Angelo Takigami, MD

Chief Diagnostic Radiology Resident, Lahey Clinic, Burlington, Massachusetts, Since July 2026
Incoming Cardiovascular Imaging Fellow, Massachusetts General Hospital, Boston, Massachusetts, July 2027 – June 2028
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BIOGRAPHY

Angelo Takigami, MD, is Chief Diagnostic Radiology Resident at Lahey Clinic. He earned his medical degree at the Faculdade de Medicina da Universidade de São Paulo. His clinical and academic interests focus on cardiovascular and thoracic imaging. In July 2027 he begins a cardiovascular imaging fellowship at Massachusetts General Hospital.

HIGHLIGHTS

2021 CAD-RADS

His first-author study of how CAD-RADS was used at Massachusetts General Hospital identified barriers to adoption and proposed an expansion for exceptions such as coronary anomalies and dissection. Those findings directly informed the “E” modifier in CAD-RADS 2.0.

2023 Sybil

From September 2020 to July 2021 he was a postdoctoral research fellow in thoracic imaging with Dr. Florian Fintelmann at Massachusetts General Hospital, on the MIT–Footbridge Lung Screening Project, a collaboration with Dr. Regina Barzilay at MIT CSAIL and Dr. Lecia Sequist at Massachusetts General Hospital. He designed a Python framework that extracted smoking status, pack-years, and cancer diagnoses from more than 230,000 records and assembled the Massachusetts General Hospital cohort used for the external validation of Sybil. The paper was published in the Journal of Clinical Oncology in 2023 and was featured in Netflix’s What’s Next? The Future with Bill Gates (2024), episode 1, “What Can AI Do for Us/to Us?”.

2014 Walk Again Project

As a research assistant with Prof. Miguel Nicolelis at Instituto Santos Dumont in São Paulo, he trained paraplegic patients to use EEG brain-machine interfaces, virtual reality (Oculus), the Lokomat robotic gait trainer, and an exoskeleton. The team’s brain-controlled exoskeleton made the first kick at the opening ceremony of the 2014 FIFA World Cup.

RESEARCH INTERESTS

01 Cardiovascular imaging
02 CT-FFR
03 Artificial intelligence in radiology
04 Thoracic imaging
05 Global health and HIV cardiac imaging

EDUCATION AND TRAINING

Incoming Fellow, Cardiovascular Imaging
July 2027 – June 2028 · Massachusetts General Hospital, Boston, Massachusetts

Chief Diagnostic Radiology Resident
July 2026 – present · Lahey Clinic, Burlington, Massachusetts

Diagnostic Radiology Residency
July 2023 – present · Lahey Clinic, Burlington, Massachusetts

Intern, Transitional Year
June 2022 – June 2023 · Framingham Union Hospital, MetroWest Medical Center, Massachusetts

Postdoctoral Research Fellow, Cardiovascular Imaging
February 2020 – June 2022 · Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts

Doctor of Medicine
June 2011 – August 2019 · Faculdade de Medicina da Universidade de São Paulo, Hospital das Clínicas, São Paulo, Brazil

RESEARCH

Resident Researcher
December 2024 – April 2026 · Lahey Clinic, Burlington, Massachusetts · Supervisor: Hyesun Park, MD

A project on concordance and discordance between PSMA PET/CT and multiparametric MRI in staging primary prostate cancer, with subgroup analysis by Gleason grade group. He led the study design, data collection, and statistical analysis. Presented as educational exhibit SC1571 at the American Roentgen Ray Society 2026 Annual Meeting in Pittsburgh, where it received a Certificate of Merit and was also presented in the Award-Winning Exhibit Session (Nuclear Medicine).

Postdoctoral Research Fellow, Cardiovascular Imaging
February 2020 – June 2022 · Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts · Supervisor: Brian Ghoshhajra, MD, MBA

Studied adoption of the Coronary Artery Disease Reporting and Data System (CAD-RADS) at Massachusetts General Hospital, from hypothesis through data collection, interpretation, and the manuscript. The work identified barriers to adoption and proposed an expansion for exceptions such as coronary anomalies and dissection. Those findings directly informed the creation of modifier E in CAD-RADS 2.0. He is first author of the paper in Radiology: Cardiothoracic Imaging (June 2021). He also contributed as a co-author to an NIH-funded study of coronary atherosclerosis among people living with HIV in rural Uganda, published in the Annals of Internal Medicine in 2025, reading coronary CT angiograms for the diagnosis of coronary disease. Of 630 people screened, 586 had evaluable scans.

