# Karima Addetia, BSc, MD, FRCPC, FACC, FASE

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## ACADEMIC APPOINTMENTS

- 2015-2016 Clinical Associate of Medicine, University of Chicago, Chicago, IL
- 2016-2021 Assistant Professor of Medicine, University of Chicago, Chicago, IL
- 2022- Associate Professor of Medicine, University of Chicago, Chicago, IL

# ACADEMIC LEADERSHIP

2016-	Director of Imaging in Structural Heart Disease, University of Chicago, Chicago, IL
2022-	Interim Co-Director of Cardiovascular MRI & CT, University of Chicago, Chicago, IL

# ACADEMIC TRAINING

- 1995 Bachelor of Science, Chemistry. Memorial Univ. of Newfoundland, St. John's, NL
- 2001 Medical Doctorate, Memorial University of Newfoundland, St. John's, NL
- 2001-04 Internal Medicine Residency, Memorial Univ. of Newfoundland, St. John's, NL
- 2004-05 Internal Medicine Fellowship, Memorial Univ. of Newfoundland, St. John's, NL
- 2007-08 Echocardiography Fellowship: Level III, McGill Univ., Montreal, QC
- 2009-11 Cardiology Fellowship, McGill Univ., Montreal, QC
- 2012-14 Clinical and Research Fellowship in Advanced Cardiovascular Imaging (CMR and CCT) & Research in 3D echocardiography, Univ. of Chicago, Chicago, IL
- 2020 Johns Hopkins Cardiac CT Practicum

## LICENSING AND BOARD CERTIFICATION

- 2003 Licentiate of the Medical Council of Canada (LMCC No 93832)
- 2005 Fellow, Royal College of Physicians and Surgeons of Canada (FRCPC-Internal Medicine)
- 2005-2007 License to Practice Medicine, Province of Newfoundland (F09613)
- 2007 Diplomate in Internal Medicine, American Board of Internal Medicine (ABIM)
- 2008 License to Practice Medicine, Province of Newfoundland (F09613)
- 2009-2018 License to Practice Medicine, Province of Quebec (08420)
- 2010 Examination Special Competence Adult Echocardiography (ASCeXAM): Testamur status
- 2011 Fellow, Royal College of Physicians and Surgeons of Canada (FRCPC-Cardiology)
- 2018 Board Certified in Cardiovascular Disease (ABIM)
- 2018 Fellow of the American College of Cardiology (FACC)
- 2018 Fellow of the American Society of Echocardiography (FASE)
- 2019 Board Certified in Cardiovascular Magnetic Resonance: Diplomate status
- 2020 Level II certified in Cardiac CT
- 2012- Licensed physician and surgeon, State of Illinois (036.131452)

# **PROFESSIONAL SOCIETIES**

- 2006-2012 Newfoundland and Labrador Medical Association
- 2006-2015 College des Medecins du Quebec
- 2009-2015 Quebec Medical Association and Canadian Medical Association
- 2005- Royal College of Physicians and Surgeons of Canada
- 2008- American Society of Echocardiography (ASE)
- 2012- Society of Cardiovascular Magnetic Resonance (SCMR)
- 2016- Canadian Cardiovascular Society (CCS)
- 2019- American College of Cardiology (ACC)
- 2020- Society of Cardiovascular CT (SCCT)

# HONORS, PRIZES, AND AWARDS

1991 Electoral District Scholarship

1991	M.O. Morgan Entrance Scholarship to Memorial University of Newfoundland
1991-1995	Canada Scholarship
1992	William Science Scholarship
1994-1995	Dean's List
1992-1993	Dean's List
2001	Designed and painted the Medical School Class Tile, Memorial University of Newfoundland Medical School, St. John's, NL
2011	Best Poster Prize, McGill Cardiovascular Research Day. \$1,000
2011	AHA Women in Cardiology Trainee Award for Excellence
2011	Sanofi Research Award. \$1,500
2012	American Society of Echocardiography Travel Grant. \$1,000
2012	Cover illustration, Journal of Cardiovascular Ultrasound June 2012
2013	<b>FINALIST</b> Clinical case competition. American Society of Echocardiography, Minneapolis, MN. <b>Abstract</b> : <u>Yamat M</u> , <b>Addetia K</b> , Bhave NM, Lang RM. Impalement of the Tricuspid Valve Leaflet on Pacemaker Lead
2012	
2013 2013	<b>Cover illustration</b> , European Heart Journal Cardiovascular Imaging Vol 14(12), Dec 2013 <b>High score abstract award</b> . EuroECHO Istanbul, Turkey December 2013.
2013	Abstract: Mediratta A, Addetia K, Yamat M, Weinert L, Moss JD, Nayak HM, Mor-Avi V, Lang
	RM. Location of implantable device leads and severity of tricuspid regurgitation: value of 3D echocardiography
2014	Cover illustration, J Am Soc Echocardiogr Jan-March 2014
2014	Cover illustration, JACC Cardiovascular Imaging for April 2014
2014	<b>Feature Presentation</b> Morton Arnsdorf Cardiovascular Research Day, University of Chicago,
2014	Chicago, IL, April 2014. Abstract: Addetia K, Dugan K, El-Hangouche N, Bhorade S, Mor-
	Avi V, Lang RM, Patel AR. Right ventricular recovery following lung transplantation: does it
	happen?
2014	Winner American Society of Echocardiography Calendar Contest
2014	<b>FINALIST</b> Sonographers Investigator Award (SIA). American Society of Echocardiography,
2011	Portland OR. Abstract: Yamat M, Addetia K, Mor-Avi V, Lang RM. Which tricuspid valve
	leaflets are we seeing in standard 2D echocardiographic views?
2014	High score abstract award EuroECHO Vienna, Austria December 2014
2015	<b>FINALIST</b> Sonographers Investigator Award (SIA). American Society of Echocardiography,
	Boston, MA. Abstract: Yamat M, Addetia K, Mor-Avi V, Lang RM. Comprehensive 2D
	echocardiographic interrogation of the tricuspid valve using knowledge derived from 3D
	echocardiography
2015	WINNER Clinical case competition. American Society of Echocardiography, Boston, MA.
	Abstract: Kruse E, Addetia K, Maffessanti F, Collins KA, Sayer G, Ota T, Uriel N, Lang RM.
	Assist device thrombosis – Echocardiographic findings of a clogged pump.
2016	Best poster award American College of Cardiology Scientific Sessions, Chicago, IL April
	2016. An honor given to the top 2-5% of posters presented that year at the ACC
2016	Feature Presentation (as Senior author) Morton Arnsdorf Cardiovascular Research Day,
	University of Chicago, Chicago, IL, April 2016. Abstract: Singh A, Kishiki K, Maffessanti F,
	Gomberg-Maitland M, Mor-Avi V, Lang RM, Addetia K. Assessment of Inter-Chamber
	Functional Relationships in Severe Pulmonary Arterial Hypertension Using Simultaneous
	Strain Measurements in Four Cardiac Chambers
2018	Feature Presentation (as Senior author) Morton Arnsdorf Cardiovascular Research Day,
	University of Chicago, Chicago, IL, April 2018. Abstract: Narang A, Lang RM, Kishiki K,
	Weinert L, Maffessanti F, Mor-Avi V, Addetia K. Superiority of 3D over 2D Echocardiographic
	Analysis of Right Ventricular Function in Predicting Mortality
2021	Hugo and Mary Ann Draye Virtual Visiting Professorship Lecture, University of
	Washington Medical Center, Seattle, WA
2021	President's Circle Poster Presentation Selection, 2021 American Society of
	Echocardiography Scientific Sessions
2022	Cover illustration, J Am Soc Echocardiogr May 2022
2023	<b>Top Investigator Award</b> 34th Annual ASE Scientific Sessions (as Senior author) Abstract:

2023 **Top Investigator Award**, 34th Annual ASE Scientific Sessions (*as Senior author*) Abstract: Lee L, Henry M, Yamat M, Jain R, <u>Wali E</u>, <u>Belkin M</u>, Marzlin N, <u>Smith H</u>, <u>Abutaleb A</u>, Crouch J, Weiss ES Ota T, Salerno C, Li H, Husain A. Jeevanandam V, Lang RM, **Addetia K**. Cardiac Implantable Electronic Device-Related interference with the Tricuspid Valve Apparatus and Impact on Tricuspid Regurgitation

## CLINICAL

I am a clinical Cardiologist with sub-specialization in Echocardiography, Cardiovascular MRI and Cardiac CT (Multimodality Imaging). I am a skilled practitioner in all aspects of echocardiography including transthoracic, exercise and pharmacologic stress, trans-esophageal echocardiography as well as advanced imaging techniques such as strain, 3D, artificial intelligence, machine learning and virtual reality. I am involved in the TEE guidance of structural heart disease interventions including mitraClip, valve in valve procedures, paravalvular leak/ASD/VSD closures and left atrial appendage occlusion both in the cardiac catheterization lab and the hybrid OR. I also specialize in cardiovascular magnetic resonance (rest and stress) as well as structural and coronary cardiac CT.

2005-2006	Locum Internist, ICU and Hematology
	Health Sciences Center, Eastern Health Board, St. John's, NL
2006, 2008	Staff Internist, St. Clare's Hospital, Eastern Health Board, St. John's, NL
2010-2012	Locum Internist, McGill University Health Center (MUHC), Montreal, QC
2011-2012	Locum Cardiologist (Consultation, Call, Echo, stress test and clinics)
	Lakeshore General Hospital, Pointe Clare, QC
11/2011-07/2012	Staff Cardiologist, McGill University Health Center (MUHC), Montreal, QC
03/2015-present	Staff Cardiologist, University of Chicago Heart & Vascular Center

## SCHOLARSHIP

Peer-reviewed publications in the primary literature, exclusive of abstracts:

- 1. Ford CH, Tsaltas GC, Osborne PA, **Addetia K**. Novel flow cytometric analysis of the progress and route of internalization of a monoclonal anti-carcinoembryonic antigen (CEA) antibody. Cytometry. 1996;23(3):228-40.
- Benbarkat H, Addetia K, Eisenberg MJ, Sheppard R, Filion KB, Michel C. Application of the Seattle heart failure model in patients >80 years of age enrolled in a tertiary care heart failure clinic. Am J Cardiol. 2012 Dec 1;110(11):1663-6.
- 3. Addetia K, Sebag IA, Marelli A, Do DH, Afilalo J, Martucci G, Therrien J. Right Ventricular End-Diastolic Wall Stress: Does It Impact on Right Atrial Size, and Does It Differ in Right Ventricular Pressure vs Volume Loading Conditions? Can J Cardiol. 2013 Jul;29(7):858-65.
- 4. Bhave NM, **Addetia K**, Spencer KT, Weinert L, Jeevanandam V, Lang RM. Localizing mitral valve perforations with three-dimensional transesophageal echocardiography JACC: Cardiovascular Imaging. 2013;6(3):407-410.
- 5. Addetia K, Mor-Avi V, Weinert L, Salgo IS, Lang RM. A New Definition for an Old Entity: Improved Definition of Mitral Valve Prolapse using Three-Dimensional Echocardiography and Color-Coded Parametric Models. J Am Soc Echocardiogr 2014;27:8-16.
- Addetia K, Bhave NM, Tabit CE, Gomberg-Maitland M, Freed BH, Dill K, Lang RM, Mor-Avi V, Patel AR Sample Size and Cost Analysis for Pulmonary Arterial Hypertension Drug Trials Using Various Imaging Modalities to Assess Right Ventricular Size and Function Endpoints. Circ Cardiovasc Imaging. 2014 Jan 1;7(1):115-24.
- Mediratta A, Addetia K (co-first author), Yamat M, Moss JD, Nayak HM, Burke MC, Weinert L, Maffessanti F, Jeevanandam V, Mor-Avi V, Lang RM. 3D Echocardiographic Location of Implantable Device Leads and Mechanism of Associated Tricuspid Regurgitation. JACC Cardiovasc Imaging. 2014 Apr;7(4):337-47. Images on the journal COVER for this issue.

