



Rahul P Sharma, MBBS, FRACP

Clinical Associate Professor, Medicine - Cardiovascular Medicine

CLINICAL OFFICES

- **Cardiovascular Medicine**

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Bio

BIO

Dr Rahul P. Sharma, MBBS, FRACP is the Director of Structural Interventions at Stanford Healthcare, Associate Director of the Cardiac Catheterization Laboratory and Clinical Associate Professor of Medicine at Stanford University.

Dr Sharma graduated from Monash University and completed his medicine and cardiology training at the Alfred Hospital in Melbourne, Australia. He completed an advanced interventional and structural fellowship at Cedars Sinai Medical Center in Los Angeles, California in 2015 before joining Cedars Sinai as Clinical Faculty, Director of the Structural Imaging Core Laboratory and Associate Director of Interventional Cardiology Research until 2019, before joining Stanford Healthcare.

Dr Sharma is an Interventional Cardiologist with specialized clinical and research interests in structural heart disease, particularly transcatheter valve therapy. He has a large volume of expertise in transcatheter aortic, mitral and tricuspid replacement, percutaneous mitral valve repair, left atrial appendage occlusion, PFO/ASD/VSD closure, alcohol septal ablation and cerebral protection. He also has expertise in CT imaging for structural heart disease. He is a clinical investigator in ongoing national multi-center research studies and clinical trials and has co-authored numerous peer reviewed, scientific articles and book chapters. Dr Sharma also serves as a national and international clinical proctor for transcatheter aortic and mitral valve implantation and percutaneous mitral valve repair and speaks regularly at major national and international cardiology meetings.

CLINICAL FOCUS

- Cardiovascular Disease
- Coronary Artery Disease
- Coronary Artery Stenosis
- Percutaneous Coronary Intervention
- Aortic Valve Stenosis
- Aortic Valve Insufficiency
- Mitral Valve Insufficiency

- Mitral Valve Prolapse
- Mitral Valve Stenosis
- Tricuspid Valve
- Tricuspid Valve Insufficiency
- Tricuspid Valve Stenosis
- Atrial Septal Defect
- Ventricular Septal Defect
- Atrial Appendage
- Cardiomyopathy, Hypertrophic
- TAVR
- MitraClip
- Transcatheter aortic valve replacement
- TMVR
- Transcatheter mitral valve replacement
- Tricuspid clip
- Transcatheter tricuspid valve replacement
- Alcohol septal ablation
- Watchman
- Left atrial appendage closure
- PFO closure
- ASD/VSD closure
- Paravalvular leak closure

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Medicine - Cardiovascular Medicine

ADMINISTRATIVE APPOINTMENTS

- Interventional Cardiologist, Stanford Health Care, (2019- present)
- Clinical Assistant Professor, Stanford University, (2019- present)
- Director of Structural Interventions, Stanford Healthcare, (2019- present)
- Interventional Cardiologist, Cedars-Sinai Medical Center, (2017-2019)
- Research Scientist II, Department of Medicine, Cedars Sinai Medical Center, (2016-2017)
- Affiliate Member, Cardiac Society of Australia and New Zealand, (2014- present)
- Fellow, Royal Australasian College of Physicians, (2012- present)
- Representative, Royal Australasian College of Physicians Victorian and Tasmanian Training Committee, Australia, (2011-2016)
- Founder and President, Association of Victorian Cardiology Advanced Trainees, Australia, (2011-2014)

HONORS AND AWARDS

- Excellence in Teaching Award 2017-2018, Cedars Sinai Medical Center (2018)
- Recipient of Academic Scholarship for Masters in Health Delivery Sciences, - (2018)
- Winner – “Medtech’s Got Talent” Innovation Award, - (2014)

