006
Clinical Practices Committee	2005-2006
Strategic Planning Task Force	2006-2007
Economic Advocacy Committee	2005-2007
Membership Committee	2012-2020
Chair, Program Committee – SCMR	2018
Foundations of CMR Level 1 Workshop	
Publication Committee	2019-2021
Chair, Publication Committee	2021-2023
Annual Scientific Session Program Committee	2020-2023
Chair, Registry Committee	2023-Present
Board of Trustees	2024-Present

American College of Cardiology  
Heart House Roundtable: Tricuspid Valve Disease – 2023

## J. **BIBLIOGRAPHY**

### **Peer Reviewed Articles**

1. Donegan WL, **Shah DJ**. Prognosis of patients with breast cancer related to timing of operation. *Archives of Surgery*. 1993;128:309-313. PMID: 8442688
2. **Shah DJ**, DiLuzio S, Ambardekar AV, Smulevitz B, Smith GL, Nagaraj A, Hamilton AJ, McPherson DD, Rigolin VH. Evaluation of valvular regurgitation severity using digital acquisition of echocardiographic images. *J Am Soc Echo*. 2002; 15(3):241-6. PMID: 11875387
3. Kim RJ, **Shah DJ**, Judd RM. How we perform delayed enhancement imaging. *J CMR*. 2002; 5(3):50 5-514. PMID: 12882082
4. Bello D, **Shah DJ**, Farah GM, Di Luzio S, O'Donohue J, Vargas JD, Parker MA, Johnson MR, Cotts WG, Klocke FJ, Bonow RO, Judd RM, Gheorghiade M, Kim RJ. Gadolinium cardiovascular magnetic resonance predicts reversible myocardial dysfunction and remodeling in patients with heart failure undergoing beta-blocker therapy. *Circulation*. 2003;108:1945-1953. PMID: 14557364

5. Kim RJ, **Shah DJ**. Fundamental concepts in myocardial viability assessment revisited: when knowing how much is "alive" is not enough. *Heart*, 2004; 90(2): 137-40. PMID: 14729777
6. Seghatol FF, **Shah DJ**, DiLuzio, S, Bello D, Johnson MR, Cotts WG, O'Donohue JA, Bonow RO, Gheorghide M, Rigolin VH. Relation Between Contractile Reserve and Improvement in Left Ventricular Function with Beta Blocker Therapy In Patients With heart Failure Secondary to Ischemic or Idiopathic Dilated Cardiomyopathy. *Am J Cardiol*, 2004; 93:854-859. PMID: 15050488
7. Heitner JF, Klem I, Alexander K, Thomson L, Meine TJ, Patel MR, Haq SA, **Shah DJ**, Kim RJ. The case of the disappearing myxoma. *J Cardiovasc Magn Reson* 2005;7(5):841-3. PMID: 16353446
8. **Shah DJ**, Judd RM, Kim RJ. Technology Insights: Magnetic Resonance Imaging of the Myocardium. *Nature Clinical Practice Cardiovascular Medicine*, 2005; 2(11): 597-605. PMID: 16258572
9. Klem I, Heitner JF, **Shah DJ**, Sketch MH, Behar V, Weinsaft J, Cawley P, Parker M, Elliott E, Judd RM, Kim RJ. Improved Detection of Coronary Artery Disease by Stress Perfusion Cardiovascular Magnetic Resonance With the Use of Delayed Enhancement Infarction Imaging. *J Am Coll Cardiol* 2006;47(8):1630-8. PMID: 16631001
10. Wagner A, Mahrholdt H, Thomson L, Hager S, Meinhardt G, Rehwald W, Parker M, **Shah DJ**, Sechtem U, Kim RJ, Judd RM. Effects of time, dose, and inversion time for acute myocardial infarct size measurements based on magnetic resonance imaging-delayed contrast enhancement. *J Am Coll Cardiol* 2006;47(10):2027-33.
11. **Shah DJ**, Brown B, Kim RJ, Grizzard JD. Magnetic resonance evaluation of peripheral arterial disease. *Cardiol Clin*, 2007. 25(1): p. 185-212, vii. PMID: 17478246
12. **Shah DJ**, Brown B, Kim RJ, Grizzard JD. Magnetic resonance evaluation of peripheral arterial disease. *Magn Reson Imaging Clin N Am*, 2007. 15(4): p. 653-79, vii. PMID: 17976596
13. Huber S, Muthupillai R, Cheong B, Wible JH, **Shah DJ**, Woodard P, Grothues F, Mahrholdt H, Rochitte CE, Masoli O, Kim RJ, Schwaiger CM, Fuisz A, Kramer C, van Rossum AC, Biederman R, Lombardi M, Martin E, Kevorkian R, Flamm SD. Safety of gadoversetamide in patients with acute and chronic myocardial infarction, *J Magn Reson Imaging*, 2008. 28(6):1368-78.
14. Weinsaft JW, Kim HW, **Shah DJ**, Klem I, Crowley AL, Brosnan R, James OG, Patel MR, Heitner H, Parker M, Velazquez EJ, Steenbergen C, Judd RM, Kim RJ. Detection of left ventricular thrombus by delayed-enhancement cardiovascular magnetic resonance prevalence and markers in patients with systolic dysfunction, *J Am Coll Cardiol*, 2008. 52(2): 148-57. PMID: 18598895
15. Kim HW, Klem I, **Shah DJ**, Wu E, Sheridan NM, Parker MA, Crowley AL, Bonow RO, Judd RM, Kim RJ. Unrecognized Non-Q-wave Myocardial Infarction: Prevalence and Prognostic Significance in Patients with Suspected Coronary Disease, *Plos Med*, 2009. 6(4): e1000057. PMID: 19381280
16. Cheema OM, Patel AA, Chang SM, **Shah DJ**. Gerbode ventricular septal defect diagnosed at cardiac MR imaging: case report, *Radiology*, 2009. 252(1): 50-2. PMID: 19561249
17. **Shah DJ**, Kim HW, Kim RJ. Evaluation of Ischemic Heart Disease, *Heart Fail Clin*, 2009. 5(3):315-32. PMID: 19564011