- 8. Cain M, Metzl M, Patel AR, **Addetia K**, Spencer K, Sweiss N, Beshai J. Cardiac Sarcoidosis Detected by Late Gadolinium Enhancement and Prevalence of Atrial Arrhythmias. Am J Cardiol. 2014 May 1;113(9):1556-60.
- 9. <u>Mediratta A</u>, **Addetia K**, Lang RM. Tricuspid Regurgitation Severity Associated With Positioning of RV Lead or Other Etiology Assessed by Intracardiac Echocardiography. JACC Imaging 2014;7(12):1286-87.
- Addetia K, Maffessanti F, <u>Mediratta A</u>, Yamat M, Weinert L, Moss JD, Nayak HM, Burke MC, Patel AR, Kruse E, Jeevanandam V, Mor-Avi V, Lang RM. Impact of Implantable Transvenous Device Lead Location on Severity of Tricuspid Regurgitation. J Am Soc Echocardiogr 2014;27(11):1164-75. Selected for CME activity and added to <u>www.ASEUniversity.org</u>.
- Obase K, Jeevanandam V, Saito K, Kesner K, Barry A, Hollatz A, Farooqui F, Addetia K, Roberts JD, Ota T, Balkhy HH, Yoshida K, Mor-Avi V, Lang RM. Visualization and Measurement of Mitral Valve Chordae Tendineae Using 3D Transesophageal Echocardiography from the Transgastric Approach. J Am Soc Echocardiogr. 2015 Apr;28:449-54.
- Addetia K, Michel C, Holcroft CA, Sheppard R, Rudski LG, Early Improvement in Serial Echocardiographic Studies in Heart Failure Patients Predicts Long Term Survival - A Pilot Study. J Card Fail. 2015 Jun;21(6):470-8.
- 13. <u>Medvedofsky D</u>, **Addetia K**, Hamilton J, Jimenez JL, Lang RM, Mor-Avi V. Semi-automated echocardiographic quantification of right ventricular size and function. Int J Cardiovasc Imaging. 2015 Aug;31(6):1149-57.
- Medvedofsky D, Addetia K, Patel AR, SedImeier A, Baumann R, Mor-Avi V, Lang RM. Novel approach to three-dimensional echocardiographic quantification of right ventricular volumes and function from focused views. J Am Soc Echocardiogr. 2015 Oct;28(10):1222-31.
- 15. Gomberg-Maitland M, Schilz, R, <u>Mediratta A</u>, **Addetia K**, Coslet S, Thomeas V, Gilles H, Oudiz RJ. Phase I Safety Study of Ranolazine in Pulmonary Arterial Hypertension. Pulm Circ. 2015 Dec;5(4):691-700.
- 16. Addetia K, <u>Yamat M</u>, <u>Mediratta A</u>, <u>Medvedofsky D</u>, <u>Patel M</u>, Ferrerra P, Mor-Avi V, Lang RM. Comprehensive Two-Dimensional Interrogation of the Tricuspid Valve Using Knowledge Derived from Three-Dimensional Echocardiography. J Am Soc Echocardiogr. 2016 Jan;29(1):74-82. Selected for CME activity and added to www.ASEUniversity.org.
- Mizukoshi K, Takeuchi M, Nagata Y, Addetia K, Lang RM, Akashi YJ, Otsuji Y. Normal Values of Left Ventricular Mass Index Assessed by Transthoracic 3D Echocardiography. J Am Soc Echocardiogr. 2016 Jan;29(1):51-61.
- Murtagh G, Laffin LJ, Beshai JF, Maffessanti F, Bonham CA, Patel AV, Yu Z, Addetia K, Mor-Avi V, Moss JD, Hogarth DK, Sweiss NJ, Lang RM, Patel AR. Prognosis of Myocardial Damage in Sarcoidosis Patients with Preserved Left Ventricular Ejection Fraction: Risk Stratification Using Cardiovascular Magnetic Resonance. Circ Cardiovasc Imaging 2016 Jan;9(1):e003738.
- Uriel N, Sayer G, Addetia K, Fedson S, Kim G, Rodgers D, Kruse E, Collins K, Adatya S, Sarswat N, Jorde U, Juricek C, Ota T, Jeevanandam V, Burkhoff D, Lang R. Combined Hemodynamic and 3-Dimensional Echocardiographic Ramp Tests in Patients with Left Ventricular Assist Devices. JACC Heart Fail. 2016 Mar;4(3):208-17.
- 20. Addetia K, Takeuchi M, Maffessanti F, Nagata Y, Hamilton J, Mor-Avi V, Lang RM. Simultaneous Longitudinal Strain in All 4 Cardiac Chambers: A Novel Method for Comprehensive Functional Assessment of the Heart. Circ Cardiovasc Imaging. 2016 Mar;9(3):e003895.

- 21. Addetia K, Maffessanti F, Yamat M, Weinert L, <u>Narang A</u>, Freed BH, Mor-Avi V, Lang RM. Threedimensional echocardiography-based analysis of right ventricular shape in pulmonary arterial hypertension. Eur Heart J Cardiovasc Imaging. 2016 May;17(5):564-75
- Mediratta A, Addetia K, Medvedofsky D, Gomberg-Maitland M, Mor-Avi V, Lang RM. Echocardiographic Diagnosis of Acute Pulmonary Embolism in Patients with McConnell's Sign. Echocardiography. 2016 May;33(5):696-702.
- 23. Murtagh G, Yu Z, Harrold E, Cooke J, Keegan N, Fukuda S, Addetia K, Kim JH, Spencer KT, Takeuchi M, Kennedy J, Ward RP, Patel AR, Lang RM, DeCara JM. Monitoring Ionizing Radiation Exposure for Cardiotoxic Effects of Breast Cancer Treatment. Am J Cardiol. 2016 May 15;117(10):1678-82.
- Altmayer SP, Patel AR, Addetia K, Gomberg-Maitland M, Forfia PR, Han Y. Cardiac MRI Right ventricle / Left ventricle (RV/LV) Volume Ratio Increases Detection of RV Enlargement. Journal of Magnetic Resonance Imaging 2015. J Magn Reson Imaging. 2016 Jun;43(6):1379-85.
- 25. Murtagh G, Laffin LJ, Patel KV, Patel AV, Bonham CA, Yu Z, **Addetia K**, El-Hangouche N, Maffesanti F, Mor-Avi V, Hogarth DK, Sweiss NJ, Beshai JF, Lang RM, Patel AR. Improved detection of myocardial damage in sarcoidosis using longitudinal strain in patients with preserved left ventricular ejection fraction. Echocardiography. 2016 Sep;33(9):1344-52.
- 26. Kado Y, Obokata M, Nagata Y, Ishizu T, Addetia K, Aonuma K, Kurabayashi M, Lang RM, Takeuchi M, Otsuji Y. Cumulative Burden of Myocardial Dysfunction in Cardiac Amyloidosis Assessed Using Four-Chamber Cardiac Strain. J Am Soc Echocardiogr. 2016 Nov;29(11):1092-1099.
- 27. <u>Medvedofsky D</u>, <u>Jimenez JL</u>, **Addetia K**, Singh A, Lang RM, Mor-Avi V, Patel AR. Multi-parametric quantification of tricuspid regurgitation using cardiovascular magnetic resonance: A comparison to echocardiography. Eur J Radiol. 2017 Jan;86:213-220.
- Medvedofsky D, Aronson D, Gomberg-Maitland M, Thomeas V, Rich S, Spencer K, Mor-Avi V, Addetia K, Lang RM, Shiran A. Tricuspid regurgitation progression and regression in pulmonary arterial hypertension: implications for right ventricular and tricuspid valve apparatus geometry and patients outcome. Eur Heart J Cardiovasc Imaging. 2017 Jan;18(1):86-94.
- <u>Kebed K</u>, <u>Kruse E</u>, Addetia K, Ciszek B, Thykattil M, Guile B, Lang RM, Mor-Avi V. Atrial-focused views improve the accuracy of two-dimensional echocardiographic measurements of the left and right atrial volumes: a contribution to the increase in normal values in the guidelines update. Int J ardiovasc Imaging. 2017 Feb;33(2):209-218.
- 30. Saura D, Dulgheru R, Caballero L, Bernard A, Kou S, Gonjilashvili N, Athanassopoulos GD, Barone D, Baroni M, Cardim N, Hagendorff A, Hristova K, Lopez T, de la Morena G, Popescu BA, Penicka M, Ozyigit T, Rodrigo Carbonero JD, Van De Veire N, Von Bardeleben RS, Vinereanu D, Zamorano JL, Gori AS, Cosyns B, Donal E, Habib G, Addetia K, Lang RM, Badano LP, Lancellotti P. Two-dimensional transthoracic echocardiographic normal reference ranges for proximal aorta dimensions: results from the EACVI NORRE study. Eur Heart J Cardiovasc Imaging. 2017 Feb;18(2):167-179.
- <u>Cai L</u>, Addetia K, Medvedofsky D, Spencer KT. Myocardial strain may be useful in differentiating Takotsubo cardiomyopathy from left anterior descending coronary artery ischemia. Int J Cardiol. 2017 Mar 1;230:359-363.
- Medvedofsky D, Kebed K, Laffin L, Stone J, Addetia K, Lang RM, Mor-Avi V. Reproducibility and experience dependence of echocardiographic indices of left ventricular function: Side-by-side comparison of global longitudinal strain and ejection fraction. Echocardiography. 2017 Mar;34(3):365-370.