Postdoctoral Research Fellow, Thoracic Imaging
September 2020 – July 2021 · Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts · Supervisor: Florian Fintelmann, MD

He worked with Dr. Florian Fintelmann, a thoracic radiologist at Massachusetts General Hospital, on Sybil, which came out of the MIT–Footbridge Lung Screening Project, a collaboration between MIT and Massachusetts General Hospital. Sybil estimates lung-cancer risk within six years from a single chest CT. Dr. Regina Barzilay and Dr. Lecia Sequist were collaborators on the project. Angelo built a Python framework to pull smoking status, pack-years, and cancer diagnoses from unstructured records, processed more than 230,000 records, and assembled a 6,000-patient cohort mirroring the

National Lung Screening Trial. That Massachusetts General Hospital cohort was used for the external validation of Sybil. The paper has more than 200 citations.

Research Assistant, Walk Again Project

January 2014 – October 2014 · Instituto Santos Dumont, São Paulo, Brazil · Supervisor: Miguel Nicolelis, MD, PhD

Trained paraplegic patients and worked between the clinical and engineering teams. Participants learned to drive virtual objects, the Lokomat robotic gait trainer, and a full exoskeleton from EEG brain-machine interfaces, with virtual reality (Oculus). People with complete spinal cord injury (ASIA A) regained partial voluntary lower-limb control. The team's brain-controlled exoskeleton made the first kick at the opening ceremony of the 2014 FIFA World Cup. He gave live demonstrations to Francis Collins, then Director of the NIH, and to Ronaldo. The results were published in Scientific Reports, among that journal's 100 most-read articles of 2016, and have passed 500 citations.

Research Exchange Student

January 2013 – December 2013 · Center for Neuroengineering, Duke University, Durham, North Carolina · Supervisor: Miguel Nicolelis, MD, PhD

Worked on somatosensory cortex (S1) stimulation in rats as part of a brain-machine interface for sensing infrared light, and recorded reward-related activity and its connection to S1. The project was presented as a poster at the Society for Neuroscience in 2013. He also wrote a MATLAB framework for processing electrophysiological data.

LEADERSHIP

Resident Peer Learning Leader

July 2024 – July 2025 · Lahey Clinic, Burlington, Massachusetts

Directed the resident peer learning program, facilitating case review and structured feedback. Represented residents in departmental peer learning discussions and initiatives.

Quality & Safety Resident

October 2024 – July 2025 · Lahey Clinic, Burlington, Massachusetts

Represented residents at the Department of Radiology Quality and Safety Committee meetings. Selected to attend the Stanford Radiology Summer Summit (2025), focused on advancing quality and safety in radiology. Attended formal courses in Quality & Safety and Just Culture.

Diversity, Equity, and Inclusion (DEI) Resident Representative

October 2024 – July 2025 · Lahey Clinic, Burlington, Massachusetts

Organized a visiting professor lecture featuring Dr. Justin Stowell (Mayo Clinic Florida) on improving radiology care for transgender patients, overseeing program planning, speaker coordination, and post-lecture discussion.

TEACHING

Journal club: "To Forgive, Divine"

2025 · Lahey Clinic · One-hour discussion for 10 radiology residents and 1 attending

Introduction to Cardiac CT and MRI

2025 · Diagnostic radiology and internal medicine residents' conference, Lahey Clinic · One-hour lecture for 25 residents

Introduction to Cardiac CT and MRI
2025 · Diagnostic radiology residents' conference, Lahey Clinic · One-hour lecture for 15 residents

Chest Radiographs
2024 · Diagnostic radiology clerkship, Tufts University, Lahey Clinic · One-hour lecture for 1 medical student

Contrast Reaction Simulation
2024 · Simulation laboratory, Lahey Clinic · Instructor. One-hour session for 4 radiology residents

Chest Radiographs
2023 · Diagnostic radiology clerkship, Tufts University, Lahey Clinic · One-hour lecture for 2 medical students

Sybil: data mining and parsing with Python
2021 · Fintelmann lab meeting, Massachusetts General Hospital · One-hour lecture for lab members

DICOM metadata and data parsing with Python
2021 · Massachusetts General Hospital · Four one-hour sessions for 1 research fellow

Supervision: Jordan Kondo
2022 · Harvard Medical School · Medical student. Supervised a research project that produced one abstract at the American Roentgen Ray Society Annual Meeting, 2023

AWARDS AND HONORS

Certificate of Merit
2026 · American Roentgen Ray Society · Educational exhibit SC1571, "PSMA PET-CT and mpMRI Concordance in Primary Prostate Cancer: Association with High-Grade Disease."