18. Estep JD, **Shah DJ**, Nagueh SF, Mahmarian JJ, Torre-Amione G, Zoghbi WA. The role of multimodality cardiac imaging in the transplanted heart. *JACC Cardiovasc Imaging*, 2009. 2(9): 1126-40. PMID: 19761994
19. Cheema O, Patel A, **Shah DJ**. Utility of Delayed Enhanced Cardiac Magnetic Resonance in the Assessment of Cardiomyopathies. *Methodist DeBakey Cardiovascular Journal* 2009;5(1):15-20.
20. Bismuth J, **Shah DJ**, Broadbent K. Venous Imaging. *Methodist DeBakey Cardiovascular Journal* 2009;5(4):7-13. PMID: 20143589
21. Bismuth J, Karmonik C, **Shah DJ**, Davies M, Lumsden A. New Dimensions in Diagnostic Imaging of the Aorta. In: Garbey M, Bass BL, Collet C, Mathelin M, Tran-Son-Tay R, eds. *Computational Surgery and Dual Training*. December 2009.
22. Cheema OM, Zarrin-Khamed N, Reardon MJ, **Shah DJ**, Little SH. Characterization of a cardiac mass using a systematic multimodality imaging approach. *J Heart Lung Transplant*, the official publication of the International Society for Heart Transplantation 2010;29:1080-1. PMID: 20570184
23. **Shah DJ**, Dela Cruz JD. Functional Valve Assessment: The Emerging Role of Cardiovascular Magnetic Resonance. *Methodist DeBakey Cardiovasc J*, 2010; 6(1):p.15-9. PMID: 20360653
24. Vivo RP, Krim SR, Dela Cruz JD, Ramchandani M, **Shah DJ**, Little SH, Zoghbi WA. Multimodality imaging of giant prolapsing left atrial myxoma. *Methodist DeBakey Cardiovasc J*, 2010. 6(2): p. 40-2. PMID: 20661193
25. **Shah DJ**. Evaluation of Cardiac Masses: The Role of Cardiovascular Magnetic Resonance. *Methodist DeBakey Cardiovasc J*, 2010;6:4-11. PMID: 20834205
26. Karmonik C, Bismuth J, Redel T, Anaya-Ayala JE, Davies, MG, **Shah DJ**, Lumsden AB. "Impact of Tear Location on Hemodynamics in a Type B Aortic Dissection Investigated with Computational Fluid Dynamics." *Conf Proc IEEE Eng Med Biol Soc*. 2010;1:3138-41. PMID: 21096590
27. Karmonik C, Bismuth J, Davies M, **Shah DJ**, Younes HK, Lumsden AB. A Computational Fluid Dynamics Study Pre and Post Stent Graft Placement in an Acute Type B Aortic Dissection. *Vasc Endovascular Surgery*. December 2011 Feb;45(2):157-64. Epub 2010 Dec 13. PMID: 21156714
28. Malaty AN, Shah DH, Abdelkarim AR, Nagueh SF. Relation of Replacement Fibrosis to Left Ventricular Diastolic Function in Patients with Dilated Cardiomyopathy. *J Am Soc Echocardiogr* 2011;24:333-338. PMID: 21338867
29. Yeniaras E, Lamaury J, Navkar NV, **Shah DJ**, Deng Z, Chin K, Tsekos NV. Magnetic Resonance Based Control of a Robotic Manipulator for Interventions in the Beating Heart. *Proceedings of IEEE International Conference on Robotics and Automation, ICRA 2011;6270-6275*.
30. Navkar NV, Yeniaras E, **Shah DJ**, Tsekos NV, Deng Z. Extracting Geometric Features of Aortic-Valve Annulus Motion from Dynamic Cardiac MRI for Guiding Interventions. *Proceedings of IEEE International Symposium on Biomedical Imaging, 2011, Chicago, Illinois, March 2011*.
31. Cheema O, Nasir N, Attar M, Nagueh S, Zoghbi WA, **Shah DJ**. Tissue Characterization by Cardiovascular Magnetic Resonance Aids in the Evaluation of a Patient with Ventricular Tachycardia. *Methodist DeBakey Cardiovascular Journal* 2011. Apr-Jun;7(2):46-47. PMID: 21685848

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34. Karmonik C, Bismuth J, **Shah DJ**, Davies MG, Purdy D, Lumsden AB. Computational Study of Haemodynamic Effects of Entry- and Exit-Tear Coverage in a DeBakey Type III Aortic Dissection: Technical Report. *European Journal of Vascular and Endovascular Surgery* 2011. 42(2):172-177. PMID: 21549622
35. Weinsaft J, Kim HW, Crowley AL, Klem I, Shenoy C, Assche LV, Brosnan R, **Shah DJ**, Velazquez EJ, Parker M, Judd RM, Kim RJ. LV Thrombus Detection by Routine Echocardiography. *JACC: Cardiovascular Imaging* July 2011;4(7):702-713. PMID: 21757159
36. Ramlawi B, Little SH, **Shah D**. When to Replace the Ascending Aorta? *Methodist DeBakey Cardiovascular Journal* 2011. Jul-Sep;7(3):39-42. PMID: 21979126
37. Karmonik C, Duran C, Davies M, **Shah D**, Lumsden A, Bismuth J. Correlation between Hemodynamic Parameters and Intra-Arterial Septum Motion in DeBakey Type III Aortic Dissections Using 2D Pcmri and 4D MRA. *33<sup>rd</sup> Annual International IEEE EMBS Conference. Boston, MA, August 30 – September 3 2011. Conf Proc IEEE Eng Med Biol Soc. 2011 Aug;2011:2809-12. PMID: 222549025*
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61. Russo R, Costa H, Kabra A, Uretsky S, Wolff SD, Martin ET, Higgins S, Tominaga G, Machado C, Florin T, Bloomgarden DC, Birgersdotter-Green U, Ponce G, Schaerf R, Lampert R, **Shah D**, Arshad A, Tonkin A, Anderson J, Rivard A, Wolfe DA, Biederman R, Rubenstein J, Tomassoni G, Boyle NG. American Heart Association Scientific Sessions, Dallas, TX. November 2013.
62. Chaikriangkrai K, Lopez-Mattei JC, Ghosn M, El-Beheary M, **Shah DJ**, Nagueh SF. Cardiac Magnetic Resonance Derived Late Gadolinium Enhancement Replacement Fibrosis and Extracellular Volume Significance in the Detection of Diastolic Dysfunction. American Heart Association Scientific Sessions, Dallas, TX. November 2013.
63. Ghosn M, Chaikriangkrai K, **Shah DJ**, Little SH. Cardiac Magnetic Resonance 4D Flow: An In Vitro Validation of Bioprosthetic Mitral Valve Flow Volume Quantification. American Heart Association Scientific Sessions, Dallas, TX. November 2013.
64. Maragiannis D, Jackson MS, Igo SR, Chin K, Autry K, Ghosn M, **Shah D**, Little SH. Cardiac Magnetic Resonance Imaging for the Functional Assessment of Normal Bioprosthetic Mitral Valves: A Comparison Against In Vitro Flow Transducer and Doppler Echocardiography Measurements. American Heart Association Scientific Session, Dallas, TX. November 2013.
65. Ghosn MG, Chaikriangkrai K, **Shah DJ**. Relationship between Myocardial Extracellular Volume and Myocardial Scar In Non-ischemic Cardiomyopathy Patients. American Heart Association Scientific Sessions, Dallas, TX. November 2013.
66. Orrego CM, Ghosn MG, Cordero-Reyes AM, Garcia-Morales LJ, Polsani VR, Yang E, McNeal G, Zuehlsdorff S, Bhimaraj A, Estep JD, Torre-Amione G, **Shah D**. In non-ischemic cardiomyopathy (NICMP), the presence of LV scar detected by Delayed Enhancement-CMR is a stronger predictor of cardiovascular events than Left Ventricular Ejection Fraction (LVEF). Society of Cardiovascular Magnetic Resonance, San Francisco, CA 2013.
67. Polsani V, Nabi F, **Shah DJ**. Prevalence of partial anomalous pulmonary venous connection in adult patients undergoing cardiac magnetic resonance for evaluation of