- 33. Bernard A, Addetia K, Dulgheru R, Caballero L, Sugimoto T, Akhaladze N, Athanassopoulos GD, Barone D, Baroni M, Cardim N, Hagendorff A, Hristova K, Lopez T, De La Morena G, Popescu BA, Penicka M, Ozyigit T, Carbonero JDR, Van De Veire N, Von Bardeleben RSt, Vinereanu D, Zamorano JL, Martinez C, Magne J, Cosyns B, Donal E, Habib G, Badano LP, Lang RM, Lancellotti P. 3D Echocardiographic Reference Ranges for Normal Left Ventricular Volumes and Strains: Results from the EACVI NORRE study. Eur Heart J Cardiovasc Imaging. 2017 Apr 1;18(4):475-483.
- 34. <u>Mediratta A</u>, Addetia K, <u>Medvedofsky D</u>, Schneider RJ, Kruse E, Shah AP, Nathan S, Paul JD, Blair JE, Ota T, Balkhy HH, Patel AR, Mor-Avi V, Lang RM. 3D Echocardiographic Analysis of Aortic Annulus for Transcatheter Aortic Valve Replacement using Novel Aortic Valve Quantification Software: Comparison with Computed Tomography. Echocardiography. 2017 May;34(5):690-699.
- 35. Sugimoto T, Dulgheru R, Bernard A, Ilardi F, Contu L, Addetia K, Caballero L, Akhaladze N, Athanassopoulos GD, Barone D, Baroni M, Cardim N, Hagendorff A, Hristova K, Lopez T, de la Morena G, Popescu BA, Moonen M, Penicka M, Ozyigit T, Rodrigo Carbonero JD, van de Veire N, von Bardeleben RS, Vinereanu D, Zamorano JL, Go YY, Rosca M, Calin A, Magne J, Cosyns B, Marchetta S, Donal E, Habib G, Galderisi M, Badano LP, Lang RM, Lancellotti P. Echocardiographic reference ranges for normal left ventricular 2D strain: results from the EACVI NORRE study. Eur Heart J Cardiovasc Imaging. 2017 May 1;18(8):833-840.
- 36. <u>Singh A</u>, **Addetia K**, Maffessanti F, Mor-Avi V, Lang RM. LA Strain Categorization of LV Diastolic Dysfunction. JACC Cardiovasc Imaging. 2017 Jul;10(7):735-743.
- Medvedofsky D, Mor-Avi V, Kruse E, Guile B, Ciszek B, Weinert L, Yamat M, Volpato V, Addetia K, Patel AR, Lang RM. Quantification of Right Ventricular Size and Function from Contrast-Enhanced Three-Dimensional Echocardiographic Images. J Am Soc Echocardiogr. 2017 Dec;30(12):1193-1202.
- Balaney B, Medvedofsky D, Mediratta A, Ciszek B, Kruse E, Shah AP, Addetia K, Lang RM, Mor-Avi V. Invasive Validation of the Echocardiographic Assessment of Left Ventricular Filling Pressures Using the 2016 Diastolic Guidelines: Head-to-Head Comparison with the 2009 Guidelines. J Am Soc Echocardiogr. 2018 Jan;31(1):79-88.
- Addetia K, Uriel N, Maffessanti F, Sayer G, Adatya S, Kim GH, Sarswat N, Fedson S, Medvedofsky D, Kruse E, Collins K, Rodgers D, Ota T, Jeevanandam V, Mor-Avi V, Burkhoff D, Lang RM. 3D Morphological Changes in LV and RV During LVAD Ramp Studies. JACC Cardiovasc Imaging. 2018 Feb;11(2 Pt 1):159-169.
- 40. Addetia K, Maffessanti F, Muraru D, Singh A, Surkova E, Mor-Avi V, Badano LP, Lang RM. Morphologic Analysis of the Normal Right Ventricle Using Three-Dimensional Echocardiography-Derived Curvature Indices. J Am Soc Echocardiogr. 2018 May;31(5):614-623.
- 41. Sugimoto T, Robinet S, Dulgheru R, Bernard A, Ilardi F, Contu L, Addetia K, Caballero L, Kacharava G, Athanassopoulos GD, Barone D, Baroni M, Cardim N, Hagendorff A, Hristova K, Lopez T, de la Morena G, Popescu BA, Penicka M, Ozyigit T, Rodrigo Carbonero JD, van de Veire N, Von Bardeleben RS, Vinereanu D, Zamorano JL, Go YY, Marchetta S, Nchimi A, Rosca M, Calin A, Moonen M, Cimino S, Magne J, Cosyns B, Galli E, Donal E, Habib G, Esposito R, Galderisi M, Badano LP, Lang RM, Lancellotti P. Echocardiographic reference ranges for normal left atrial function parameters: results from the EACVI NORRE study. Eur Heart J Cardiovasc Imaging. 2018 Jun 1;19(6):630-638.
- 42. Altmayer SPL, Han QJ, Addetia K, Patel AR, Forfia PR, Han Y. Using all-cause mortality to define severe RV dilation with RV/LV volume ratio. Sci Rep. 2018 May 8;8(1):7200. doi: 10.1038/s41598-018-25259-1.
- 43. <u>Medvedofsky D</u>, Mor-Avi V, Sayer G, **Addetia K**, Kruse E, Adatya S, Kim G, Weinert L, Yamat M, Ota T, Jeevanandam V, Uriel N, Lang RM. Residual native left ventricular function optimization using quantitative

3D echocardiographic assessment of rotational mechanics in patients with left ventricular assist devices. Echocardiography. 2018 Oct;35(10):1606-1615.

- Medvedofsky D, Maffessanti F, Weinert L, <u>Tehrani DM</u>, <u>Narang A</u>, Addetia K, Mediratta A, Besser SA, Maor E, Patel AR, Spencer KT, Mor-Avi V, Lang RM. 2D and 3D Echocardiography-Derived Indices of Left Ventricular Function and Shape: Relationship With Mortality. JACC Cardiovasc Imaging. 2018 Nov;11(11):1569-1579.
- 45. <u>Narang A</u>, **Addetia K**, Weinert L, Yamat M, Shah AP, Blair JE, Mor-Avi V, Lang RM: Diagnosis of isolated cleft mitral valve diagnosed using three-dimensional echocardiography. J Am Soc Echocardiogr 2018; 31:1161-1167.
- 46. <u>Genovese D</u>, Singh A, <u>Volpato V</u>, Kruse E, Weinert L, Yamat M, Mor-Avi V, **Addetia K**, Lang RM. Load Dependency of Left Atrial Strain in Normal Subjects. J Am Soc Echocardiogr. 2018 Nov;31:1221-1228.
- 47. <u>Singh A, Medvedofsky D, Mediratta A, Balaney B</u>, Kruse E, Ciszek B, Shah AP, Blair JE, Maffessanti F, **Addetia K**, Mor-Avi V, Lang RM. Peak left atrial strain as a single measure for the non-invasive assessment of left ventricular filling pressures. Int J Cardiovasc Imaging. 2019 Jan;35(1):23-32.
- 48. <u>Mehta P, Chapel DB, Goyal N, Yu DB</u>, Mor-Avi V, <u>Narang A</u>, **Addetia K**, Sarswat N, Lang RM, Husain AN, Patel AR. A histopathologic schema to quantify the burden of cardiac amyloidosis: Relationship with survival and echocardiographic parameters. Echocardiography. 2019 Feb;36(2):285-291.
- 49. <u>Volpato V</u>, Lang RM, Yamat M, Veronesi F, Weinert L, Tamborini G, Muratori M, Fusini L, Pepi M, Genovese D, Mor-Avi V, **Addetia K**. Echocardiographic Assessment of the Tricuspid Annulus: The Effects of the Third Dimension and Measurement Methodology. J Am Soc Echocardiogr. 2019 Feb;32(2):238-247.
- 50. Addetia K, Muraru D, Veronesi F, Jenei C, Cavalli G, Besser SA, Mor-Avi V, Lang RM, Badano LP. 3-Dimensional Echocardiographic Analysis of the Tricuspid Annulus Provides New Insights into Tricuspid Valve Geometry and Dynamics. JACC Cardiovasc Imaging. 2019 Mar;12(3):401-412.
- 51. <u>Singh A</u>, Kawaji K, <u>Goyal N</u>, <u>Nazir NT</u>, <u>Beaser A</u>, O'Keefe-Baker V, **Addetia K**, Tung R, Hu P, Mor-Avi V, Patel AR. Feasibility of Cardiac Magnetic Resonance Wideband Protocol in Patients with Implantable Cardioverter Defibrillators and Its Utility for Defining Scar. Am J Cardiol. 2019 Apr 15;123(8):1329-1335.
- 52. <u>Genovese D</u>, Mor-Avi V, Palermo C, Muraru D, Volpato V, Kruse E, Yamat M, Aruta P, Addetia K, Badano LP, Lang RM. Comparison Between Four-Chamber and Right Ventricular-Focused Views for the Quantitative Evaluation of Right Ventricular Size and Function. J Am Soc Echocardiogr. 2019 Apr;32(4):484-494.
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- 127.Addetia K, Lang RM. Beat-to-beat variability occurs not only in atrial fibrillation: clinical value of dynamic assessment of the mitral and tricuspid annulus. European Heart Journal - Cardiovascular Imaging (2021) 22, 1374–1375.
- 128.Singulane CC, Singh A, **Addetia K**, Yamat M, Lang RM. Developing Insights Regarding Tricuspid Valve Regurgitation: Morphology, Assessment of Severity, and the Need for a Novel Grading Scheme. Struct Heart. 2022 Apr 4;6(1):100026.
- 129.Addetia K, Lang RM. Functional tricuspid regurgitation: challenging the old beliefs. Eur Heart J Cardiovasc Imaging. 2022 Jun 21;23(7):941-943.
- 130.Lee L, **Addetia K**, Singh A. Echocardiographic Evaluation of the Athlete's Heart: Focused Review and Update. Curr Cardiol Rep. 2022 Dec;24(12):1907-1916.
- 131.Han Y, Chen T, Addetia K. Tricuspid Valve Prolapse: A Forgotten Mechanism of Primary Tricuspid Regurgitation? J Am Coll Cardiol. 2023 Jan 27:S0735-1097(22)07643-4.
- 132.Hahn RT, Lerakis S, Delgado V, **Addetia K**, Burkhoff D, Muraru D, Pinney S, Friedberg MK. Multimodality Imaging of Right Heart Function: JACC Scientific Statement. J Am Coll Cardiol. 2023 May 16;81(19):1954-1973.

#### Peer-reviewed works in 'non-traditional' outlets:

- 133. Addetia K, Weinert L, Lang RM, Mor-Avi V. Role of 3D echocardiography derived color-coded parametric models of the mitral valve in differential diagnosis of prolapse and billowing. Computing in Cardiology 2013;40:1143-1146.
- 134.Veronesi F, **Addetia K**, Lamberti C, Lang RM, Mor-Avi V. 3D Evaluation of Tricuspid Annulus Morphology in Patients with Pulmonary Hypertension. Computing in Cardiology 2013; 40:241-244.
- 135.Maffessanti F, Addetia K, Murtagh G, Weinert L, Patel AR, Lang RM, Mor-Avi V. Fusion Imaging of Computed Tomography and 3D Echocardiography: Combined Assessment of Coronary Anatomy and Myocardial Function. Computing in Cardiology. 2014;41(January):701-704.

#### Case Reports:

- 136.<u>Benbarkat H</u>, **Addetia K**, Salehi AH, Sheppard D, Huynh T. A case of indolent endocarditis. Can J Infect Dis Med Microbiol. 2012 Fall;23(3):e51-2.
- 137.Addetia K, Therrien J. Spot Diagnosis Using Pulse Wave Doppler Interrogation of the Abdominal Aorta. JCU:2012;20(2):112-113.
- 138.<u>Yamat M</u>, **Addetia K**, Lang RM. Perforation of the tricuspid valve caused by an implanted device lead. Eur Heart J Cardiovasc Imaging. 2013 Dec;14(12):1186. Images on the
- 139.Addetia K, <u>Retzer E</u>, Lang RM, Patel AR. New Onset of Heart Failure in a Young Female. <u>http://www.scmr.org/</u>caseoftheweek/2014/7126.html#.VFFi0sWEjDd.
- 140.<u>Yamat M</u>, Lang RM, **Addetia K**. Malcoaptation of the pulmonary valve diagnosed using transthoracic 3D echocardiography. Eur Heart J Cardiovasc Imaging. 2015 Jun;16(6):695.
- 141.<u>Cossor W</u>, **Addetia K**, Balkhy H, Spencer KT, Lang RM, Patel AR. Unroofed Coronary Sinus Atrial Septal Defect: A Multi-Modality Approach. Eur Heart J Cardiovasc Imaging. 2015 Nov;16(11):1263.
- 142.Obase K, Addetia K, Takahashi K, Yamamoto K, Kawamura A, Tamada T, Imai K, Uemura S. Double-Orifice Tricuspid Valve Visualized by Three-Dimensional Transthoracic Echocardiography. J Cardiovasc Ultrasound. 2016 Sep;24(3):253-255.