RSNA Roentgen Resident/Fellow Research Award
2025 · Radiological Society of North America Research & Education Foundation · Recognition of outstanding radiologic research.

Honors with Distinction
2019 · Harvard Medical School · Advanced Clerkship in Pediatric Radiology.

Top 100 Most-Read Articles of 2016
2016 · Scientific Reports · The Walk Again Project article ranked among the journal's 100 most-read that year.

Merit Award Exchange Scholarship
2013 · Faculdade de Medicina da Universidade de São Paulo · Awarded to outstanding medical students.

4th Place, Faculdade de Medicina da Universidade de São Paulo Entrance Examination
2011 · Faculdade de Medicina da Universidade de São Paulo · Among more than 13,000 candidates.

PRESENTATIONS

1. RadTrack: A Tool for Radiology Report Data Mining in Education, Quality Improvement, and Research
Takigami AK, Voog RA, Goiffon R, Park H, Emmanuel G
2026 · Oral presentation · American Roentgen Ray Society Annual Meeting · Pittsburgh, PA · OR1629 · April 2026

2. Not the Average Cough: Unmasking Chronic Lymphocytic Leukemia with Pulmonary Involvement
Takigami AK, Voog RA, Emmanuel G, Braschi-Amirfarzan M, Thomas R
2025 · Oral presentation · Society of Thoracic Radiology Annual Meeting · Huntington Beach, CA · 2025

3. A Pattern-Based Approach to Diffuse Lung Disease
Takigami AK, Gosangi B, Shi W, Emmanuel G, Thomas R
2027 · E-poster · Society of Thoracic Radiology Annual Meeting · Orlando, FL · Poster 141 · March 13–17, 2027 · accepted

4. PSMA PET-CT and mpMRI Concordance in Primary Prostate Cancer: Association with High-Grade Disease
Takigami AK, Voog RA, Connell B, Dumas B, Emmanuel G, Park H
2026 · Educational exhibit · American Roentgen Ray Society Annual Meeting · Pittsburgh, PA · SC1571 · April 12–15, 2026 · Certificate of Merit · also presented orally in the Award-Winning Exhibit Session: Nuclear Medicine, April 15, 2026

5. Heart to Heart: Peer Learning for Cardiac Findings on Non-Cardiac CT
Jabr A, Gautam A, Takigami AK, Broder J, Flacke S, Gosangi B, et al.
2025 · Presentation · Society of Cardiovascular Computed Tomography Annual Meeting · Montreal, Canada · 2025

6. Pacemaker Complications: The Radiologist's Role in Identifying Potential Complications
Voog RA, Takigami AK, Thomas R, Emmanuel G
2025 · Presentation · American Roentgen Ray Society Annual Meeting · San Diego, CA · 2025

7. Role of CTA-Derived Quantitative Imaging Parameters in Bicuspid-Aortic Valve
Randhawa M, Depetris J, Goiffon RJ, Takigami AK, Montes D, Thondapu V, Ghoshhajra BB, Jassar A, Hedgire SS
2023 · Presentation · Radiological Society of North America Annual Meeting · Chicago, IL · 2023

8. Thoracic aorta dilatation is more common in patients with spontaneous coronary artery dissection
Kondo J, Williamson K, Foldyna B, Takigami A, Baliyan V, Hedgire S, Ghoshhajra B
2023 · Presentation · American Roentgen Ray Society Annual Meeting · Honolulu, HI · 2023

9. Feasibility and clinical outcomes of integrating FFRCT into clinical practice: Insights from a large academic medical center
Takigami AK, Thondapu V, Ranganath PG, Zhang E, Parakh A, Goiffon RJ, Baliyan V, Foldyna B, Lu MT, Tower-Rader A, Meyersohn NM, Hedgire S, Ghoshhajra BB
2022 · Presentation · Society of Cardiovascular Computed Tomography Annual Meeting · Las Vegas, NV · 2022

10. Use and exceptions of CAD-RADS classification in coronary CT reporting at a large quaternary hospital
Takigami AK, Thondapu V, Goiffon RJ, Depetris J, Gupta S, Knyazev V, et al.
2020 · Presentation · Society of Cardiovascular Computed Tomography Annual Meeting · Virtual · 2020

11. When the Expert Consensus Does Not Apply: CCTA Results That Do Not Fit CAD-RADS Categorization
Gupta S, Thondapu V, Goiffon RJ, Depetris J, Takigami AK, Ghoshhajra B, et al.
2020 · Presentation · Society of Cardiovascular Computed Tomography Annual Meeting · Virtual · 2020