- atrial septal defect. *Journal of Cardiovascular Magnetic Resonance* 2013, 15(Suppl 1):P285. Society of Cardiovascular Magnetic Resonance, San Francisco, CA.
68. Brunner G, Bismith J, Nambi V, Ballantyne CM, Zoghbi W, Lumsden A, Morrisett J, **Shah DJ**. Assessment of leg muscle morphology by contrast-enhanced magnetic resonance imaging (CE-MRI) in patients with peripheral arterial disease. *Journal of Cardiovascular Magnetic Resonance* 2013, 15(Suppl 1):P235. Society of Cardiovascular Magnetic Resonance, San Francisco, CA.
  69. Vemulapalli S, Abboud L, Duran C, Klem I, Kim HW, Crowley A, Quinones M, Nabi F, Middleton JP, Zoghbi WA, Kim RJ, **Shah DJ**. The ferumoxytol in renal insufficiency study (FIRST). *Journal of Cardiovascular Magnetic Resonance* 2013, 15(Suppl 1):P228. Society of Cardiovascular Magnetic Resonance, San Francisco, CA.
  70. Simprini LA, Afroz A, Klem I, Jensen CJ, Kim RJ, Heitner JF, Sood M, Chandy E, **Shah DJ**. Routine cine-CMR for assessment of prosthesis-associated mitral regurgitation – a multicenter, multivendor study. *Journal of Cardiovascular Magnetic Resonance* 2013, 15(Suppl 1):E100. Society of Cardiovascular Magnetic Resonance, San Francisco, CA.
  71. Orrego CM, Cordero-Reyes AM, Ghosn MG, Estep JD, Torre-Amione G, Zuehisdorff S, McNeal GR, **Shah DJ**. The detection of left ventricular scar by delayed enhancement-CMR in non-ischemic cardiomyopathy is a stronger predictor of cardiovascular events than left ventricular ejection fraction. *Journal of Cardiovascular Magnetic Resonance* 2013, 15(Suppl 1):O95. Society of Cardiovascular Magnetic Resonance, San Francisco, CA.
  72. Chaikriangkrai K, Lopez-Mattei JC, Ibrahim H, Little SH, Zoghbi W, Quinones MA, Lawrie G, **Shah DJ**. Prognostic Value of Preoperative Myocardial Fibrosis Assessment by Delayed Enhancement Cardiac Magnetic Resonance Imaging in Patients Undergoing Mitral Valve Repair. *Journal of Cardiovascular Magnetic Resonance* 2014, 16(Suppl 1):P284. Society of Cardiovascular Magnetic Resonance Scientific Sessions, New Orleans, LA. January 2014.
  73. Ghosn MG, Jackson MS, Maragiannis D, Chin K, Autry K, Igo SR, Little SH, **Shah DJ**. An *In Vitro* Validation of Cardiac Magnetic Resonance 4D Flow measurements with Bioprosthetic Mitral Valve Flow Volumes Quantification. *Journal of Cardiovascular Magnetic Resonance* 2014, 16(Suppl 1):P67. Society of Cardiovascular Magnetic Resonance Scientific Sessions, New Orleans, LA. January 2014.
  74. Ghosn MG, Chaikriangkrai K, Nagueh SF, **Shah DJ**. Relationship between CMR derived myocardial extracellular volume and myocardial replacement scarring in non-ischemic cardiomyopathy. *Journal of Cardiovascular Magnetic Resonance* 2014, 16(Suppl 1):P326. Society of Cardiovascular Magnetic Resonance Scientific Sessions, New Orleans, LA. January 2014.
  75. Ghosn MG, Birnbaum I, Chaikriangkrai K, Nasir N, Zoghbi WA, Quinones MA, **Shah DJ**. Replacement Fibrosis Detected by CMR is a Predictor of Outcome in Patients with Non-Ischemic Cardiomyopathy. *Journal of Cardiovascular Magnetic Resonance* 2014, 16(Suppl 1):P318. Society of Cardiovascular Magnetic Resonance Scientific Sessions, New Orleans, LA. January 2014.
  76. Maragiannis D, Jackson M, Chin K, Autry K, Igo S, **Shah DJ**, Little SH. Bioprosthetic mitral valve effective orifice area by phase-contrast CMR. An in vitro comparison with Doppler echocardiography. *Journal of Cardiovascular Magnetic Resonance* 2014, 16(Suppl 1):T3. Society of Cardiovascular Magnetic Resonance Scientific Sessions, New Orleans, LA. January 2014.

77. Brunner G, Bismuth J, Nambi V, Ballantyne CM, Zoghbi W, Lumsden A, Morrisett JD, **Shah DJ**. Calf muscle perfusion maps from contrast-enhanced magnetic resonance imaging (CE-MRI) to assess peripheral arterial disease. *Journal of Cardiovascular Magnetic Resonance* 2014, 16(Suppl 1):P170. Society of Cardiovascular Magnetic Resonance Scientific Sessions, New Orleans, LA. January 2014.
78. Flores-Arredondo JH, Brunner G, Abboud LN, Morrisett JD, Ballantyne CM, Dave AS, Zoghbi WA, Valderrabano M, **Shah DJ**. Detection of left atrial scar and changes of cardiac function in relation to AF ablation, by 3D late gadolinium enhancement. *Journal of Cardiovascular Magnetic Resonance* 2014, 16(Suppl 1):P145. Society of Cardiovascular Magnetic Resonance Scientific Sessions, New Orleans, LA. January 2014.
79. Ghosn G, Birnbaum I, Chaikriangkrai K, Trachtenberg BH, Bhimaraj A, Torre-Amione G, Estep JD, **Shah DJ**. Replacement Fibrosis Detected by CMR is a Predictor of Outcome in Patients with Non-Ischemic Cardiomyopathy. *American College of Cardiology*, Washington, DC. March 2014.
80. Ghosn G, Green P, Chaikriangkrai K, Birnbaum I, Nagueh SF, Quiñones MA, Zoghbi WA, **Shah DJ**. Non-Invasive Risk Stratification in Patients with Non-Ischemic Cardiomyopathy Using Cardiac Magnetic Resonance Imaging. *American College of Cardiology*, Washington, DC. March 2014.
81. Ghosn MG, Le D, Hinojosa J, Duran C, Lumsden A, Bismuth J, **Shah DJ**. Cardiac Magnetic Resonance in Differentiating Amongst Aortic Dissection and Aortic Intramural Hematoma in Acute Aortic Syndrome Patients. *American Association for Thoracic Surgery*, New York, NY. April 2014.
82. Patel A, Jackson M, Maragiannis D, Ghosn MG, Autry K, Igo S, **Shah DJ**, Little S, Bismuth J. A Dynamic ex vivo Porcine Model of Acute Type-B Aortic Dissection for the Validation of 4D-Flow Magnetic Resonance Measurements. *American Association for Thoracic Surgery*, New York, NY. April 2014.
83. Maragiannis D, Ghosn MG, Green P, **Shah DJ**, Little SH, Nagueh SF. Replacement and Interstitial Fibrosis by Cardiac MR and Diastolic dysfunction in HCM. *American Society of Echocardiography Annual Scientific Sessions*, Portland, OR. June 2014.
84. Adigun R, Chaikriangkrai K, Ghosn M, Little SH, Zoghbi WA, Nabi F, **Shah DJ**. Impact of Late Gadolinium Enhancement with Cardiac Magnetic Resonance on Mortality in Moderate to Severe Aortic Stenosis. *American Heart Association Scientific Sessions*, Chicago, IL. November 2014.
85. Ghosn MG, Maragiannis D, **Shah DJ**, Green P, Little SH, Nagueh SF. Replacement and Interstitial Fibrosis by Cardiac MR and Diastolic Dysfunction in Patients with Dilated Cardiomyopathy. *American Heart Association Scientific Sessions*, Chicago, IL. November 2014.
86. Maragiannis D, Jackson MS, Ghosn MF, Igo SR, Autry K, Chin K, **Shah DJ**, Little SH. Bioprosthetic Mitral Valve Effective Orifice Area using 4D Flow Cardiac Magnetic Resonance derived Time Velocity Integral. An *in vitro* comparison with Doppler Echocardiography. *American Heart Association Scientific Sessions*, Chicago, IL. November 2014.
87. Maragiannis D, Jackson MS, Igo SR, Chin K, Autry K, Ghosn M, **Shah DJ**, Little SH. Bioprosthetic Mitral Valve Effective Orifice Area Using 4D Flow Cardiac Magnetic Resonance Derived Time Velocity Integral. An In-Vitro Comparison with Doppler Echocardiography. *Society for Cardiovascular Magnetic Resonance Scientific Sessions*, Nice, France. February 2015.