- 143.<u>Koo G</u>, <u>Goyal N</u>, DeCara JM, Lang RM, **Addetia K**. An insidious and deadly complication of mechanical chest compressions in a patient on anticoagulation and the subtle echocardiographic findings that enabled timely diagnosis. Echocardiography. 2018 May;35(5):743-746.
- 144.Addetia K, Landeras L, Yamat M, Lang RM. The answer lies in the third dimension. Eur Heart J Cardiovasc Imaging. 2019 Feb 1;20(2):232.
- 145.<u>Karagodin I</u>, <u>Kebed K</u>, Singh A, **Addetia K**, Shah AP, Lang RM. Stabbed Through the Heart: An Unusual VSD Presentation. JACC Case Rep. 2020;2(4):559-564.
- 146. Addetia K, Lang RM. Roadmap to the Mechanisms of Aortic Regurgitation on Echocardiography. JACC Case Rep. 2020 Aug 19;2(10):1589-1594.
- 147.Cotella JI, Yamat M, Henry MP, Addetia K, Lang RM. Clinical Utility of Transillumination on Transthoracic Imaging. CASE (Phila). 2022 Aug 26;6(9):394-399.
- 148.Yang E, Balkhy HH, Patel B, Cotella J, Landeras L, **Addetia K**, Slivnick JA. Cardiovascular computed tomography for the detection of quadricuspid aortic valve: A case report. Radiol Case Rep. 2023 Jul 29;18(10):3544-3548.
- 149.Prabhu N, Guile B, Tang M, Lee L, Landeras L, Lang RM, Sarswat N, Addetia K. Anomalous right coronary artery from the main pulmonary artery (ARCAPA): Incidental finding in an asymptomatic septuagenarian. Radiol Case Rep. 2023 Aug 11;18(10):3720-3723.

#### Peer-reviewed works accepted or in press

- 150.Cotella JI, Kovacs A, **Addetia K**, Fabian A, Asch FM, Lang RM; WASE Investigators. Three-Dimensional Echocardiographic Evaluation of Longitudinal and Non-Longitudinal Components of Right Ventricular Contraction Results from the World Alliance of Societies of Echocardiography Study. Eur Heart J Cardiovasc Imaging. 2023 Aug 21:jead213.
- 151.Cotella JI, Kovacs A, **Addetia K**, Fabian A, Asch FM, Lang RM; WASE Investigators. Three-Dimensional Echocardiographic Evaluation of Longitudinal and Non-Longitudinal Components of Right Ventricular Contraction Results from the World Alliance of Societies of Echocardiography Study. Eur Heart J Cardiovasc Imaging. 2023 Aug 21:jead213.

#### Books:

#### As author:

- 152. Clerkship Survival Manual, published through Memorial University of Newfoundland with the support of the Faculty of Medicine Dean's Office and Student Affairs and with forward from the Dean of Memorial University Medical School, Dr. J. Rourke. First edition published 2004. Yearly publications since. Third edition published June 2007 & again June 2008, 2009, 2010, 2011, 2012, 2013, 2014 and 2015
- 153.Narang A, **Addetia K**, Gorcsan J, Klein AL, Pellikka P, Porter TR, Singh A, Kai Ming Wang T, Xie F, Land RM. Quick Reference and Formula Guide: Cardiac Strain, Stress, 3D, Ultrasound Enhancing Agents (UEA) and Pericardial Disease. Sponsored by the American Society of Echocardiography 2022

#### Book chapters:

- 154. Addetia K, Mor-Avi V, Lang RM. Three-dimensional Echocardiography. In Ecocardiografia e Imagen Cardiovascular en la Practica Clinica. Distribuna Editorial. 2014.
- 155.Mediratta A, Maffessanti F, **Addetia K**, Lang RM. Echocardiographic Evaluation of the Right Atrium and Right Ventricle. In Applied Echocardiography in Coronary Artery Disease. Ed. RR Kasliwal, Jaypee Brothers Medical Publishers: Daryaganj, New Delhi: 2015.

- 156.Delafave L, Addetia K, McNally EM. Imaging in Familial Dilated Cardiomyopathy. In ASE's Comprehensive Echocardiography. Ed. RM Lang, SA Goldstein, I Kronzon, BK Khandheria, V Mor-Avi Edition 2. Elsevier, 2016.
- 157.Badano LP, Addetia K, Muraru D. Quantification of Tricuspid Regurgitation. In ASE's Comprehensive Echocardiography. Ed. RM Lang, SA Goldstein, I Kronzon, BK Khandheria, V Mor-Avi Edition 2. Elsevier, 2016
- 158.Badano LP, **Addetia K**, Muraru D. Epidemiology, Etiology and Natural History of Tricuspid Regurgitation. In ASE's Comprehensive Echocardiography. Ed. RM Lang, SA Goldstein, I Kronzon, BK Khandheria, V Mor-Avi Edition 2. Elsevier, 2016.
- 159. Addetia K, Lang RM. Recent Advances in The Imaging Assessment of Infiltrative Cardiomyopathy. In Cardio-Imaging in Heart Failure. CTO Editorial, 2016
- 160.Addetia K, Lang RM. Routine Assessment of the Left Ventricle. Textbook of Three-Dimensional Echocardiography. Editors: Badano, Luigi P., Lang, Roberto M., Muraru, Denisa. Springer Nature Switzerland, 2019
- 161.Takeuchi M, Addetia K, Lang RM. Advanced Assessment of the Left Ventricle. Textbook of Three-Dimensional Echocardiography. Editors: Badano, Luigi P., Lang, Roberto M., Muraru, Denisa. Springer Nature Switzerland, 2019
- 162. Addetia K, Muraru D, Guta AC, Badano LP, Lang RM. The Normal Tricuspid Valve. Textbook of Three-Dimensional Echocardiography. Editors: Badano, Luigi P., Lang, Roberto M., Muraru, Denisa. Springer Nature Switzerland, 2019
- 163.Muraru D, Addetia K, Jarjour F, Lang RM, Badano LP. Organic Tricuspid Regurgitation. Textbook of Three-Dimensional Echocardiography. Editors: Badano, Luigi P., Lang, Roberto M., Muraru, Denisa. Springer Nature Switzerland, 2019
- 164.Tsang W, **Addetia K**, Lang RM. Aortic-Mitral Coupling. In Advances in Treatments for Aortic Valve and Root Diseases. Editors: Fattouch, K., Lancellotti, P., Vannan, M.A., Speziale, G. Springer Nature 2018
- 165.**Addetia K**, Mor-Avi V, Lang RM. Transthoracic 3D Echocardiography. Oh Manual of Echocardiography 7<sup>th</sup> Edition.
- 166.Singh A, Addetia K. Section: Echocardiography in Athletic Preparticipation Screening. Section: Hypertrophic Cardiomyopathies. In ASE's Comprehensive Echocardiography. Ed. RM Lang, SA Goldstein, I Kronzon, BK Khandheria, V Mor-Avi Edition 3. Elsevier, 2020
- 167. Addetia K, Lang RM. Systematic Echocardiographic Approach to Left Ventricular Assist Device Therapy. Section: Echocardiography in Heart Failure. In ASE's Comprehensive Echocardiography. Ed. RM Lang, SA Goldstein, I Kronzon, BK Khandheria, V Mor-Avi Edition 3. Elsevier, 2020
- 168.Addetia K, Lang RM. Pacemaker-Induced Tricuspid Regurgitation. Section: Tricuspid and Pulmonic Valve Disease. In ASE's Comprehensive Echocardiography. Ed. RM Lang, SA Goldstein, I Kronzon, BK Khandheria, V Mor-Avi Edition 3. Elsevier, 2020
- 169. Singulane C, Araujo LT Addetia K. The Tricuspid Valve. Clinical Echocardiography. 2021. In press.

Works in review, in preparation, under review and not yet publicly available

170.<u>Singh A</u>, **Addetia K**, Mediratta A, Sarswat N, Pursnani A, Salinger M, Patel AR. Expansion of Left Ventricular Pseudoaneurysm Following Myocardial Infarction: Tissue Characterization Using Cardiac Magnetic Resonance and Computed Tomography. *Under review* 

- 171.<u>Han QJ</u>, <u>Altmayer SPL</u>, **Addetia K**, Patel AR, Forfia PR, Han Y. Right ventricular dyssynchrony in pulmonary arterial hypertension as evidenced by slice-to-slice minimum volume timing. *Under review.*
- 172. Addetia K, <u>Pandya D</u>, Nayak H, Moss J, Tung R, Yamat M, Mor-Avi V, Lang RM, Upadhyay G. Verification of Pacemaker Lead Tip Location Using 3D Echocardiography: An Alternative to Chest X-ray or Biplane Fluoroscopy? *In preparation*.
- 173.<u>Narang A, Henry MP</u>, <u>Kishiki K</u>, Takeuchi M, Besser SA, Mor-Avi V, Lang RM, **Addetia K**. Left Ventricular Mechanical Properties in Patients with Severe Aortic Insufficiency and Normal Ejection Fraction: Impact on Survival. *In preparation.*

#### FUNDING

#### Current:

Medtronic Grant 2023-

My role: PI. Total cost: \$75K. Project period 2024-

Pfizer Grant 2021-

Program Title: Early Identification of TTR Amyloidosis Using Transthoracic Echocardiography My role: PI. Total cost: \$75K. Project period 2021-24.

University of Chicago Professional Development Fund 2020-Funds: \$25K

ASE EchoCORE

Question-based self-assessment tool for cardiologists, anesthesiologists, fellows and residents who want to learn echocardiography and prepare for the boards Editors: Karima Addetia MD and Roberto M. Lang MD Sponsor: American Society of Echocardiography (ASE)

World Alliance of Societies of Echocardiography (WASE) Normal Values Study Sponsor: American Society of Echocardiography (ASE) Overall PIs: Roberto M. Lang MD and Federico M. Asch MD My role: WASE Investigator and PI for Chicago and 3D CoreLab. Responsible for data collection, storage and 3D analysis Enrollment of >2200 normal subjects 2017-2019. Data measurement and analysis 2018-2023

Goldblatt Medical Foundation Grant. PI: Roberto M. Lang and Nir Uriel. My role: Mentee. Title: Optimization of Left Ventricular Assist Devices (LVADs) Using Three-Dimensional Ultrasound Imaging of the Heart. Total cost: \$75K. Project period 2015-16.

TOMTec Research Innovators Travel Grant. Total: \$5,000. Project period 2013

#### Past:

- Regional Professional Development Grant, Royal College of Physicians and Surgeons of Canada. My role: PI. Traineeship in Advanced 3D Imaging at the University of Chicago. Total cost: \$3,000. Project period: 2012-13
- Undergraduate Research Award. PI: Dr. T. Scott. My role: Mentee. Title: "Development Of Computer-Based Teaching Materials For Undergraduate Medical Education". Total cost: \$2,600. Project period: Summer 1999
- Undergraduate Research Award. PI: Dr. K. Kao. My role: Mentee. Title: "Analysis of rel Gene Induced Epidermal Tumors". Total cost: \$2,600. Project period 1/2/1998-1/3/1998.
- Studentship. PI: Dr. S. Kaiser. My role: Mentee. Title: "Examination of PTHRP Expression in Human Cervical Epithelial Cells". Total cost: \$3,400. Project period: Summer 1994

# **INVITED SPEAKING**

National and international chair/moderator invitations

2015	Session Chair	Assessment Aortic Stenosis, ASE Scientific sessions, Boston MA
2015	Session Chair	The Future Is Today! 3D Echo 360 <sup>0</sup> Course, Padua IT
2007	Poster Professor	Imaging Case Report Posters, CHEST, Montreal CA
2017	Moderator	Right Ventricle and Atria, 3D ECHO 360 Course, Padua IT
2017	Moderator	The Aortic Valve, 3D ECHO 360 Course, Padua IT
2017	Moderator	Tricuspid valve: The New Frontier, 3D ECHO 360, Padua IT
2018	Session Chair	Right Chamber and Congenital Heart Skill Boosters, 3D Echo Asia-
		Pacific, Seoul Korea
2018	Poster Professor	FIT Poster Presentation, ACC&IL and WC Chapters, Chicago, IL
2019	Moderator	The Right Heart, 19 <sup>th</sup> Annual Echo New York, New York, NY
2021	Moderator	IMCI: Innovation in patient-centered multimodality Cardiac Imaging.
		Virtual and International Course: Session: Multimodality imaging to
		assess patients with functional tricuspid regurgitation
2021	Moderator	Tricuspid Regurgitation: The Next Challenge, ASE Virtual Scientific
		Sessions
2022	Poster Moderator	Janet Rowley Research Day, University of Chicago, Chicago IL
2022	Poster Moderator	ASE 2022 Scientific Sessions, Seattle, WA
2023	Session Chair	ACC 2023 Scientific Sessions, New Orleans, LA
2023	Poster Moderator	ASE 2023 Scientific Sessions, New Harbor, Washington, DC