- Finalist – Royal Australian College of Physicians Research Prize, - (2012)
- Winner – Alfred Health Senior Medical Staff Research Scholarship, - (2012)
- Winner – Alfred Health Teacher of the Year Award, - (2012)
- Winner – Anglican Church Grammar School Old Boy’s Association Scholarship, - (2012)
- Finalist – Alfred Health Research Prize, - (2011)
- No. 1 ranked candidate overall for entrance to Cardiology Fellowship, - (2011)
- Winner – Alfred Health Teacher of the Year Award, - (2011)
- Winner – Monash University Medical Students Teaching Award, - (2011)
- Winner – Victoria Cardiology Registrar’s Research Prize, Cardiac Society of Australia and New Zealand (2011)
- Winner – Alfred Health Teaching Supervisors Award, - (2010)
- Winner – Novartis research travel scholarship, - (2009)
- Winner – Baker IDI research travel scholarship, - (2007)
- Finalist – Australian and New Zealand Society for Geriatric Medicine Prize, - (2006)
- Finalist – Prince Henry’s Institute Surgical Prize, - (2006)
- Winner – Monash University overseas elective scholarship, - (2006)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Fellow, Cardiac Society of Australia and New Zealand (2014 - present)
- Fellow, Royal Australian College of Physicians (2014 - present)

PROFESSIONAL EDUCATION

- Board Certification: Cardiology, Royal Australasian College of Physicians - Australia (2013)
- Fellowship, Cedars Sinai Medical Center, Interventional and Structural Cardiology , Los Angeles, CA (2015)
- Fellowship, Alfred Hospital, Cardiology Advanced Physician Training , Melbourne, Australia (2014)
- Fellowship, Monash Medical Center , Melbourne, Australia (2014)
- Fellowship, Royal Australasian College of Surgeons, Alfred Health , Melbourne, Australia (2013)
- Residency, Alfred Hospital, General Medicine , Melbourne, Australia (2011)
- Internship, Alfred Hospital , Melbourne, Australia (2011)
- MBBS, Monash University, Bachelor of Medicine, Bachelor of Surgery , Melbourne, Australia (2006)

LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Transcatheter valve therapies, CT valve imaging, AI and device innovation

CLINICAL TRIALS

- 2019-06 TRISCEND Study, Recruiting
- ACURATE IDE: Safety and Effectiveness Study of ACURATE Valve for Transcatheter Aortic Valve Replacement, Recruiting
- Clinical Trial to Evaluate the Safety and Effectiveness of Using the Tendyne Mitral Valve System for the Treatment of Symptomatic Mitral Regurgitation, Recruiting

- Edwards PASCAL CLASP IID/IIF Pivotal Clinical Trial, Recruiting
- MitraClip REPAIR MR Study, Recruiting
- PARTNER 3 Trial: Safety and Effectiveness of the SAPIEN 3 Transcatheter Heart Valve in Low Risk Patients With Aortic Stenosis, Recruiting
- Transcatheter Mitral Valve Replacement With the Medtronic Intrepid™ TMVR System in Patients With Severe Symptomatic Mitral Regurgitation, Recruiting
- Edwards PASCAL Transcatheter Valve Repair System Pivotal Clinical Trial, Not Recruiting
- TRISCEND II Pivotal Trial, Not Recruiting