88. Ghosn MG, Pickett SJ, Green PW, Yang E, Nambi V, Ballantyne CM, **Shah DJ**. Examining the Relationship between Cardiac Troponin T and Cardiac Morphology, Function, and Fibrosis – A Cardiac Magnetic Resonance Study. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Nice, France. February 2015.
89. Ivanov A, Yossef J, Mohamed A, Socolow J, Gulkarov J, Worku B, Chattranukulchai P, Tortolani A, Sacchi T, Ghosn MG, **Shah DJ**, Grizzard J, Biederman RW, Klem I, Heitner J. Evaluating Change of Function After Revascularization in Patients with Multi Vessel Coronary Artery Disease, Severely Reduced Left Ventricular Systolic Function and No Scar on CMR Imaging. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Nice, France. February 2015.
90. Maragiannis D, Jackson MS, Chin K, Igo S, Autry K, Zoghbi WA, **Shah DJ**, Little SH. Cardiac MRI Functional Assessment of Bioprosthetic Mitral Valves: An In-Vitro Comparison against Doppler Echocardiography. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Nice, France. February 2015.
91. Ghosn MG, Pickett S, Nabi F, Brunner G, Nambi V, Zoghbi WA, Quinones MA, **Shah DJ**. Myocardial Extracellular Volume as a Predictor of Outcome – A Cardiac Magnetic Resonance Study. American College of Cardiology Scientific Sessions, San Diego, CA. March 2015.
92. Kitkungvan D, Nabi F, Ghosn Mohamad, Dave A, Valderrabano M, Zoghbi W, **Shah D**. Detection of Left Atrial and Left Atrial Appendage Thrombus by Cardiac Magnetic Resonance in Patients Undergoing Pulmonary Vein Isolation. American College of Cardiology Scientific Sessions, San Diego, CA. March 2015.
93. Maragiannis D, Ghosn M, **Shah D**, Green P, Little S, Nagueh S. Replacement and Interstitial Fibrosis by Cardiac MR and Diastolic Dysfunction in Patients with Dilated Cardiomyopathy. American College of Cardiology Scientific Sessions, San Diego, CA. March 2015.
94. Ghosn GG, Pickett S, Brunner G, Nabi F, Zoghbi W, Quinones M, Nambi V, **Shah D**. Association of Myocardial Extracellular Volume and Clinical Outcome: A Cardiac Magnetic Resonance Study. American College of Cardiology Scientific Sessions, San Diego, CA. March 2015.
95. Maragiannis D, Jackson M, Flores-Arendondo J, Alvarez P, Autry K, Zoghbi W, **Shah D**, Little S. Effective Orifice Area by Cardiac Magnetic Resonance for the Functional Assessment of Bioprosthetic Aortic Valves. American College of Cardiology Scientific Sessions, San Diego, CA. March 2015.
96. Haenel A, Ghosn M, Schulz DG, Vykoukal J, **Shah D**, Raizner AE, Alt E. Fresh Adipose Tissue Derived Stem Cells Significantly Enhance Ventricular Function in a Chronic Porcine Myocardial Infarction Model. American College of Cardiology Scientific Sessions, San Diego, CA. March 2015.
97. Kitkungvan D, Nabi F, Quinones M, Xu J, Lawrie G, Little SH, Zoghbi W, **Shah DJ**. Prevalence and Characteristics of Left Ventricular Fibrosis in Patients with Mitral Valve Prolapse. *Circulation*. 2015;132: A15795
98. Mandawat Aditya, Mandawat Anant, Crowley AL, Heitner J, Ivanov A, **Shah DJ**, Nabi F, Farzaneh-Far A, Kim HW, Rehwald WG, Kim R, Judd R, Klem I. Prevalence of dysfunctional but viable myocardium in patients with ischemic cardiomyopathy – results from clinical scans performed in 2010-2014 at four U.S. hospitals. *Journal of Cardiovascular Magnetic Resonance* 2016, 18(Suppl):O1.

99. Kim HW, Labib D, **Shah DJ**, Farzaneh-Far A, Heitner J, Grizzard JD, Crowley AL, Klem I, Nabi F, Kim R, Judd R. Prevalence of unrecognized myocardial scarring in patients with normal contractile function across four U.S. hospitals. *Journal of Cardiovascular Magnetic Resonance* 2016, 18(Suppl 1):O131.
100. Yang EY, Polsani V, Brunner G, Nabi F, Hoogeveen RC, Nambi V, Ballantyne CM, **Shah DJ**. Prognostic implications of myocardial fibrosis and troponin levels measured by a highly sensitive assay in non-ischemic cardiomyopathy. *Journal of Cardiovascular Magnetic Resonance* 2016, 18(Suppl 1):P121.
101. **Shah DJ**, Yang EY, Heitner J, Farzaneh-Far A, Nabi F, Kim HW, Ivanov A, Klem I, Crowley AL, Parker M, Judd R, Kim R. CMR Clinical Practice Patterns Across Four U.S. Medical Centers from 2010-2014. *Journal of Cardiovascular Magnetic Resonance* 2016, 18(Suppl 1):P311.
102. Labib D, Kim HW, **Shah DJ**, Farzaneh-Far A, Heitner J, Klem I, Crowley AL, Nabi F, Parker M, Judd R, Kim R. Prevalence of regional and whole-heart viability in patients with myocardial akinesis consecutively enrolled from 4 US hospitals. *Journal of Cardiovascular Magnetic Resonance* 2016, 18(Suppl 1):Q33.
103. Kitkungvan D, Nabi F, Kim RJ, Bonow RO, Quinones M, Xu Jiaqiong, Lawrie G, Little S, Zoghbi W, **Shah DJ**. Prevalence and Prognostic Implications of CMR detected Myocardial Fibrosis in Patient with Matrial Valve Prolapse. American Heart Association Scientific Sessions, New Orleans, LA. November 2016.
104. Ivanov A, **Shah D**. Prognostic Implication of First Pass Stress Perfusion Cardiovascular Magnetic Resonance Imaging. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Washington, DC. February 2017.
105. Thakkar A, **Shah D**. Potential Utility of T1 Mapping to Characterize Pericardial Effusions. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Washington, DC. February 2017.
106. Kim H, **Shah D**. Prevalence and Prognostic Significance of Unrecognized Myocardial Scar in 30,000 Patients Followed for Ten Years. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Washington, DC. February 2017.
107. Acharya V, **Shah D**. Extracellular Volume as a Risk Marker for Mortality in Patients with Ischemic Coronary Artery Disease. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Washington, DC. February 2017.
108. Khan M, **Shah D**. Association of Left Atrial Volumes and All-Cause Mortality in a Large Cohort of Subjects with Preserved Ejection Fraction. Society for Cardiovascular Magnetic Resonance Scientific Sessions, Washington, DC. February 2017.
109. Haoran Zhao H, Liu X, Zaid H, **Shah DJ**, Heffernan M, Becker A, Tsekos N. Early Studies of a Transmission Mechanism for MR-Guided Interventions. IROS 2017. September 27, 2017.
110. Dany Debs, **Shah D**. Clinical Outcomes of Secondary Tricuspid Regurgitation Quantified Using Cardiovascular Magnetic Resonance. American College of Cardiology Scientific Sessions 2019. New Orleans, LA. March 18, 2019.
111. Dany Debs, **Shah D**. Regional Replacement and Diffuse Interstitial Left Ventricular Fibrosis in Chronic Aortic Valve Regurgitation Assessed by Cardiac Magnetic Resonance. American College of Cardiology Scientific Sessions 2019. New Orleans, LA. March 18, 2019.