National and international invited and teaching presentations

2013	Invited Speaker	Cardiomyopathy and LGE in Manifesting Carrier of Becker's Muscular Dystrophy: Should All Carriers of The Dystrophin Gene Mutation Be
		Screened for Cardiomyopathy? SCMR, San Francisco, CA
2013	Invited Speaker	Heart Failure and Imaging in Interventional Cardiology, EuroECHO, Istanbul Turkey
2013	Workshop	TEE for Beginning Practitioners, EuroECHO, Istanbul Turkey
2013	Grand Rounds	3D Echocardiography: Advantage of The Added Dimension, McGill University, Montreal, QC
2014	Invited Speaker	Comprehensive Assessment of BAV Using CMR: Looking Beyond the Valve, SCMR, New Orleans LA
2014	Webinar	Enhancing Assessment of the RV with Strain, Sponsor: Epsilon Imaging
2014	Invited Speaker	2D/3D Echo LV and LA, AHA Scientific Sessions, Chicago IL
2014	Workshop	TEE for Beginning Practitioners, EuroECHO, Vienna Austria
2014	Invited Speaker	Tricuspid Annulus: Dynamic and Static Analysis, EuroECHO, Vienna Austria
2015	Grand Rounds	3D Echocardiography: The Advantage of the Added Dimension, Sunnybrook Hospital, Toronto ON
2015	Invited Speaker	Why we need 3D in assessing the LV, EuroECHO, Seville Spain
2016	Invited Speaker	New Applications in Echo and CMR, CC Illinois Chapter, Oakbrook IL
2016	Invited Speaker	Cases to stump the experts, ASE, Seattle WA
2016	Invited Speaker	Beyond Geometrical Assumptions: Quantitation of the Tricuspid Annulus and Severity Of TR, EuroECHO, Leipzig Germany
2017	Invited Speaker	A Case of Lung Cancer, Myocardial Infarction and Cardiac Mass: Added Value of CMR, SCMR, Washington DC
2017	Invited Speaker	The Normal Tricuspid Valve, Right Heart. New Frontier, Padua IT
2017	Invited Speaker	A Case of Pacemaker-induced TR, ACC, Washington DC
2017	Invited Speaker	TR: The Most Complex Valve – Simplified, CSE, Toronto ON
2017	Workshop	Hands-on computer workstation session (Philips 3D). Canadian Society of Echocardiography, Toronto, ON
2017	Invited Speaker	The LVAD Ramp Study, ASE, Baltimore MA
2017	Invited Speaker	Complications. Mechanical Device Support, ASE, Baltimore MA
2018	Invited Speaker	RV Assessment by Echocardiography, ACC, Orlando FLA

2010	Crand Doundo	DV/ Dest. Dresent Future, LakeShare Llashital, Deint Clare, OC
2018 2018	Grand Rounds	RV: Past, Present Future, LakeShore Hospital, Point Clare QC
2018	Invited Speaker Invited Speaker	PFO: Controversy and Closure, ASE, Nashville TN 2D of the Left ventricle, EuroEcho, Milan IT
2018		
2019	Invited Speaker	3D Color Flow Imaging: for MR Quantification, ASE, Portland, OR
	Invited Speaker	The Journey of a Thrombus From Vein to Artery: An unexpected stop Cryptogenic Stroke / PFO closure, ASE, Portland, OR
2019	Invited Speaker	3D Echocardiography for the Evaluation of The Mitral and Tricuspid Valves. What's New? Sixth SONECOM Congress, Mexico City, Mexico
2019	Invited Speaker	Tricuspid Annulus Evaluation by 3D, measurement method, does it
		provide new clues in the evaluation of the tricuspid valve? Sixth
		SONECOM Congress, Mexico City, Mexico
2019	Invited Speaker	Decoding the right ventricle by 3D Echo (size, function and prognosis). Sixth SONECOM Congress, Mexico City, Mexico
2019	Invited Speaker	Advances of Echocardiography in the Prognosis of Pulmonary
	•	Hypertension. 6 <sup>th</sup> SONECOM Congress, Mexico City, Mexico
2019	Workshop	Management of the new quantification tools of modern
		echocardiography: Dynamic HeartModel, right ventricle function with
		3D image, right ventricle autostrain, left ventricle autostrain and left
		Atrium. Sixth SONECOM Congress, Mexico City, Mexico
2019	Invited Speaker	When Do We Need RV Volumes and EF. How do I use These? 19th
		Annual Echo New York, New York, NY
2019	Invited Speaker	The RV in LVAD. 19 <sup>th</sup> Annual Echo New York, New York, NY
2019	Invited Speaker	LA Strain for DD? 19 <sup>th</sup> Annual Echo New York, New York, NY
2019	Workshop	Taking Advantage of Multimodality Imaging In Daily Clinical Practice:
		Beyond Echocardiography in Cardiac Amyloid, CCS, Montreal, CA
2019	Workshop	When Should We Take Advantage of Percutaneous Therapies For
		Valvular Heart Disease in Our Patients? Focus on The Mitral And
		Tricuspid Valves: The dysfunctional prosthetic valve: The
		Percutaneous Option, CCS, Montreal, CA
2019	Invited Speaker	Practical tips for an easy 3D cropping and orientation, EuroECHO,
		Vienna, Austria
2020	Invited Speaker	36th Annual International Conference on Case Studies/Recent
		Advances in Echocardiography and Allied Techniques (MRI, CT,
		Nuclear), Chicago, IL Canceled due to COVID-19 Pandemic
2020	Grand Rounds	Right Ventricular Mechanics, Mayo Clinic, Rochester Minnesota.
		Postponed due to COVID-19 Pandemic
2020	Invited Speaker	Imaging with the new Transillumination and tissue transparency
		techniques, Virtual Webinar Imagen Cardiovascular Multimodal,
		Cardio Academic, Mexico City, Mexico
2020	Invited Speaker	Evaluación Ventriculo Derecho en 2020, Virtual Seventh SONECOM
		Congress, Mexico City, Mexico
2020	ACC Webinar	In conjunction with JACC Case Reports: Roadmap to the Mechanisms
		of Aortic Regurgitation on Echocardiography
2020	Invited Speaker	3D for Left Atrial Volume. Why? How? Echo NY and iMAGINE Virtual
		Education Series 2020-2021
2020	Invited Speaker	Standard 3D Views and Anatomy in Session: TEE in Structural Heart
		Interventions. ECHO 360 Structural Heart Imaging Virtual Symposium,
0000		Seoul, Korea
2020	Invited Speaker	Left Atrial Assessment: Putting it All Together. A Modern Look at the
2022	Invited One-line	Left Atrium. Webinar DIC, Brazil
2020	Invited Speaker	How to Assess Right Ventricular Function, role of new prognostic
2024	Invited One-line	Markers, CITIC 2020 Digital Meeting, Mexico City, Mexico
2021	Invited Speaker	LVAD Assessment on Echocardiography, Virtual Conference,
		University of Massachusetts Medical School, Boston, MA

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2021	Invited Speaker	Device-Lead Associated Tricuspid Regurgitation, Hugo and Mary Ann Draye Virtual Visiting Professorship Lecture, University of Washington Medical Center, Seattle, WA
2021	Invited Speaker	Use of 3D Echocardiography for Paravalvular Leaks, ASE Virtual Scientific Sessions
2021	Oral Abstract	3D Echocardiography-Based Assessment of Left Ventricular Diastolic Function: A Report from World Alliance of Societies of Echocardiography (WASE) study. Top 35 submissions. President's Circle ePoster Presentation, ASE Virtual Scientific Sessions
2021	Invited Speaker	Effect of the severe pulmonary hypertension on RV mechanics, Virtual Seventh SONECOM Congress, Mexico City, Mexico
2021	Invited Speaker	Valvuloplasty or Valve Replacement? Virtual Seventh SONECOM Congress, Mexico City, Mexico
2021	Invited Speaker	Advantages of 3D evaluation of the aortic root. Case based, Virtual Seventh SONECOM Congress, Mexico City, Mexico
2021	Invited Speaker	Cardiac Leads and TR: Incidental or Causative? TVT 2021: The Structural Heart Summit Miami, FLA
2021	ESC Cardio Talk	Beat-to-beat variability occurs not only in atrial fibrillation: clinical value of dynamic assessment of the mitral and tricuspid annulus, ESC website (podcast)
2022	Invited Speaker	Assessment of the Pericardium. SCMR 25th Annual Scientific Sessions Virtual 2022: Physicians Pre-Conference
2022	Invited Speaker	Virtual Imaging Lecture Series: Imaging of LVADs and Interpretation of RAMP Studies. Advocate Aurora Health Care, Milwaukee, WI
2022	Invited Speaker	Imaging The Transplanted Heart, Mechanical Circulatory Support: ASE Scientific Sessions 2022, On Demand session
2022	Invited Speaker	Echo-OR Correlation, ASE Scientific Sessions 2022, Seattle, WA
2022	Invited Speaker	Live Cropping the Tricuspid Valve, ASE Scientific Sessions 2022, Seattle, WA
2022	Invited Speaker	Valvular Heart Disease Research, Top Echo Research of the Year: Innovations Today for Tomorrow's Practice, ASE Scientific Sessions 2022, Seattle, WA
2022	Invited Speaker	Cardiac Implantable Electronic Lead device induced Tricuspid Regurgitation. Centro de Imagen y Technologia en Intervencion Cardiovascular (CITIC) 2022, Mexico City, Mexico
2022	Invited Speaker	Early Diagnosis Of Cardiac Amyloidosis. Centro de Imagen y Technologia en Intervencion Cardiovascular (CITIC) 2022, Mexico City, Mexico
2022	Invited Speaker	TEE & 3D Echo for Structural Heart Interventions, Advanced Interventional Imaging Academy ECHO360 Structural Heart Imaging, Seoul, Korea
2023	Invited Speaker	Multimodality Approach to Unravelling the Mysteries of Ischemic Heart Disease: MINOCA and INOCA Virtual Webinar Case Presentation 1: Role of CMR Perfusion Imaging
2023	Invited Speaker	ACC/WCC 2023 Multimodality Imaging Research Highlights Webinar Organizer and Participant
2023	Invited Speaker	Why we Need 3D for the Left Ventricle, EuroEcho Barcelona, Spain, May 2023
2023	Invited Speaker	3th Annual Symposium in Cardiovascular Imaging with a focus on "Structure and Function of the Right Heart: From the Basics to the Latest" June 2023, Montreal, QC, Canada
2023	Invited Speaker	Pump Problems: Peripartum Cardiomyopathy. ASE Scientific Sessions, June 2023, Baltimore, MD
2023	Invited Speaker	Cardio-Academic/ACC congress, Complexities of Left Atrial Analysis, August 2023, Mexico City, Mexico