Publications

PUBLICATIONS

- **A randomized evaluation of the TriGuard HDH cerebral embolic protection device to Reduce the Impact of Cerebral Embolic LESions after TransCatheter Aortic Valve ImplanTation: the REFLECT I trial.** *European heart journal*
Lansky, A. J., Makkar, R., Nazif, T., Messe, S., Forrest, J., Sharma, R., Schofer, J., Linke, A., Brown, D., Dhoble, A., Horwitz, P., Zang, M., DeMarco, et al
2021
- **Randomized Evaluation of TriGuard 3 Cerebral Embolic Protection After Transcatheter Aortic Valve Replacement: REFLECT II.** *JACC. Cardiovascular interventions*
Nazif, T. M., Moses, J. n., Sharma, R. n., Dhoble, A. n., Rovin, J. n., Brown, D. n., Horwitz, P. n., Makkar, R. n., Stoler, R. n., Forrest, J. n., Messé, S. n., Dickerman, S. n., Brennan, et al
2021; 14 (5): 515–27
- **Transcatheter aortic valve thrombosis: a review of potential mechanisms.** *Journal of the Royal Society, Interface*
Raghav, V., Midha, P., Sharma, R., Babaliaros, V., Yoganathan, A.
2021; 18 (184): 20210599
- **Randomized Trials Are Needed for Transcatheter Mitral Valve Replacement.** *JACC. Cardiovascular interventions*
Rogers, J. H., Sorajja, P., Thourani, V. H., Sharma, R. P., Chehab, B., Cowger, J., Heimansohn, D., Badhwar, V., Guerrero, M., Ailawadi, G.
2021; 14 (18): 2039-2046
- **The role of flow stasis in transcatheter aortic valve leaflet thrombosis.** *The Journal of thoracic and cardiovascular surgery*
Trusty, P. M., Bhat, S. S., Sadri, V., Salim, M. T., Funnell, E., Kamioka, N., Sharma, R., Makkar, R., Babaliaros, V., Yoganathan, A. P.
2020
- **A Review of the Partner Trials.** *Interventional cardiology clinics*
Markham, R., Sharma, R.
2020; 9 (4): 461–67
- **Self-expanding intra-annular versus commercially available transcatheter heart valves in high and extreme risk patients with severe aortic stenosis (PORTICO IDE): a randomised, controlled, non-inferiority trial.** *Lancet (London, England)*
Makkar, R. R., Cheng, W., Waksman, R., Satler, L. F., Chakravarty, T., Groh, M., Abernethy, W., Russo, M. J., Heimansohn, D., Hermiller, J., Worthley, S., Chehab, B., Cunningham, et al
2020
- **Comparison of Valve Performance of the Intra-Annular Self-Expanding Portico (TM) Transcatheter Aortic Valve With Contemporary Supra-Annular Self-Expanding and Intra-Annular Balloon-Expandable Valves: Insights From the PORTICO IDE Trial**
Makkar, R. R., Waksman, R., Groh, M., Russo, M. J., Hermiller, J., Worthley, S., Chehab, B., Asch, F. M., Sharma, R. P., Jilaihawi, H., Pichard, A. D., Reardon, M. J., Fontana, et al
ELSEVIER SCIENCE INC.2020: S46
- **Percutaneous Pulmonary Vein Stenting to Treat Severe Pulmonary Vein Stenosis After Surgical Reconstruction.** *Innovations (Philadelphia, Pa.)*
Dalal, A. R., Markham, R. n., Haeffele, C. n., Sharma, R. n., Watkins, A. C.
2020: 1556984520933962
- **Endovascular Neuromodulation: Safety Profile and Future Directions.** *Frontiers in neurology*
Raza, S. A., Opie, N. L., Morokoff, A., Sharma, R. P., Mitchell, P. J., Oxley, T. J.
2020; 11: 351