112. Leclerc J, Zhao H, **Shah D**, Ghosn M, Becker A. Toward Adaptive Control for 3D Navigation of Magnetic Milli-Swimmers. Texas System Day 2019. Texas A&M. April 5, 2019.
113. El Tallawi C, Chamsi-Pasha M, Angulo C, Qamar F, **Shah D**, Zoghbi W. A Prospective Near Simultaneous Comparative Study of Echocardiography and CMR for the Assessment of Mitral Regurgitation. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 6, 2024.
114. Covington M, Deangelo L, Narendrula A, Tereshchenko L, Sande Mathias I, Tower-Radar A, Malahfji M, Gangadharamurthy D, Goyal A, Tong M, Liu S, Polsani V, Elliott M, Phelan D, Chen D, Simonetti O, Judd R, **Shah D**, Nguyen C, Kwon D. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 7, 2024.
115. Malahfji M, Saeed M, Kaolawanich Y, Pan A, Crudo V, Reardon M, Elliott M, Polsani V, Bonow R, Zoghbi W, Kim R, **Shah D**. Effect of Combined Aortic and Mitral Regurgitation On Cardiac Remodeling And Outcomes: Evaluation With Cardiac Magnetic Resonance. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 7, 2024.
116. Ali S, Chaaya R, Khan M, Lazzara G, Chebrolu L, **Shah D**. A Unique Presentation of Cardiac Lymphoma Manifesting As Myocardial Infraction with Non-obstructive Coronary Arteries. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 7, 2024.
117. Topriceanu C, Bernhard B, Ge Y, Antiochos p, Heydari B, Steel K, Bingham S, Mikolich J, Arai A, Bandettini W, Patel A, Shanbhag S, Farzaneh-Far A, Heitner J, Shenoy C, Leung S, Gonzalez J, Raman S, Ferrari V, Shah D, Schulz-Menger J, Stuber M, Simonetti O, Kwong R. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 7, 2024.
118. Deangelo L, Covington M, Narendrula A, Tereshchenki L, Sande Mathias I, Tower-Radar A, Malahfji M, Gangadharamurthy D, Goyal A, Tong M, Liu S, Polsani V, Elliott M, Phelan D, Chen D, Simonetti O, Shah D, Nguyen C, Kwon D. Ventricular Size on Event Free Survival in Patients with Chronic Aortic Regurgitation. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 7, 2024.
119. Bersali A, Saeed M, Darwish A, Guta A, Qamar F, Maragiannis D, Nabi F, Chamsi-Pasha M, Al-Mallah M, Malahfji M, El Tallawi C, Shah D. Association of Myocardial Scarring with Outcomes In Patients With Secondary Mitral Regurgitation. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 7, 2024
120. Sande Mathias I, Covington M, Deangelo L, Narendrula A, Tereshchenko L, Tower-Rader A, Malahfji M, Gangadharamurthy D, Goyal A, Tong M, Liu S, Polsani V, Elliott M, Phelan D, Chen D, Simonetti O, Judd R, Shah D, Nguyen C, Kown D. Increased Adverse Outcomes in Women With Chronic Aortic Regurgitation. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 8, 2024.
121. Saad J, Nayfeh M, Alahdab F, Shah D, Al-Mallah M. Left Atrial Late Gadolinium Enhancement As A Diagnostic Clue in HFPEF. American College of Cardiology Scientific Sessions 2024. Atlanta, GA. April 8, 2024.

## **PRESENTATIONS:**

### **Invited Lectures:**

1. American Heart Association Annual Scientific Sessions. "Congenital and Acquired types of Valvular Abnormalities of the Heart with Prosthetic Valves/Devices – Anatomic and Echocardiographic correlations including 3D." New Orleans, LA. November 2000.
2. Division of Cardiology Grand Rounds, Duke University Medical Center, "Basics of MRI Imaging." Durham, NC. August 2002.

3. Division of Thoracic Surgery Grand Rounds, Duke University Medical Center, "Clinical Utility of Cardiovascular MRI." Durham, NC. October 2002.
4. Duke Cardiovascular Magnetic Resonance Cardiovascular MR Practicum, "Principles of Vascular MR Imaging." Durham, NC. December 2002.
5. Advances in Cardiac Care, the 9<sup>th</sup> Annual Cardiovascular Symposium of The Saha Foundation, "Cardiac MRI: Will Magnets Replace Nuclear Laboratories?" Lexington, KY. October 2003.
6. Duke Cardiovascular Magnetic Resonance Cardiovascular MR Practicum, "MR Assessment of the Central and Peripheral Vascular System." Durham, NC. December 2003.
7. Society of Cardiovascular Magnetic Resonance 7<sup>th</sup> Annual Scientific Sessions, "The Vasodilator CMR Stress Test – Analogy to Stress SPECT." Barcelona, Spain. February 2004.
8. Joint Cardiology and Radiology Grand Rounds, East Jefferson General Hospital, "Cardiovascular MRI: Promises or Clinical Reality?" Metairie, LA. June 2004.
9. Duke Cardiovascular Magnetic Resonance Practicum, "MR Assessment of the Central and Peripheral Vascular System." Durham, NC. September 2004
10. Society of Cardiovascular Magnetic Resonance 8<sup>th</sup> Annual Scientific Sessions, "Fellows Symposium: How to Transition To The Real World." San Francisco, CA. January 2005.
11. Society of Cardiovascular Magnetic Resonance 8<sup>th</sup> Annual Scientific Sessions, "Maintaining The Workflow." San Francisco, CA. January 2005.
12. American College of Cardiology Annual Scientific Sessions 2005, "Encore! Read With the Experts MRI/CT Case Presentations." Orlando, FL. March 2005.
13. 4<sup>th</sup> Annual Magnetom World Summit, "Setting Up A Successful CMR Practice." Singapore, Singapore. September 2005.
14. Duke Cardiovascular Magnetic Resonance Cardiovascular MR Practicum, "MR Imaging of the Central and Peripheral Vascular System." Durham, NC. October 2005.
15. 25<sup>th</sup> Annual Cardiology Symposium at St. Francis Health Center, "Update in Cardiac Imaging." Topeka, KS. March 2006.
16. American College of Cardiology Annual Scientific Sessions 2006, "Meet the Experts: Challenging Cases in Peripheral Magnetic Resonance Angiography/Computed Tomography Angiography." Atlanta, GA. March 2006.
17. American College of Cardiology Annual Scientific Sessions 2006, "Read with the Experts: Contrast Studies, Strategies for Evaluating Ischemia and Viability." Atlanta, GA. March 2006.
18. American College of Cardiology, Tennessee Chapter, Heart Failure Summit: The Leading Edge to Heart Failure Management 2006, "Cardiac MRI in the Evaluation of Heart Failure." Nashville, TN. April 2006.
19. Saint Thomas Health System Cardiology Update 2006, "Cardiac MRI in the Evaluation of Cardiomyopathy." Nashville, TN. May 2006.
20. Cardiology Research Conference, Methodist DeBakey Heart Center. "Cardiac MRI: Redefining concepts in cardiology." Houston, TX. June 2006.