2023	Invited Speaker	Cardio-Academic/ACC congress, Assessment of Paravalvular Leaks, August 2023, Mexico City, Mexico
2023	Invited Speaker	State-of-the-art Imaging Identifies Various Causes of Tricuspid Regurgitation, Korean Society of Cardiology, October 2023
2023	Invited Speaker	Demystifying the mystery: Echo, to determine TR anatomy and mechanism, CCS October 2023
2023	Invited Speaker	3D Echocardiography: Latest Advances and Applications 12th Annual Multimodality Cardiovascular Imaging for the Clinician Houston Methodist Research Institute Houston October 2023
2023	Invited Speaker	Artificial Intelligence in Cardiovascular Imaging: What is the Impact on Workforce and Workflow? Adopt or Adapt? 12th Annual Multimodality Cardiovascular Imaging for the Clinician Houston Methodist Research Institute October 2023
2023	Invited Speaker	Topic TBD, Virtual Multimodality Imaging Conference, Massachusetts General Hospital Nov 2023
2024	Invited Speaker	Multimodality Imaging of the Right Heart, Virtual Multimodality Imaging Conference, Johns Hopkins University February 2023
2024	Invited Speaker	When Does Assessment of the Tricuspid Valve Matter? Global Cardiovascular Magnetic Resonance Imaging Conference January 2024 London, England

# National and International Course Faculty

2014	Course Faculty	3D Echo 360 2014 Atlanta, Georgia Is 3D Stress Echo Really Necessary/Practical?
		Expert Interpretation of 3D Degenerative MV Anatomy: How?
		3D of the Abnormal Right Ventricle: Is it Feasible?
2015	Course Faculty	Echo 360 European Edition from Innovation to Practice
		The left atrium
		Combined Imaging for TAVI
2016	Course Faculty	3D Echo 360 Atlanta, Georgia
		2-D RV Strain in Pulmonary Hypertension
		2-D Vs. 3-D TTE for RV Function
		2-D Vs. 3-D TTE for TV Anatomy
2017	Course Faculty	3D Echo 360 European Edition Padua IT
		Comparing with CMR data. How close is close enough?
		Quantitative Assessment of the Tricuspid Apparatus.
		Clinical Added Value of High Volume-Rate 3D Color. Philips
		Symposium.
		Degenerative mitral regurgitation assessed with MVQ
2017	Course Faculty	3D Echo 360 Asia-Pacific Edition. Seoul, Korea
		2D/3D echo in the assessment of the atrial septal defect
		Clinical Added Value of High Volume-Rate 3D Color. Philips
		Symposium.
		3D Echo in TV assessment
2018	Course Faculty	Society for CMR (SCMR) Level I CMR Certification Workshop, Chicago, IL
		Assessment of Myocardial Infarction and Viability Using CMR. In
		Session: Ischemic Heart Disease and Non-Ischemic Heart Disease
2018	Course Faculty	19th Annual ASCeXAM/ReASCE Review Course, Boston, MA
	<b>,</b>	Tricuspid and Pulmonary Valve Disease: New Guidelines
		Echocardiography in Heart Failure and Left Ventricular Assist Devices
2018	Course Faculty	3D Echo Asia, Beijing, China
	,	When to do 3-D for LV Quantification?
		Live Case Scanning - Philips
		2-D RV Strain in Pulmonary Hypertension

2019	Course Faculty	3-D for TV Anatomy 20 <sup>th</sup> Annual ASCeXAM/ReASCE Review Course, Boston, MA
	· · · · · · · · · · · · · · · · · · ·	Tricuspid and Pulmonary Valve Disease: New Guidelines Echocardiography in Heart Failure and LVADs
2019	Course Faculty	3D Echo 360 European Edition Padua IT
	,	Added value of 3DE for assessing RV shape and mechanics
		Automated intelligence algorithm (left ventricle)
0000		Pacemaker associated tricuspid regurgitation
2020	Course Faculty	21 <sup>st</sup> Annual ASCeXAM/ReASCE Virtual Review Course Tricuspid and Pulmonary Valve Disease: New Guidelines
		Echocardiography in Heart Failure and LVADs
		Degenerative Mitral Valve Disease
2021	Course Faculty	22 <sup>st</sup> Annual ASCeXAM/ReASCE Virtual Review Course
		Tricuspid and Pulmonary Valve Disease: New Guidelines
		Echocardiography in Heart Failure and LVADs
		Degenerative Mitral Valve Disease Live Virtual Q&A
2022	Course Faculty	23 <sup>rd</sup> Annual ASCeXAM/ReASCE Virtual Review Course
2022	Course radary	Tricuspid and Pulmonary Valve Disease: New Guidelines
		Echocardiography in Heart Failure and LVADs
		Degenerative Mitral Valve Disease
		Contrast Echocardiography
2022	Course Feaulty	Live Virtual Q&A
2022	Course Faculty	American College of Cardiology and Kenyan Cardiac Society Echocardiography Course Virtual
		Echocardiography localse virtual
2023	Course Faculty	American College of Cardiology and Kenyan Cardiac Society
		Echocardiography Course Virtual
		RV Assessment
		Echocardiography In HCM
Course Directo 2022	<u>or</u>	Inaugural Joint University of Chicago Northshore Advanced Imaging
2022		Inaugural Joint University of Chicago-Northshore Advanced Imaging Conference (UCNS-AIC)
		- Monthly, 1-hour duration
		- Case Presentations given by Cardiology or Advanced Imaging
		Fellows followed by panel discussion spearheaded by the Moderator
		and summary teaching points presented by Imaging Cardiology
0000		Faculty alternating between the two institutions
2023		Inaugural Advanced Imaging Physics Course
		-12 week Virtual course spaced out over first 6 months of Advanced Imaging Fellowship Training. Lectures take place Wednesday Noon
		- Speakers include Physicians and Physicists
Local invited p		
1998	Invited Speaker	Use of Multimedia and Images in Web-based Course Design, Cybersteps, St. John's, NL
2004	Research Seminar	Vasopressin in cardiac arrest, the Newfoundland and Labrador
2010	One of Device de	experience. Memorial University of Newfoundland, St. John's, NL
2010 2011	Grand Rounds Grand Rounds	Eisenmenger Syndrome, McGill University, Montreal, QC Right Ventricular End-Diastolic Wall Stress: A New Marker for Diastolic
2011		Function? McGill University, Montreal, QC
2011	Grand Rounds	Echocardiography in Preoperative Medicine. Perioperative Seminar
	-	Series, McGill University, Montreal, QC
2013	Research Seminar	Differential diagnosis of MV prolapse and billowing using 3D TEE color-coded parametric maps, Univ. of Chicago, Chicago, IL

2013	Research Seminar	Sample size and cost analysis for PAH drug trials using imaging-based endpoints. Univ. of Chicago, Chicago, IL
2014	Research Seminar	Apical sparing of LGE and longitudinal strain deformation in cardiac amyloidosis. Univ. of Chicago, Chicago, IL
2015	Invited Speaker	Imaging the Forgotten Valve: The TV. Innovations in cardiovascular therapeutics 2015, Univ. of Chicago, Chicago, IL
2017	Grand Rounds	Intersection between 3D Echocardiography and Clinical Practice, University of Chicago, Chicago, IL
2021	Grand Rounds	Lessons Learned from Imaging the Right Heart With 3D Echocardiography and Applications to Clinical Practice, University of Chicago, Chicago, IL
2021	DOM Chair Visit	Introducing a New Parameter for Ventricular Assessment, University of Chicago, Chicago, IL

#### INVITED, ELECTED, OR APPOINTED EXTRAMURAL SERVICE

#### National and Global Initiatives

- June 2023 Lead Entrapment in Transcatheter and Surgical Tricuspid Valve Replacement Workshop An initiative of the Heart Valve Collaboratory (HVC) and Heart Rhythm Society (HRS)
  - Online meeting designed to bring together international experts to provide a state-of-the-art overview and critical analysis of issues related to lead entrapment in the context of transcatheter tricuspid valve interventions.
  - Invited Lecture: Deeper Dive in CIED and TR: Causative and Incidental

#### Committee Work

#### Medical School Admissions

- 2004-2006 Memorial University of Newfoundland Medical School Admissions Committee. Responsible for interviewing candidates and evaluation and assessment of dossiers
- 2009-2011 McGill Interview Question (M3I) Review Committee. Responsible for setting and review of interview questions prior to the next Medical School interview cycle
- 2007-2012 McGill University Medical School Admissions Committee. Responsible for candidate interviews, reading and evaluation of autobiographical essays (2009, 2010, 2012) and participation in overall candidate evaluation and discussion of borderline candidates at the end of each interview cycle
- 2012-McGill University Medical School Admissions Committee. Responsible for evaluation of autobiographical essays and CVs as part of the candidate evaluation process
- 2020-MMI (Multiple Mini Interview) Virtual Evaluator. Mini scenarios designed to evaluate applicants to McGill Medical School.

Medical Council for Canada (MCC)

- 2008-2016 Clinical Reasoning Skills Committee of the Medical Council for Canada
  - Medicine representative. Involved in preparation/ updating and blueprinting of questions for the LMCC Part I Medical licensing exam.
    - Commitment: Met twice annually for 3 days in Ottawa, Ontario

#### American Society of Echocardiography

- 2013 American Society of Echocardiography Advisory Group
- 2015-2018 American Society of Echocardiography Education Committee. Responsible for 1) once-a-year in-person meetings and twice-a-year teleconference; 2) review educational plans for ASE activities; 3) recommendation of new educational strategies and methods; 4) advising the board of directors regarding feasibility/appropriateness of new activities; 5) recommendation of speakers and topics for web-based activities; 6) formation of research partnerships with medical institutions or other CME providers with interest in echocardiography 2019-2022 American Society of Echocardiography Research Committee.

2020	American Society of Echocardiography Formula Guide. Commissioned to write 3 formula
	cards for introduction and summary of learning points for 3D Echocardiography
2020-2022	Member at Large on the American Society of Echocardiography Scientific Sessions
	Program Committee (2-year term)
2021-2023	Appointed Chair of the American Society of Echocardiography 3D/4D Standardization
	<b>Committee.</b> Involved in the standardization of 3D/4D echocardiography across Vendors and Sites.
	- Launched Live DEMO at the ASE Scientific Sessions 2022 in Seattle, WA to showcase
	inter-vendor operability of 3D datasets. Participating ultrasound vendors included: Philips,
	GE Healthcare and Cannon
	- Launched Virtual DEMO for the ASE to showcase inter-vendor operability of 3D datasets.
0000	Participating ultrasound vendors included: Philips, GE Healthcare and Cannon
2022-	American Society of Echocardiography Guidelines and Standards Committee.
American Colle	ege of Cardiology
2022-	Appointed to the ACC Cardiovascular Imaging Section Leadership Council
2022-	Member of the ACC Awards Committee
2022-	Abstract Captain, ACC.23/WCC Multimodality Imaging: Echo. Responsible for
LOLL	- Selecting abstract reviewers for ACC 2023
	- Reviewing abstracts in Multimodality Imaging: Echo category
	- Entering abstracts selected for flat board poster sessions
2023	Organizer and Moderator, ACC.23 Cardiovascular Imaging Section Highlights Webinar
2023	Advanced CV Imaging Fellowship (ACIF) Training Workgroup
Editorial Board	<u>Is</u>
2019-2022	Editorial Board of the Journal of the American Society of Echocardiography
2022-	Re-appointed Editorial Board of Journal of the American Society of Echocardiography
2022-	Appointed to the Editorial Board of Circulation Cardiovascular Imaging
	- Review a minimum of 6 manuscripts/year
	<ul> <li>Agree to write 1 editorial comment/year</li> </ul>
	<ul> <li>Participate in the yearly Editorial Board meeting held at AHA Scientific Sessions</li> </ul>
2022-	Appointed to the Editorial Board of Cardiovascular Innovations and Applications, the
	official journal of the Great Wall International Congress of Cardiology (GWICC)
2023	Appointed to the Editorial Board Frontiers in Cardiovascular Medicine
Other	
<u>Other</u> 2014-	Accession Editor Constant (COTIN) Seciety of Condinuescular Magnetic
2014-	Associate Editor, Case of the Week (COTW), Society of Cardiovascular Magnetic
	Resonance (SCMR). Responsible for 1) synthesis and compilation of assigned cases and presentation for peer review by entire COTW committee; 2) post review
	communication with authors and preparation of final case for presentation on the COTW
	website archive; 3) peer review of CMR case reports submitted from around the world to
	SCMR COTW committee and 4) selection of top 5 cases for presentation at yearly
	SCMR meeting
2014-	Abstract Grader for CHEST Annual Meeting (2015, 2016, 2017), ASE Scientific Sessions
	(2015, 2016, 2017, 2019, 2020, 2021, 2022), CHEST World Congress (2014, 2016), EuroEcho
	Imaging (2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023), Canadian Cardiovascular
	Congress (2020, 2021, 2022, 2023), ACC Scientific Sessions (2021, 2022, 2023, 2024),
	EuroCMR (2021)
2011-	Manuscript Reviewer:
	- American Journal of Cardiology
	- European Heart Journal