- **Timing and Outcomes of Percutaneous Coronary Intervention in Patients Who Underwent Transcatheter Aortic Valve Implantation.** *The American journal of cardiology*
Ochiai, T. n., Yoon, S. H., Flint, N. n., Sharma, R. n., Chakravarty, T. n., Kaewkes, D. n., Patel, V. n., Nakamura, M. n., Cheng, W. n., Makkar, R. n.
2020
- **Motor neuroprosthesis implanted with neurointerventional surgery improves capacity for activities of daily living tasks in severe paralysis: first in-human experience.** *Journal of neurointerventional surgery*
Oxley, T. J., Yoo, P. E., Rind, G. S., Ronayne, S. M., Lee, C. M., Bird, C. n., Hampshire, V. n., Sharma, R. P., Morokoff, A. n., Williams, D. L., MacIsaac, C. n., Howard, M. E., Irving, et al
2020
- **Variation in the Timing of Percutaneous Coronary Intervention and Outcomes in Patients Undergoing Transcatheter Aortic Valve Replacement**
Ochiai, T., Yoon, S., Flint, N., Sharma, R., Patel, V., Chakravarty, T., Nakamura, M., Cheng, W., Makkar, R.
ELSEVIER SCIENCE INC.2019: B670
- **Patching residual leaks following a MitraClip procedure** *EUROINTERVENTION*
Kar, S., Sharma, R.
2019; 15 (6): E482–E483
- **Computed tomography characteristics of the aortic valve and the geometry of SAPIEN 3 transcatheter heart valve in patients with bicuspid aortic valve disease** *EUROPEAN HEART JOURNAL-CARDIOVASCULAR IMAGING*
Kawamori, H., Yoon, S., Chakravarty, T., Maeno, Y., Kashif, M., Israr, S., Abramowitz, Y., Mangat, G., Miyasaka, M., Rami, T., Kazuno, Y., Takahashi, N., Jilaihawi, et al
2018; 19 (12): 1408–18
- **Transcatheter aortic valve replacement in bicuspid aortic valve stenosis: where do we stand?** *JOURNAL OF CARDIOVASCULAR SURGERY*
Yoon, S., Sharma, R., Chakravarty, T., Miyasaka, M., Ochiai, T., Nomura, T., Gellada, N., Nemanpour, S., Nakamura, M., Chen, W., Makkar, R.
2018; 59 (3): 381–91
- **Response by Sharma et al to Letter Regarding Article, "The Fluid Mechanics of Transcatheter Heart Valve Leaflet Thrombosis in the Neosinus".** *Circulation*
Sharma, R., Midha, P. A., Babaliaros, V., Makkar, R. R., Yoganathan, A. P.
2018; 137 (19): 2094-2095
- **Recurrent severe aortic stenosis after transfemoral transcatheter valve-in-valve-in-valve replacement** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
Ochiai, T., Yoon, S., Sharma, R., Chakravarty, T., Nakamura, M., Cheng, W., Makkar, R.
2018; 155 (5): E141–E144
- **Too little, too much or just right? Goldilocks revisited....** *Catheterization and cardiovascular interventions : official journal of the Society for Cardiac Angiography & Interventions*
Sharma, R., Henry, T. D.
2018; 91 (5): 840-841
- **Relation Between Left Ventricular Outflow Tract Calcium and Mortality Following Transcatheter Aortic Valve Implantation** *AMERICAN JOURNAL OF CARDIOLOGY*
Maeno, Y., Abramowitz, Y., Yoon, S., Israr, S., Jilaihawi, H., Watanabe, Y., Sharma, R., Kawamori, H., Miyasaka, M., Kazuno, Y., Takahashi, N., Hariri, B., Mangat, et al
2017; 120 (11): 2017–24
- **The Fluid Mechanics of Transcatheter Heart Valve Leaflet Thrombosis in the Neosinus** *CIRCULATION*
Midha, P. A., Raghav, V., Sharma, R., Condado, J. F., Okafor, I. U., Rami, T., Kumar, G., Thourani, V. H., Jilaihawi, H., Babaliaros, V., Makkar, R. R., Yoganathan, A. P.
2017; 136 (17): 1598+
- **Effect of ascending aortic dimension on acute procedural success following self-expanding transcatheter aortic valve replacement A multicenter retrospective analysis** *INTERNATIONAL JOURNAL OF CARDIOLOGY*
Maeno, Y., Yoon, S., Abramowitz, Y., Watanabe, Y., Jilaihawi, H., Lin, M., Chan, J., Sharma, R., Kawashima, H., Israr, S., Kawamori, H., Miyasaka, M., Rami, et al
2017; 244: 100–105