12. Coronary CT Angiography in Patients with Clinical Suspicion for Spontaneous Coronary Artery Dissection
Thondapu V, Goiffon RJ, Takigami AK, Gupta S, Knyazev V, Depetris J, et al.
2020 · Presentation · Society of Cardiovascular Computed Tomography Annual Meeting · Virtual · 2020

13. Effect of Heart Rate and Arterial Calcium Score on Coronary CT Angiography Using Dual-Source CT
Goiffon RJ, Depetris J, Thondapu V, Takigami AK, Hoffmann U, Hedgire S, et al.
2020 · Presentation · Society of Cardiovascular Computed Tomography Annual Meeting · Virtual · 2020

14. Diagnostic Performance of Coronary CT Angiography Compared to Invasive Coronary Angiography in a Large Academic Practice
Goiffon RJ, Depetris J, Thondapu V, Takigami AK, Hoffmann U, Hedgire S, et al.
2020 · Presentation · Society of Cardiovascular Computed Tomography Annual Meeting · Virtual · 2020

15. The Walk Again Project: Analysis of brain activity of spinal cord injury patients during training with a BMI
Moioli R, Brasil F, Shokur S, Lin A, Fast K, Peretti N, Takigami A, et al.
2014 · Presentation · Society for Neuroscience Annual Meeting · Washington, DC · 2014

16. The walk again project: Brain-controlled exoskeleton locomotion
Lin A, Schwarz D, Sellaouti R, Shokur S, Moioli R, Brasil F, Fast K, Peretti N, Takigami A, et al.
2014 · Presentation · Society for Neuroscience Annual Meeting · Washington, DC · 2014

17. The walk again project: Sensory feedback for brain-controlled exoskeleton
Shokur S, Gallo S, Olivier J, Peretti N, Takigami A, Lin A, et al.
2014 · Presentation · Society for Neuroscience Annual Meeting · Washington, DC · 2014

18. The Walk Again Project: An EEG/EMG training paradigm to control locomotion
Brasil F, Moioli R, Shokur S, Fast K, Lin A, Peretti N, Takigami A, et al.
2014 · Presentation · Society for Neuroscience Annual Meeting · Washington, DC · 2014

19. The Walk Again Project: Using a Brain-Machine Interface for Establishing a Bi-Directional Interaction Between Paraplegic Subjects and a Lower Limb Exoskeleton
Nicolelis M, Shokur S, Lin A, Moioli R, Brasil F, Peretti N, Fast K, Takigami A, et al.
2014 · Presentation · Society for Neuroscience Annual Meeting · Washington, DC · 2014

20. Population coding of stimulus and reward in rat basal forebrain
Thomson E, Sylvester K, Takigami A, Lou J, Nicolelis M
2013 · Presentation · Society for Neuroscience Annual Meeting · San Diego, CA · 2013

JOURNAL ARTICLES

1. Epidemiology of Coronary Atherosclerosis Among People Living With HIV in Uganda: A Cross-Sectional Study
Mark J. Siedner, Brian Ghoshhajra, Geoffrey Erem, Rita Nassanga, Mangun Randhawa, Andrew Ochieng, Moses Acan, Michael T. Lu, Vikas Thondapu, **Angelo Takigami,** Zahra Reynolds, Flavia Atwiine, Edna Tindimwebwa, Rebecca F. Gilbert, Eliza Passell, Shruti Sagar, Yao Tong, Ntobeko A.B. Ntusi, Alexander C. Tsai, Prossy Bibangambah, Thomas Gaziano, Susanne S. Hoeppner, Christopher T. Longenecker, Samson Okello, Stephen Asiimwe
Annals of Internal Medicine. 2025;178(4):468-478. PMID 40073231. https://doi.org/10.7326/annals-24-02233

2. Selective Use of CT Fractional Flow at a Large Academic Medical Center: Insights from Clinical Implementation after 1 Year of Practice
Mangun K. Randhawa, **Angelo K. Takigami,** Vikas Thondapu, Praveen G. Ranganath, Eric Zhang, Anushri Parakh, Reece J. Goiffon, Vinit Baliyan, Borek Foldyna, Michael T. Lu, Albree Tower-Rader, Nandini M. Meyersohn, Sandeep Hedgire, Brian B. Ghoshhajra
Radiology: Cardiothoracic Imaging. 2024;6(2):e230073. PMID 38573127. https://doi.org/10.1148/ryct.230073

3. Sybil: A Validated Deep Learning Model to Predict Future Lung Cancer Risk From a Single Low-Dose Chest Computed Tomography