- European Heart Journal Cardiovascular Imaging
   Journal of the American College of Cardiology (JACC)
- JACC Cardiovascular Imaging

	<ul> <li>JACC Case Reports</li> <li>JACC Advances</li> <li>Circulation</li> <li>Circulation Cardiovascular Imaging</li> <li>Journal of American Society of Echocardiography (JASE)</li> <li>Journal of Cardiovascular Magnetic Resonance (JCMR)</li> <li>American Journal of Physiology</li> <li>Frontiers in Cardiovascular Imaging</li> <li>Structural Heart Disease Journal</li> <li>Mayo Clinic Proceedings</li> <li>CASE: Cardiovascular Imaging Case Reports</li> <li>Expert Review of Cardiovascular Therapy</li> </ul>
2020- 2022-	APCA CMR Board Exam Item Writing Committee American Board of Internal Medicine (ABIM) Cardiovascular Disease Item-Writing Task Force
<u>Teaching</u>	
1993-1994	Physics Marker/Demonstrator, Dept. of Physics, Memorial University of NFLD
1994-1995	Chemistry Marker/Demonstrator, Dept. of Chemistry, Memorial University of NFLD
1995	Student Research Assistant, Community Medicine, Memorial University of NLFLD
1996	MedQuest Instructor, Faculty of Medicine, Memorial University of NFLD
1997	Science Camp Counselor, Newfoundland Science Centre
1998	Assistant on an <b>Instructional Design and Development Team</b> Partners: Vista School District and Centre for TeleLearning and Rural Education, Faculty of Education, Memorial University of NFLD and STEM-Net. Involved in the research and development of a Web-based Advanced Placement Chemistry course for rurally situated high school students
1996-2006	Vital Link First Aid Instructor, Canadian Red Cross, Newfoundland Chapter
2000	<b>Neuroanatomy Course Demonstrator</b> . Anatomy tutor, second year medical students. Memorial University of NFLD, St. John's, NL. Commitment: 3h/w for 1 semester
2001	Clerkship Orientation Seminar for third year medical students
2001	<b>Neuroanatomy Course Demonstrator</b> . Anatomy tutor, second year medical students Memorial University of NFLD, St. John's, NL. Commitment: 3h/w for 1 semester
2001-2006	Clinical Skills Tutor. Bedside and small group teaching (2h/ session) First and second year medical students, Memorial University of NFLD, St. John's, NL
2001-2006	OSCE Examiner. First and second year Medical Students. Memorial University of NFLD, St. John's, NL
2003	<b>Medical Council for Canada Part I Exam Review Course Instructor</b> for 4 <sup>th</sup> -yar medical students. Course: 1 week. Taught Respirology portion Memorial University of NFLD Medical School, St. John's, NL
2004	<b>Medical Council for Canada Part I Exam Review Course Instructor</b> for 4 <sup>th</sup> -yar medical students. Course: 1 week. Taught Respirology portion Memorial University of NFLD, St. John's, NL
2008-2011	<b>Professional Skills Course Tutor</b> , second year medical students (5-6 students). Bedside and small group teaching and marking of case reports. Commitment: 14h each year Marked end-of-course OSCE. McGill University, Montreal, QC
2009-2010	<b>Cardiovascular Physiology Course Small Group Tutor</b> for first-year medical students (12 students). McGill University, Montreal, QC
2012	Introduction to Internal Medicine (IIM) Instructor, McGill University, Montreal, QC Commitment: 6 hours per week for 7 weeks. Second-year medical students (4 students)

# INTRAMURAL SERVICE: University of Chicago

- <u>Committee membership:</u> 2015- Pritzker S Pritzker School of Medicine, Medical School Admissions Committee
- Pritzker School of Medicine, Cardiology Fellow Selection Committee 2015-
- University of Chicago General Cardiologist Search Committee 2018

2021 University of Chicago Imaging Cardiologist Search Committee 2023 University of Chicago Interventional Cardiologist Search Committee

#### Leadership:

2016-	Director of Imaging in Structural Heart Disease
2022-	Interim Co-Director Cardiovascular CT and MRI

## TEACHING

# <u>Clinical</u>

2015-	Ward and bedside tea	ching of medical	students,	residents and fellows.
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- 2015- Evaluation of medical students, residents and cardiology fellows
- 2015- Teaching transthoracic echocardiography transesophageal echocardiography to cardiology fellows, advanced imaging fellows and anesthesia residents
- 2015- Teaching structural transesophageal echocardiography to advanced imaging fellows.
- 2015- Teaching CMR and CCT to cardiology fellows and advanced imaging fellows
- 2020- Weekly Echocardiography Conference Teaching for Cardiology fellows
- 2021- Weekly Cardiovascular MRI/ Cardiac CT Teaching Sessions for Advanced Imaging Fellows
- 2020- Cardiology Fellow Core Lecture Series Topic: Degenerative Mitral Valve Disease
- 2023- Cardiology Fellow Core Lecture Series Topic: Chamber Quantification
- 2023- Cardiology Fellowship Bootcamp Lecture Series. Topic: Pericardial Effusion and Tamponade

#### MENTOR: Longitudinal Cardiology Clinic

2020-21	Mentorship of 1 <sup>st</sup> year Cardiology Fellow, Patrick Miller MD, Longitudinal Cardiology Clinic
2021-22	Mentorship of third-year Cardiology Fellow, Eisha Wali MD Longitudinal Cardiology Clinic
2022-23	Mentorship of 1 <sup>st</sup> year Cardiology Fellow, Jia Guo MD, Longitudinal Cardiology Clinic
2023-24	Mentorship of 1 <sup>st</sup> year Cardiology Fellow, Christian Selinski MD, Longitudinal Cardiology Clinic

#### Graduate medical education (residency and clinical fellowships):

**Clinical** 

2005 Organized Teaching Rounds for Internal Medicine Residents to help in the preparation for Royal College Internal Medicine Exams

- 2011-2012 OSCE Examiner. Internal Medicine Residents. *McGill University, Montreal QC*
- 2012 How to Pass the Royal College Cardiology Fellowship Exam. Adult Cardiology Fellow Academic <sup>1</sup>/<sub>2</sub> day, McGill University, Montreal, QC

Continuing Medical Education:

<u>Other:</u>	
2000	Organized, launched 1 <sup>st</sup> Clerkship Orientation Seminar for third year medical students
2014	3D Analysis of the Tricuspid Valve
	Conducted 4-day hands-on Course for South Korean visitors: Dr. B.J. Sun (Cardiologist) and
	Ms. Kim (sonographer) from Cardiac Imaging Center, Asan Medical Center in Seoul, South
	Korea. University of Chicago, Chicago, IL
2015	Advanced quantification of the cardiac chambers: Part I
	Conducted 4-day hands-on session on 3D chamber quantification for physicians in the
	University of Liège Echocardiography Lab. This initiative was part of the NORRE (Normal
	Reference Ranges for Echocardiography) study. University of Liège, Liege, Belgium
2016	Advanced quantification of the cardiac chambers and the mitral valve: Part II
	Conducted 2-day hands-on session on 3D chamber quantification and mitral valve analysis for
	a physician from the University of Liège. This initiative was part of the NORRE study. University
	of Liège, Liege, Belgium

Research trainees:

(a) Medical (M.D.)

Hanane Benbarkat, MD. Internal medicine resident

- 1. <u>Benbarkat, H</u>, **Addetia K**, Salehi AH, Sheppard D, Huynh, T. Sometimes When You Hear Hoofbeats, It Is a Zebra. Canadian Society of Internal Medicine, October 2011, Halifax. **Poster**
- Benbarkat H, Addetia K, Eisenberg M, Sheppard R, Michel C. Application of the Seattle Heart Failure Model in Patients > 80 years of age Enrolled in a Tertiary Care Heart Failure Clinic. McGill Cardiovascular Research Day, poster and CCS October 2012, Toronto. Poster. Canadian Journal of Cardiology. 2012;28(5):S340 and Journal of Cardiac Failure Vol. 18, Issue 8, Supplement, Page S93
   Mediratta MD, Cardiology fellow.

Anuj Mediratta, MD. Cardiology fellow

- <u>Mediratta A</u>, Addetia K, Yamat M, Weinert L, Mor-Avi V, Lang RM. Relationship between the Location of Implantable Device Leads and Severity of Tricuspid Regurgitation: Value of 3D Echocardiography. Internal Medicine Research Day, University of Chicago, March 2013. Poster and American Society of Echocardiography June 2013, Minneapolis, MN. MODERATED poster
- Mediratta A, Addetia K, Yamat M, Weinert L, Moss JD, Nayak HM, Mor-Avi V, Lang RM. Location of implantable device leads and severity of tricuspid regurgitation: value of 3d echocardiography. AHA Nov 2013, Dallas, Poster
- 3. <u>Mediratta A</u>, **Addetia K**, Yamat M, Weinert L, Moss JD, Nayak HM, Mor-Avi V, Lang RM. Location of implantable device leads and severity of tricuspid regurgitation: value of 3D echocardiography. EuroECHO Congress December 2013, **Poster. HIGH SCORE ABSTRACT** award
- 4. <u>Mediratta A</u>, **Addetia K**, Yamat M, Weinert L, Mor-Avi V, Lang RM. Incremental Value of Transthoracic 3D Echocardiography in Elucidating the Mechanism of Tricuspid Valve Regurgitation. American Society of Echocardiography 2014, Portland OR. **Poster**

David Pandya, MD. Cardiology fellow

 <u>Pandya D</u>, Addetia K, Yamat M, Mediratta A, Moss JD, Nayak H, Burke M, Tung R Mor-Avi V, Lang RM, Upadhyay G. Verification of Pacemaker Lead Tip Location Using 3D Echocardiography: An Alternative to Chest X-ray or Biplane Fluoroscopy? American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2016. Poster

Amita Singh, MD. Cardiology fellow

- 1. <u>Singh A</u>, **Addetia K**, Maffessanti F, Mor-Avi V, Lang RM. Relation between left atrial deformation imaging in varying degrees of left ventricular diastolic dysfunction. American Society of Echocardiography 2015, Boston MA. **MODERATED poster**
- Singh A, Kishiki K, Maffessanti F, Gomberg-Maitland M, Mor-Avi V, Lang RM, Addetia K. Assessment of Inter-Chamber Functional Relationships in Severe Pulmonary Arterial Hypertension Using Simultaneous Strain Measurements in Four Cardiac Chambers. ACC Annual Meeting and Scientific Sessions, Chicago IL. April 2016. Poster
- 3. <u>Singh A</u>, **Addetia K**, Maffessanti F, Mor-Avi V, Lang RM. Use of LA stiffness to Categorize Diastolic Dysfunction in Patients with Preserved LV Ejection Fraction. American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2016. **Poster**
- 4. <u>Singh A, Kishiki K</u>, Mor-Avi V, Maffessanti F, Gomberg-Maitland M, Lang RM, **Addetia K**. Occult Left Atrial Dysfunction in Severe Pulmonary Arterial Hypertension: A Novel Application of Left Atrial Strain. American Heart Association Scientific Sessions 2016, New Orleans, LA.
- Singh A, Kishiki K, Narang A, Maffessanti F, Gomberg-Maitland M, Mor-Avi V, Lang RM, Addetia K. Simultaneous 4-Chamber Longitudinal Strain and Mortality in Severe Pulmonary Arterial Hypertension. American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2016. Poster