- **Clinical outcomes and prognostic factors of transcatheter aortic valve implantation in bicuspid aortic valve patients** *ANNALS OF CARDIOTHORACIC SURGERY*
Yoon, S., Sharma, R., Chakravarty, T., Kawamori, H., Maeno, Y., Miyasaka, M., Nomura, T., Ochiai, T., Israr, S., Rami, T., Nakamura, M., Chen, W., Makkar, et al
2017; 6 (5): 463–72
- **Advanced Imaging of Intracranial Atherosclerosis: Lessons from Interventional Cardiology** *FRONTIERS IN NEUROLOGY*
Pavlin-Premrl, D., Sharma, R., Campbell, B. V., Mocco, J., Opie, N. L., Oxley, T. J.
2017; 8: 387
- **Outcomes in Transcatheter Aortic Valve Replacement for Bicuspid Versus Tricuspid Aortic Valve Stenosis** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
Yoon, S., Bleiziffer, S., De Backer, O., Delgado, V., Arai, T., Ziegelmueller, J., Barbanti, M., Sharma, R., Perlman, G. Y., Khalique, O. K., Holy, E. W., Saraf, S., Deuschl, et al
2017; 69 (21): 2579–89
- **Optimal sizing for SAPIEN 3 transcatheter aortic valve replacement in patients with or without left ventricular outflow tract calcification** *EUROINTERVENTION*
Maeno, Y., Abramowitz, Y., Jilaihawi, H., Israr, S., Yoon, S., Sharma, R. P., Kazuno, Y., Kawamori, H., Miyasaka, M., Rami, T., Mangat, G., Takahashi, N., Okuyama, et al
2017; 12 (18): E2177–E2185
- **Transcatheter Mitral Valve Replacement for Degenerated Bioprosthetic Valves and Failed Annuloplasty Rings.** *Journal of the American College of Cardiology*
Yoon, S. H., Whisenant, B. K., Bleiziffer, S. n., Delgado, V. n., Schofer, N. n., Eschenbach, L. n., Fujita, B. n., Sharma, R. n., Ancona, M. n., Yzeiraj, E. n., Cannata, S. n., Barker, C. n., Davies, et al
2017; 70 (9): 1121–31
- **Controversies in Out of Hospital Cardiac Arrest?** *Interventional cardiology clinics*
Sharma, R. P., Stub, D.
2016; 5 (4): 551-559
- **Impact of Body Mass Index on the Outcomes Following Transcatheter Aortic Valve Implantation** *CATHETERIZATION AND CARDIOVASCULAR INTERVENTIONS*
Abramowitz, Y., Chakravarty, T., Jilaihawi, H., Cox, J., Sharma, R. P., Mangat, G., Nakamura, M., Cheng, W., Makkar, R. R.
2016; 88 (1): 127–34
- **Outcomes in Patients With Transcatheter Aortic Valve Replacement and Left Main Stenting The TAVR- LM Registry** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
Chakravarty, T., Sharma, R., Abramowitz, Y., Kapadia, S., Latib, A., Jilaihawi, H., Poddar, K., Giustino, G., Ribeiro, H. B., Tchetché, D., Monteil, B., Testa, L., Tarantini, et al
2016; 67 (8): 951–60
- **Impact of Preprocedural B-Type Natriuretic Peptide Levels on the Outcomes After Transcatheter Aortic Valve Implantation** *AMERICAN JOURNAL OF CARDIOLOGY*
Abramowitz, Y., Chakravarty, T., Jilaihawi, H., Lee, C., Cox, J., Sharma, R. P., Mangat, G., Cheng, W., Makkar, R. R.
2015; 116 (12): 1904–9
- **Unmasking of familial long QT syndrome type 2 with crystal methamphetamine exposure** *HEART RHYTHM*
Kumar, S., Sharma, R., Kalman, J. M.
2014; 11 (10): 1836–38
- **Randomized double-blind placebo-controlled crossover study to determine the effects of esomeprazole on inhibition of platelet function by clopidogrel** *JOURNAL OF THROMBOSIS AND HAEMOSTASIS*
Fernando, H., Bassler, N., Habersberger, J., Sheffield, L. J., Sharma, R., Dart, A. M., Peter, K. H., Shaw, J. A.
2011; 9 (8): 1582–89