21. Duke Cardiovascular Magnetic Resonance Cardiovascular MR Practicum, "MR Imaging of the Central and Peripheral Vascular System." Durham, NC. October 2006.
22. Society of Cardiovascular Magnetic Resonance Annual Scientific Sessions 2007, "Breakfast with the Exert II: CMR in Private Practice." Rome, Italy. February 2007.
23. Saint Thomas Health System Cardiology Update 2007, "Stress MRI: A Viable Clinical Competitor for Evaluation of the Patient with Chest Pain." Nashville, TN. April 2007.
24. Saint Thomas Health System Cardiology Update 2007, "Perioperative Cardiovascular Evaluation and Management for Non-Cardiac Surgery." Nashville, TN. April 2007.
25. American College of Cardiology Annual Scientific Sessions 2008, "Pericardial Constriction or Restriction?: MRI." Chicago, IL. April 2008.
26. Imaging in Heart Failure Summit in Monterrey, "Evaluation of Myocardial Viability: MRI." Monterrey, Mexico. April 2008.
27. Imaging in Heart Failure Summit in Monterrey, "Evaluation of the Right Ventricle: MRI." Monterrey, Mexico. April 2008.
28. Department of Cardiology Grand Rounds, Methodist DeBakey Heart & Vascular Center, "Cardiac MRI: Applications Ready for Prime Time in 2008." Houston, TX. May 2008.
29. American Society of Echocardiography Annual Scientific Sessions 2008, "CMR Viewpoint Echocardiography and Cardiac MRI in Myocarditis and Cardiomyopathies: Amyloidosis." Toronto, Canada. June 2008.
30. American Society of Echocardiography Annual Scientific Sessions 2008, "CMR Viewpoint Echocardiography and Cardiac MRI in Myocarditis and Cardiomyopathies: Hypertrophic Cardiomyopathy." Toronto, Canada. June 2008.
31. Department of Cardiology Grand Rounds, Methodist DeBakey Heart & Vascular Center, "Cardiac MRI: From Promise to Clinical Reality." Houston, TX. February 2009.
32. American College of Cardiology Annual Scientific Sessions 2009, "Acute Aortic Syndrome - Is it Time For an Acute Aortic Treatment Center: MRA in Aortic Dissection." Orlando, FL, March 2009.
33. Course Director, Methodist DeBakey Heart & Vascular Center, "Cardiology Update: Getting with the Guidelines." Houston, TX. May 2009.
34. Division of Cardiology Conference, University of Texas Medical Branch, "Overview of Cardiac MRI." Galveston, TX. July 2009.
35. Division of Cardiology Grand Rounds, Advocate Illinois Masonic Medical Center, "Cardiovascular Imaging: Present and Future." Chicago, IL. August 2009.
36. Department of Cardiology Grand Rounds, Methodist DeBakey Heart & Vascular Center, "Predicting the Risk of Sudden Cardiac Death beyond Ejection Fraction: Is MRI the Answer?" Houston, TX. September 2009.
37. Duke Cardiovascular Magnetic Resonance Practicum, "Evaluation of the Pericardium." Durham, NC. September 2009.

38. Duke Cardiovascular Magnetic Resonance Practicum, "Reimbursement of Cardiac MRI Procedures." Durham, NC. September 2009.
39. Division of Cardiology Grand Rounds, Kettering Medical Center, "Utility of Cardiac MRI in Clinical Practice." Dayton, OH. October 2009.
40. Methodist DeBakey Heart & Vascular Center Advanced Cardiovascular Update 2009, "Cardiac MRI in valve disease." Houston, TX. October 2009.
41. Department of Internal Medicine Grand Rounds, Houston Methodist Hospital, "Cardiovascular Magnetic Resonance Imaging: From Promise to Clinical Reality." Houston, TX. January 2010.
42. Division of Cardiology Multi-Modality Imaging Conference, Duke University Medical Center, "The Prevalence and Potentially Reversible Nature of Myocardial Thinning." Durham, NC. March 2010.
43. Total Endovascular Series - Dialysis Access 1 Symposium, Methodist DeBakey Heart & Vascular Center, "Central Venous Imaging - CTV/MRV." Houston, TX. March 2010.
44. American College of Cardiology Annual Scientific Sessions 2010, Co-Chair "Imaging Spotlight: Hot Topics in Cardiology -- Multimodality Imaging for Assessment of Right Ventricle Morphology and Function." Atlanta, GA. March 2010.
45. Lipids, Atherosclerosis and Preventive Cardiology Update, Christie Ballantyne Course Director, "Cardiac MRI: How it's Useful in Ischemic Heart Attack." Houston, TX. May 2010.
46. Association National Cardiologists of Mexico and Institute of Technology Monterrey, Third Congress: Innovations in Cardiology and Vascular Medicine. "Magnetic resonance imaging in the evaluation of congenital heart disease: Overview." Monterrey, Mexico. August 2010.
47. Cardiovascular Fellows' Boot Camp: Get the Basics, "Chronic Ischemic Heart Disease." Houston, TX. August 2010.
48. Cardiovascular Fellows' Boot Camp: Get the Basics, "Cardiac Imaging: MRI." Houston, TX. August 2010.
49. Association National Cardiologists of Mexico and Institute of Technology Monterrey, Third Congress: Innovations in Cardiology and Vascular Medicine. "State of the Art and Future of Cardiovascular Magnetic Resonance." Monterrey, Mexico. August 2010.
50. Duke Cardiovascular Magnetic Resonance Practicum, "Evaluation of the Pericardium." Durham, NC. September 2010.
51. Duke Cardiovascular Magnetic Resonance Practicum, "Reimbursement of Cardiac MRI Procedures." Durham, NC. September 2010.
52. Course Co-Director, Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR. Houston, TX. October 2010.
53. Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR, "Cardiac MRI: Basic Concepts and New Developments." Houston, TX. October 2010.
54. Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR, "Role of CMR in Detection of Coronary Artery Disease." Houston, TX. October 2010.

55. Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR, "Myocardial Viability to Determine Approach to Therapy: Role of CMR." Houston, TX. October 2010.
56. Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR, "Defining the Etiology of Cardiac Masses: New Role for CMR." Houston, TX. October 2010.
57. Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR, "Aortic Stenosis: The Challenge of Low Gradient, Low Output Aortic Stenosis." Houston, TX. October 2010.
58. Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR, "What are the Best Techniques to Evaluate the Aorta: Echo vs. CT vs. Dynamic MRI?" Houston, TX. October 2010.
59. Multi-Modality Cardiovascular Imaging for the Clinician: Update in Echocardiography, Nuclear, CT & CMR, "Aortic Dissection: New Insights and Therapies Using Imaging." Houston, TX. October 2010.
60. Baylor College of Medicine, Atherosclerosis and Vascular Biology Research Training Conference, "Cardiac MRI State-of-The-Art and Future." Houston, TX. October 2010.
61. Methodist DeBakey Heart & Vascular Center Advanced Cardiovascular Update 2010, "Revascularization Studies." Houston, TX. October 2010.
62. First International Conference on Cancer and the Heart at MD Anderson Cancer Center, "MRI in Evaluation of Cardiac Masses." Houston, TX. November 2010.
63. Baylor College of Medicine, Cardiology Research Conference, "Cardiac MRI: State-of-the-Art and Future Directions." Houston, TX. November 2010.
64. Total Endovascular Series: Aorta II with Cardiovascular Simulation Rodeo, "Computed Tomography Angiography (CTA) / Magnetic Resonance Arteriography (MRA)." Houston, TX. March 2011.
65. American College of Cardiology Scientific Session 2011, Cardiac MR: Non-Coronary Applications and Emerging Applications. "CMR in Hypertrophic Obstructive Cardiomyopathy." New Orleans, LA. April 2011.
66. American College of Cardiology Scientific Session 2011, Myocardial Viability and Imaging: Should We Look for It and How? "CMR Trumps All in Assessment of Viability." New Orleans, LA. April 2011.
67. American College of Cardiology Scientific Session 2011, Fellows in Training Spotlight: Detection of Coronary Disease. "Using Cardiac MRI to Detect Coronary Artery Disease." New Orleans, LA. April 2011.
68. Houston Methodist Hospital Medicine Grand Rounds, "Cases Where Cardiac MRI Provided Value." Houston, TX. April 2011.
69. Action Stat: Nurse Practitioner/Physician Assistant Book Camp, An Accelerated Conference for the Hospital-Based Clinician. "Cardiac Imaging." Houston, TX. April 2011.