Kanako Kishiki, MD. Advanced Imaging fellow

- <u>Kishiki K, Singh A, Narang A</u>, Gomberg-Maitland M, Mor-Avi V, Lang RM, Addetia K. Left Ventricular Mechanics in Patients with Pulmonary Arterial Hypertension: Relationship with Outcomes. American Heart Association Scientific Sessions 2016, New Orleans, LA
- <u>Kishiki K, Sing A, Narang A, Gomberg-Maitland M, Mor-Avi V, Lang RM, Addetia K</u>: Prognostic value of left ventricular strain in pulmonary arterial hypertension. American Society of Echocardiography, Baltimore MD, 2017

Akhil Narang, MD. Advanced Imaging fellow

1. <u>Narang A</u>, Weinert L, Kishiki K, Maffessanti F, Mor-Avi V, Lang RM, **Addetia K**: Superiority of 3D over 2D analysis of right ventricular function in predicting mortality. American Society of Echocardiography, Baltimore MD, 2017

- <u>Narang A, Kishiki K</u>, Desai NJ, Spencer KT, Mor-Avi V, Lang RM, Addetia K: Global longitudinal strain predicts mortality in patients with severe aortic insufficiency and preserved left ventricular ejection fraction. American Society of Echocardiography, Baltimore MD, 2017
- 3. <u>Narang A</u>, Goyal N, Undevia S, Song T, DeCara J, **Addetia K**. A Cardiac Mass Missed on CT and Echocardiography: The Added Value of CMR. Society of Cardiovascular Magnetic Resonance, Barcelona Spain, 2018. **ORAL PRESENTATION**

Valentina Volpato, MD. Research fellow (from Italy)

- 1. <u>Volpato V</u>, <u>Yamat M</u>, Veronesi F, Weinert L, Tamborini G, Muratori M, Fusini L, Pepi M, Mor-Avi V, Lang RM, **Addetia K**: Echocardiographic assessment of the tricuspid annulus: does measurement methodology matter? Journal of the American Society of Echocardiography June 2018.
- 2. <u>Volpato V</u>, Lang RM, Maffessanti F, Patel AR, Mor-Avi V, **Addetia K**: Is 3D analysis of longitudinal strain useful for the assessment of apical sparing in cardiac amyloidosis? EuroEcho 2018, Milan, Italy

Kalie Kebed, MD. Advanced Imaging fellow

- 1. <u>Kebed K</u>, Weinert L, Spencer KT, Maffessanti F, Mor-Avi V, Lang RM, **Addetia K**: Can differences in leaflet tethering help identify different mechanisms of severe functional tricuspid regurgitation? American Society of Echocardiography, Baltimore MD, 2017
- 2. <u>Kebed K</u>, Spencer KT, Yamat M, Weinert L, Maffessanti F, Mor-Avi V, Lang RM, **Addetia K**: Functional tricuspid regurgitation: impact of right ventricular remodeling on tricuspid valve tethering. Journal of the American Society of Echocardiography June 2018. **ORAL PRESENTATION**

Isla McClelland, MD, Cardiology fellow

- 1. <u>McClelland I, Kebed K</u>, Yamat M, Sun D, Mor-Avi V, Lang RM, **Addetia K**: Underestimation of mitral regurgitation on transthoracic echocardiography: The scope of the problem and when to be suspicious. Journal of the American Society of Echocardiography June 2019.
- 2. <u>McClelland I</u>, Addetia K: Iron Supplementation as a Cause of Artifact on Cardiovascular Magnetic Resonance Imaging. SCMR Scientific Sessions, Orlando, Florida February 2020

Laurie-Soulat Dufour, MD, Research fellow (from France)

- <u>Soulat-Dufour L</u>, Addetia K, Miyoshi T, Schreckenberg M, Blankenhagen M, Amuthan V, Citro R, Daimon M, Gutiérrez-Fajardo P, Kasliwal R, Kirkpatrick JN, Monaghan MJ, Muraru D, Ogunyankin KO, Park SW, Tude Rodrigues AC, Ronderos R, Sadeghpour A, Scalia G, Takeuchi M, Tsang W, Tucay ES, Zhang M, Asch FM, Lang RM: 2D/3D right atrial size according to age and gender: Results of the World Alliance of Societies of Echocardiography (WASE) Normal Values Study. American Society of Echocardiography June 2020 Virtual Meeting
- Soulat-Dufour L, Lang RM, Miyoshi T, Schreckenberg M, Blankenhagen M, Amuthan V, Citro R, Daimon M, Gutiérrez-Fajardo P, Kasliwal R, Kirkpatrick JN, Monaghan MJ, Muraru D, Ogunyankin KO, Park SW, Tude Rodrigues AC, Ronderos R, Sadeghpour A, Scalia G, Takeuchi M, Tsang W, Tucay ES, Zhang M, Asch FM, Addetia K: Are there geographic differences in 2D/3D right atrial size? Results of the World Alliance of Societies of Echocardiography (WASE) Normal Values Study. American Society of Echocardiography June 2020 Virtual Meeting
- Soulat-Dufour L, Lang RM, Miyoshi T, Schreckenberg M, Blankenhagen M, Amuthan V, Citro R, Daimon M, Gutiérrez-Fajardo P, Kasliwal R, Kirkpatrick JN, Monaghan MJ, Muraru D, Ogunyankin KO, Park SW, Tude Rodrigues AC, Ronderos R, Sadeghpour A, Scalia G, Takeuchi M, Tsang W, Tucay ES, Zhang M, Asch FM, Addetia K: Impact of age on right atrial function: Results of the World Alliance of Societies of Echocardiography (WASE) Normal Values Study. American Society of Echocardiography June 2020 Virtual Meeting

Linda Lee, MD. Cardiology fellow

- 1. <u>Lee L</u>, Singh A, Lang RM, **Addetia K**: Cardiac remodeling in professional female basketball players. American Society of Echocardiography Virtual Conference, 2020
- Lee L, Henry M, Yamat M, Jain R, Wali E, Belkin M, Marzlin N, Smith H, Abutaleb A, Crouch J, Weiss ES Ota T, Salerno C, Li H, Husain A. Jeevanandam V, Lang RM, Addetia K. Cardiac Implantable Electronic Device-Related interference with the Tricuspid Valve Apparatus and Impact on Tricuspid Regurgitation. American Society of Echocardiography Scientific Sessions, June 2023 Washington DC. ORAL PRESENTATION. Top Investigator Award

Cristiane Singulane MD. Research fellow (Brazil)

1. <u>Singulane C</u>, Sun D, Sarswat N, Hu Z, Patel AR, Lang RM, **Addetia K**. Defining echocardiographic predictors of outcome in cardiac amyloidosis by subtype. American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2022. **Poster** 

Juan Cotella MD. Research fellow (Argentina)

<u>Cotella J</u>, Guile B, Hipke K, Yamat M, Singh A, Henry M, Upadhyay GA, Nayak HM, Beaser A, Aziz Z, Lang RM, Addetia K. Clues to cardioversion success derived from 3D TEE of the left atrial appendage. American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2022. Poster

Eisha Wali, MD. Cardiology fellow

 Wali E, Roy R, Sun D, Jain R, Peters M, Yamat M, Tan T, <u>Tang M</u>, <u>Singulane C</u>, Lang RM, <u>Addetia</u> K, Defining Progression of Apical Hypertrophic Cardiomyopathy on Surface Echocardiography. American Society of Echocardiography Scientific Sessions June 2023, Washington DC. <u>Poster</u> and Hanny MD. Cardiology follow.

Michael Henry, MD. Cardiology fellow

 <u>Henry M</u>, <u>Abutaleb A</u>, Jeevanandam V, Smith H, Belkin M, Husain A, Pinney S, Ota T, Lang RM, Addetia K. Anatomic Description of Tricuspid Apparatus Interference From Implantable Intracardiac Devices. JACC Cardiovasc Imaging. 2021 Feb 2:S1936-878X(20)31107-4.

Rukhmini Roy MD Internal Medicine Resident – current

Jia Guo MD Cardiology fellow - current

Mike Randazzo MD Cardiology fellow-current

Michael Clarke MD Internal Medicine Resident - Current

Maxine Tang MD - Cardiology fellow Current

Iva Minga MD – Advanced Imaging Fellow - Current

(b) Other

Megan Yamat, RDCS. Sonographer, University of Chicago, Chicago, IL

- <u>Yamat M</u>, Addetia K, Bhave NM, Lang RM. Impalement of the Tricuspid Valve Leaflet on Pacemaker Lead. American Society of Echocardiography June 2013, Minneapolis, MN. FINALIST Clinical Case Competition. ASE Travel Grant awarded to presenting author
- Yamat M, Addetia K, Mor-Avi V, Lang RM. Which tricuspid valve leaflets are we seeing in standard 2D echocardiographic views? American Society of Echocardiography 2014, Portland OR. FINALIST Sonographers Investigator Award (SIA). MODERATED poster
- 3. <u>Yamat M</u>, Addetia K, Ferrara P, Weinert L, Mediratta A, Patel MB, Medvedofsky D, Mor-Avi V, Lang RM. Comprehensive 2D echocardiographic interrogation of the tricuspid valve using knowledge derived from 3D echocardiography. American Society of Echocardiography 2015, Boston MA. FINALIST Sonographers Investigator Award (SIA). MODERATED poster
- 4. <u>Yamat M</u>, Lang RM, Singh A, Mediratta A, Mor-Avi V, **Addetia K**. Where did the ICD lead go? American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2016. **Poster**
- 5. <u>Yamat M</u>, Weinert L, DeCara JM, Spencer KT, Mor-Avi V, Lang RM, **Addetia K**: Should measurements of the tricuspid annulus be performed using two-dimensional echocardiography? American Society of Echocardiography, Baltimore MD, 2017
- 6. Yamat M, Lang RM, Addetia K: Respiratory dependence of tricuspid regurgitation. American Society of Echocardiography Virtual Conference, 2020 ORAL PRESENTATION
- Yamat M, Cotella J, Lang RM, Addetia K. Middle cardiac vein visualized on transthoracic echo: An uncommon finding. American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2022. Poster

Eric Kruse, RDCS. Sonographer, University of Chicago, Chicago, IL

- 1. <u>Kruse E</u>, **Addetia K**, Maffessanti F, Collins KA, Sayer G, Ota T, Lang RM, Uriel N. Assist device thrombosis Echocardiographic findings of a clogged pump. American Society of Echocardiography 2015, Boston MA. **WINNER Clinical Case Competition**.
- Kruse E, Medvedofsky D, Sayer G, Adatya S, Kim G, Sarswat N, Ota T, Jeevanandam V, Uriel N, Lang RM, Addetia K. Can Contrast-Enhanced Echocardiographic Evaluation of the Outflow Cannula Improve the Assessment of the Left Ventricular Assist Device? American Society of Echocardiography Scientific Sessions, Seattle Washington. June 2016. Poster

- 3. Kruse E, Lang RM, Jeevanandam V, Song T, Uriel N, **Addetia K**: The non-functioning left ventricular assist device: What we can learn from echocardiography? Journal of the American Society of Echocardiography June 2019
- 4. Kruse E, Lang RM, Mor-Avi V, Sayer G, Ota T, Jeevanandam V, Uriel N, Addetia K: Normal reference values of outflow cannula velocities for the new HeartMate III left ventricular assist device. Journal of the American Society of Echocardiography June 2019.

Brittney Guile, RDCS. Sonographer University of Chicago, Chicago, IL

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