Peter G. Mikhael, Jeremy Wohlwend, Adam Yala, Ludvig Karstens, Justin Xiang, **Angelo K. Takigami,** Patrick P. Bourgouin, PuiYee Chan, Sofiane Mrah, Wael Amayri, Yu-Hsiang Juan, Cheng-Ta Yang, Yung-Liang Wan, Gigin Lin, Lecia V. Sequist, Florian J. Fintelmann, Regina Barzilay

Journal of Clinical Oncology. 2023;41(12):2191-2200. PMID 36634294. https://doi.org/10.1200/jco.22.01345

4. Quantification of the Thoracic Aorta and Detection of Aneurysm at CT: Development and Validation of a Fully Automatic Methodology

Fabiola Bezerra de Carvalho Macruz, Charles Lu, Julia Strout, **Angelo Takigami,** Rupert Brooks, Sean Doyle, Min Yun, Varun Buch, Sandeep Hedgire, Brian Ghoshhajra

Radiology: Artificial Intelligence. 2022;4(2):e210076. PMID 35391768. https://doi.org/10.1148/ryai.210076

5. Coronary Artery Disease Reporting and Data System (CAD-RADS) Adoption: Analysis of Local Trends in a Large Academic Medical Center

Angelo K. Takigami, Vikas Thondapu, Reece J. Goiffon, Jena Depetris, Sumit Gupta, Sherief Garrana, Veniamin Knyazev, Albree Tower-Rader, Michael T. Lu, Nandini Meyersohn, Udo Hoffmann, Sandeep Hedgire, Brian Ghoshhajra

Radiology: Cardiothoracic Imaging. 2021;3(3):e210016. PMID 34235445. https://doi.org/10.1148/ryct.2021210016

6. The Role of Cardiac Computed Tomography in Valve Disease and Valve Intervention Planning

Angelo K. Takigami, Brian Ghoshhajra, Sandeep Hedgire

Current Treatment Options in Cardiovascular Medicine. 2021;23(1):3. https://doi.org/10.1007/s11936-020-00879-x

7. Long-Term Training with a Brain-Machine Interface-Based Gait Protocol Induces Partial Neurological Recovery in Paraplegic Patients

Ana R. C. Donati, Solaiman Shokur, Edgard Morya, Debora S. F. Campos, Renan C. Moioli, Claudia M. Gitti, Patricia B. Augusto, Sandra Tripodi, Cristhiane G. Pires, Gislaine A. Pereira, Fabricio L. Brasil, Simone Gallo, Anthony A. Lin, **Angelo K. Takigami,** Maria A. Aratanha, Sanjay Joshi, Hannes Bleuler, Gordon Cheng, Alan Rudolph, Miguel A. L. Nicolelis

Scientific Reports. 2016;6(1):30383. PMID 27513629. https://doi.org/10.1038/srep30383

PREPRINTS / UNDER REVIEW

1. Inflammatory biomarkers and prevalent coronary atherosclerosis among Ugandan adults with and without HIV

Richard Migisha, Pauline Byakika-Kibwika, Peter Kangwagye, Abraham Muhwezi, Geoffrey Erem, Christopher T. Longenecker, Brian Ghoshhajra, Prossy Bibangambah, Rita Nassanga, Godfrey Masette, Flavia Atwiine, Edna Tindimwebwa, Rebecca F. Gilbert, Zahra Reynolds, Mangun Randhawa, Vikas Thondapu, **Angelo Takigami,** Eliza Passell, Moses Acan, Andrew Ochieng, Samson Okello, Stephen Asiimwe, Mark J. Siedner

Research Square. 2026. https://doi.org/10.21203/rs.3.rs-11473007/v1

Preprint, under review.

SUBMITTED

1. Better Gatekeeping, Unproven Savings: CT-Derived FFR Beyond a Single Platform

Angelo K. Takigami, Brian B. Ghoshhajra

Seminars in Roentgenology. 2026.

Invited commentary on Jamal F, et al. Submitted November 2026.

OTHER

ABR Diagnostic Radiology Qualifying (Core) Exam
June 2026 · American Board of Radiology · Passed

Radiologic-Pathology Correlation Course
2025 · American Institute for Radiologic Pathology

Design and Conduct of Clinical Trials
2021 · Massachusetts General Hospital · 20 hours

Languages: Portuguese (native); English (fluent); Spanish (intermediate); French (basic)

Memberships: American College of Radiology; American Roentgen Ray Society; Massachusetts Medical Society; Radiological Society of North America; Society of Cardiovascular Computed Tomography; Society of Thoracic Radiology