70. Methodist DeBakey Heart & Vascular Center Research Conference, "Quantitative Analysis of Lower Extremity Muscle Perfusion in Peripheral Arterial Disease Using Magnetic Resonance Imaging." Houston, TX. May 2011.
71. Cardiology Noon Research Conference, "Detection of Myocardial Damage in Patients with Sarcoidosis." Houston, TX. June 2011.
72. Cardiovascular Fellows' Bootcamp: Laying the Foundation, "MRI and CT." Houston, TX. August 2011.
73. Duke CMR Symposium, "Assessment of the Central Vascular System." Durham, NC. September 2011.
74. Duke CMR Symposium, "Reimbursement of Cardiac MRI Procedures." Durham, NC. September 2011.
75. Cardiovascular Imaging Research Conference, "Use of Delayed Enhancement CMR for Imaging Left Atrial Scar after A-Fib Ablation." Houston, TX. September 2011.
76. Methodist DeBakey Heart & Vascular Center Research Conference, "Left Atrial Scar Imaging to Predict Atrial Fibrillation Recurrence." Houston, TX. October 2011.
77. 2<sup>nd</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-On Heart Specimens, "Cardiac MRI: Basic Concepts and New Developments." Houston, TX. October 2011.
78. 2<sup>nd</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-On Heart Specimens, "Interesting Cases in Coronary Disease." Houston, TX. October 2011.
79. 2<sup>nd</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-On Heart Specimens, "Myocardial Viability to Determine Approach to Therapy: Is it Still Essential after the STICH Trial." Houston, TX. October 2011.
80. 2<sup>nd</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-On Heart Specimens, "Interesting Cases (audience response and panel discussion)." Houston, TX. October 2011.
81. 2<sup>nd</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-On Heart Specimens, "Defining the Etiology of Cardiac Masses: New Role for CMR." Houston, TX. October 2011.
82. 2<sup>nd</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-On Heart Specimens, "Interesting Potpourri of Cases from the Texas Medical Center: Cardiomyopathy, Contrast Echo, Constriction and Cardiac Masses." Houston, TX. October 2011.
83. 2<sup>nd</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials and Hands-On Heart Specimens, "What Are the Best Techniques to Evaluate the Aorta: Echo vs. CT vs. Dynamic MRI?" Houston, TX. October 2011
84. Lantheus Medical Imaging Educational Program, "The Evolution of Magnetic Resonance Angiography (MRA)." Houston, TX. December 2011.
85. Internal Medicine Resident Conference. "Practical Utility of Cardiac MRI." Houston, TX. January 2012.

86. Cardiovascular Imaging Research Conference, "Cardiac Magnetic Resonance Abstracts Rehearsals." Houston, TX. January 2012.
87. Joint Cardiology and Vascular Surgery Grand Rounds, Rigshospitalet - Copenhagen University Hospital. "Aortic Dissection: The imaging revolution and Implications for a New Management Paradigm." Copenhagen, Denmark. January 2012.
88. Society of Cardiovascular Magnetic Resonance 15<sup>th</sup> Annual Scientific Sessions, "Fast Imaging – Who and Why?" Orlando, FL. February 2012.
89. Methodist DeBakey Heart & Vascular Center Grand Rounds, "Cardiovascular Magnetic Resonance Imaging (MRI): State of the Art and Future." Houston, TX. April 2012.
90. Cardiology Noon Research Conference, "Prognostic Value of Myocardial Viability by Delayed-Enhanced Magnetic Resonance in Patients with Coronary Artery Disease and Low Ejection Fraction: Impact of Revascularization Therapy." Houston, TX. April 2012.
91. Methodist DeBakey Heart & Vascular Center Research Conference, "Utility of Cardiac Magnetic Resonance Imaging (MRI) in Patients with Stroke." Houston, TX. April 2012.
92. Methodist DeBakey Heart & Vascular Center Grand Rounds, "Using Multimodality Imaging to Diagnose and Treat Cardiac Masses." Houston, TX. May 2012.
93. Cardiology Noon Research Conference, "Utility of Iron Particles for Cardiovascular Imaging." Houston, TX. May 2012.
94. Brazilian Society of Cardiology (BSC), 68<sup>th</sup> Annual Brazilian Congress Conference, "CMR in Daily Clinical Practice: More Than Just a Niche Application. September 2013.
95. 4<sup>th</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials, and Hands-on Heart Specimens, "Cardiac MRI: Basic Concepts and New Developments." Houston, TX. September 13-15, 2013.
96. 4<sup>th</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Small Group Tutorials, and Hands-on Heart Specimens, "Myocardial Viability to Determine Approach to Therapy: Is it Still Essential? Lessons Learned from the STICH Trial." Houston, TX. September 13-15, 2013.
97. American Heart Association Scientific Sessions 2013, "Imaging for Viability: Is it Viable." Dallas, TX. November 2013.
98. American Heart Association Scientific Sessions 2013, "Challenges in the Diagnosis and Management of Cardiomyopathy." Dallas, TX. November 2013.
99. American College of Cardiology Scientific Sessions 2014, "Dynamic MRA - Looking Inside the Dissection." Washington, DC. March 2014.
100. American College of Cardiology Scientific Sessions 2014, "MRI for Valve Dysfunction: When Echo Fails." Washington, DC. March 2014.
101. American College of Cardiology Scientific Session 2015, "Alternative Imaging Modalities for Annulus and Access." San Diego, CA. March 2015.
102. American College of Cardiology Scientific Session 2015, "How Do We Reliably Image the Dissection as It Changes?" San Diego, CA. March 2015.

103. Southwest Valve Summit III, "CMR for Valve Disease: Adding Value." Houston, TX. May 2015.
104. Southwest Valve Summit III, "How to Best Evaluate RV and Tricuspid Valve Function." Houston, TX. May 2015.
105. Texas Chapter American College of Cardiology Annual Meeting, "Update in Practical Cardiac CT and MRI Technologies. San Antonio, TX. October 1, 2015.
106. 6<sup>th</sup> Annual Multi-Modality Cardiovascular Imaging for the Clinician: Case Based Approach, Live Cases and Small Group Tutorials, "Cardiac MRI: Basic Concepts and New Developments." Houston, TX. October 2015.
107. American Heart Association Scientific Sessions 2015, "Integrated Imaging of Heart Failure: Identification of The Etiology." Orlando, FL. November 2015
108. American Heart Association Scientific Sessions 2015, "Imaging of Malignant Cardiac Tumors." Orlando, FL. November 2015
109. Mexican Society of Cardiology Congress, "New CMR techniques in non-ischemic cardiomyopathy 2 (non-ischemic dilated cardiomyopathies, ARVD, auto-immune diseases, etc." Acapulco, Mexico. November 22-23, 2015.
110. Mexican Society of Cardiology Congress, "New CMR techniques in valvular heart disease." Acapulco, Mexico. November 22-23, 2015.
111. Society of Cardiovascular Magnetic Resonance 19<sup>th</sup> Annual Scientific Sessions, "How to Assess Cardiac Chamber Sizes and Global vs. Regional Function." Los Angeles, CA. January 27-31, 2015.
112. American College of Cardiology Scientific Sessions 2016. The Right Imaging Test in the Right Patient at the Right Time: A Case-Based Approach. Chicago, IL. April 2016.
113. Southwest Valve Summit, "CMR for Valve Disease: Adding Value." Houston, TX. April 29-May 1, 2016.
114. Southwest Valve Summit, "Evaluating RV and Tricuspid Valve Function." Houston, TX. April 29-May 1, 2016.
115. iImagine 2016, "Lesson from and for CMR." Atlanta, GA. November 5-6, 2016.
116. iImagine, "Role of CMR in Valve Regurgitation." Atlanta, GA. November 5-6, 2016.
117. iImagine, "Echo vs CMR for Post-TVT." Atlanta, GA. November 5-6, 2016.
118. 5<sup>th</sup> Annual Symposium of the Saudi Heart Failure Working Group (SAUDI-HF) In Collaboration with Saudi Heart Association Imaging Working Group (SHAIG), "Right ventricular dysfunction: pathophysiology and clinical significance." Jeddah, Kingdom of Saudi Arabia. December 9-11, 2016.
119. 5<sup>th</sup> Annual Symposium of the Saudi Heart Failure Working Group (SAUDI-HF) In Collaboration with Saudi Heart Association Imaging Working Group (SHAIG), "Right ventricular function assessment: cardiac imaging (CT, MRI) perspective." Jeddah, Kingdom of Saudi Arabia. December 9-11, 2016.

120. 5<sup>th</sup> Annual Symposium of the Saudi Heart Failure Working Group (SAUDI-HF) In Collaboration with Saudi Heart Association Imaging Working Group (SHAIG), "Case #2 clinical case demonstrating utilization of CMR in HF." Jeddah, Kingdom of Saudi Arabia. December 9-11, 2016.
121. Southwest Valve Summit, "CMR (FMR & DMR)." Houston, TX. May 5-7, 2017.
122. Southwest Valve Summit, "Moderator-Session 2-Functional Imaging 2." Houston, TX. May 5-7, 2017.
123. Minnesota Valve Symposium. CMR for Evaluation for Valvular Heart Disease. Minnesota, MN. April 2017.
124. American College of Cardiology Scientific Sessions 2017. Clinical Applications of Cardiac MRI in 2017. Washington, DC. March 17-19, 2017.
125. SCMR Scientific Sessions 2017. Optimizing Your Perfusion and Flow Imaging Protocol. February 2017.
126. Department of Medicine, Medicine Grand Rounds. "Cardiovascular MRI: Applications Ready for Prime Time." Houston, TX. October 9, 2018.
127. CMR Board. APCA Cardiovascular Magnetic Resonance Item Development Workshop. Bethesda, MA. 6/2008.
128. American College of Cardiology Scientific Sessions 2018. Cardiovascular Imaging in 2018: Latest Advances and Applications. Cardiac MRI: Going Beyond Cardiac Function. Orlando, FL. March 10-12, 2018.
129. SCMR Scientific Sessions 2018. *Impact of Viability to Guide CTO and Select CRT.* Barcelona, Spain. February 2018.
130. SCMR Scientific Sessions 2019. *Optimal Utilization of FBCA for safe and effective Cardiovascular Imaging.* Bellevue, WA. February 6-9, 2019.
131. 9<sup>th</sup> Annual Multi-Modality CV Imaging for the Clinician. "CMR in Heart Failure: Impact on Etiologic Assessment & Prognosis." Houston, TX. February 22-24, 2019.
132. 9<sup>th</sup> Annual Multi-Modality CV Imaging for the Clinician. "Q&A Panel." Houston, TX. February 22-24, 2019.
133. 9<sup>th</sup> Annual Multi-Modality CV Imaging for the Clinician. "Role of CMR in Valvular Regurgitation: When is It Indicated?" Houston, TX. February 22-24, 2019.
134. 9<sup>th</sup> Annual Multi-Modality CV Imaging for the Clinician. "Q & A; Complex Cases in Mitral Valve Disease; How do you handle discrepancies in testing results. Audience Response and Panel Discussion." Houston, TX. February 22-24, 2019.
135. 9<sup>th</sup> Annual Multi-Modality CV Imaging for the Clinician. "Read with the Experts: CT Coronary Angiography, Aortography & Nuclear Cardiology Case Studies." Houston, TX. February 22-24, 2019.
136. 9<sup>th</sup> Annual Multi-Modality CV Imaging for the Clinician. "Interesting and Complex Case Studies using multimodality Imaging with Audience Response and Panel Discussion-- Valvular heart Disease, Structural heart disease and interventions, Pericardial disease, athletic heart, LVAD assessment." Houston, TX. February 22-24, 2019.

137. Case Western University, Harrington Heart & Vascular Institute Grand Rounds. *"Assessment of Valvular Heart Disease - Insights from and for CMR"*. January 21, 2021.
138. Brigham and Women's Hospital CV Imaging Grand Rounds. *"CMR in Evaluation of Valvular Heart Disease"*. March 4, 2021.
139. Society for Cardiovascular Magnetic Resonance 25<sup>th</sup> Annual SCMR Scientific Sessions. *"Phase Contrast/MRA Imaging"*. February 3, 2022.
140. North Florida Cardiovascular 19<sup>th</sup> Annual Cardiovascular Symposium. *"Cardiac MRI: Applications Ready for Prime-Time"*. April 30, 2022.
141. Beth Israel Deaconess Medical Center CMR Conference. "Assessment of Valvular Heart Disease - Insights from and for CMR." Virtual, May 4, 2022
142. National Meeting of the National Association of Cardiologists of Mexico. *"CMR Evaluation of Aortic and Mitral Valve Disease"* Virtual May 13, 2022.
143. The Medical College of Wisconsin's Cardiology Grand Rounds. *"Assessment of Valvular Heart Disease - Insights from and for CMR"*. June 2, 2022
144. American Society of Echocardiography 33<sup>rd</sup> Annual Scientific Session *"CMR for RV Function and TR Quantification: When and Why?"* Virtual, June 10-13, 2022.
145. 2nd Regional Meeting of Cardiology of ANCAM 2022 1st Regional Session of the CCN. *"How to assess complex VHD and multiple affected valves"* Virtual, August 6, 2022
146. Piedmont Heart Institute Grand Rounds. *"Assessment of Valvular Heart Disease Insights For and From CMR"*. February 22, 2023
147. MD Anderson Cardiology Grand Rounds. *"Utility of Cardiac Magnetic Resonance in the Evaluation of New onset Cardiomyopathy"*. March 21, 2023
148. University of Virginia Cardiology Grand Rounds. *"Assessment of Valvular Heart Disease – Insights from and for CMR"*. October 11, 2023
149. Ochsner Heart & Vascular Institute Cardiology Grand Rounds. *"Assessment of Valvular Heart Disease – Insights From and For CMR"* October 27, 2023
150. Vanderbilt University Medical Center, Cardiology Grand Rounds. *"Assessment of Valvular Heart Disease – Insights From and For CMR."* March 27, 2024
151. University of Chicago, Cardiology Grand Rounds. *"Assessment of Valvular Heart Disease – Insights From CMR."* June 7, 2024.
152. University of Louisville, Cardiology Grand Rounds. *"Assessment of Valvular Heart Disease – New Insights From CMR."* August 7, 2024.
153. Christ Hospital Virtual Imaging Grand Rounds. "CMR in Aortic Regurgitation." November 19, 2024.
154. Society of Cardiovascular Magnetic Resonance Scientific Sessions. "Aortic/Pulmonic Valve Disease." Washington, DC. January 29, 2025.

155. Indian Association of Cardiac Imaging. "Learning with the Legends Keynote Address: CMR in Valvular Heart Disease." Mumbai, India. August 17, 2025.
156. Texas A&M University Clinical Sciences and Translational Research Grand Rounds. "Research in Cardiac MRI: From Bench to Bedside." November 4, 2025.