


# Stanford

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## Leo Lopez

Clinical Professor, Pediatrics - Cardiology

 NIH Biosketch available Online

 Curriculum Vitae available Online

### CLINICAL OFFICE (PRIMARY)

- **Pediatric Cardiology Admin Offices**

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### ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Jae Lee - Administrative Associate III

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## Bio

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### CLINICAL FOCUS

- Pediatric Cardiology
- Echocardiography

### ACADEMIC APPOINTMENTS

- Clinical Professor, Pediatrics - Cardiology

### ADMINISTRATIVE APPOINTMENTS

- Medical Director of Echocardiography, Lucile Packard Children's Hospital, (2018- present)

### PROFESSIONAL EDUCATION

- Board Certification: Pediatric Cardiology, American Board of Pediatrics (1994)
- Fellowship: Boston Childrens Hospital Pediatric Cardiology Fellowship (1994) MA
- Residency: Boston Childrens Hospital Pediatric Residency (1990) MA
- Medical Education: Perelman School of Medicine University of Pennsylvania (1987) PA

## Publications

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### PUBLICATIONS

- **Association Between Location of Pulmonary Outflow Obstruction and Right Ventricular Size and Function After Repair of Tetralogy of Fallot, Pulmonary Atresia, and Major Aortopulmonary Collaterals.** *Pediatric cardiology*  
Brennan, A., Punn, R., Lopez, L., Long, Z., McElhinney, D. B., Mainwaring, R. D., Ma, M., Friedberg, M. K., Hanley, F. L., Arunamata, A. A.  
2024
- **Elevating diversity, inclusion, and health equity in Pediatric Heart Network Scholars grant funding: unique opportunities and lessons learned.** *Cardiology in the young*  
Wallace, M. C., Minich, L. L., Shekerdemian, L. S., Bauser-Heaton, H., Chowdhury, S. M., Czosek, R. J., Freud, L. R., Goldberg, D. J., Gurvitz, M., Lopez, L., Schumacher, K. R., Scott, J., Slayton, et al  
2024: 1-6

- **Height-Based Pediatric Echocardiogram Z-Scores are Valid in Patients with Normal Body Mass Index and May be Advantageous in Obese Patients.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Ezon, D., Duong, S. Q., Stoffels, G., Lopez, L., Mahgerefteh, J.  
2024
- **Normal Fetal Ventricular Strain Pilot Study.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
McFarland, C., Pruitt, C., Donofrio, M. T., Freud, L. R., Lopez, L., Minich, L. L., Moon-Grady, A. J., Ou, Z., Punn, R., Tacy, T. A., Fatusin, O., Pinto, N.  
2024
- **A Prospective Randomized Controlled Trial Using Virtual Reality in Pediatric Pre-intervention Echocardiograms to Decrease Child Anxiety and Fear.** *Pediatric cardiology*  
Behera, S. K., Punn, R., Menendez, M., Be, C., Moon, S., Zuniga, M., Stauffer, K. J., Thorson, K., Asi, N., Lopez, L.  
2024
- **Consensus-Based Development of a Pediatric Echocardiography Complexity Score: Design, Rationale, and Results of a Quality Improvement Collaborative.** *Journal of the American Heart Association*  
Balasubramanian, S., Yu, S., Behera, S. K., Bhat, A. H., Camarda, J. A., Choueiter, N. F., Jone, P., Lopez, L., Natarajan, S. S., Parra, D. A., Parthiban, A., Sachdeva, R., Srivastava, et al  
2024: e029798
- **Guidelines for Performing a Comprehensive Pediatric Transthoracic Echocardiogram: Recommendations From the American Society of Echocardiography.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Lopez, L., Saurers, D. L., Barker, P. C., Cohen, M. S., Colan, S. D., Dwyer, J., Forsha, D., Friedberg, M. K., Lai, W. W., Printz, B. F., Sachdeva, R., Soni-Patel, N. R., Truong, et al  
2024; 37 (2): 119-170
- **Defining the Spectrum of Hypoplastic Left Heart Syndrome (HLHS).** *World journal for pediatric & congenital heart surgery*  
Jacobs, J. P., Bleiweis, M. S., Cohen, M. S., Lopez, L., Peek, G. J., Franklin, R. C., Tchervenkov, C. I.  
2023; 14 (6): 741-745
- **2023 AHA/ACC Clinical Performance and Quality Measures for Coronary Artery Revascularization: A Report of the American College of Cardiology/American Heart Association Joint Committee on Performance Measures** *CIRCULATION-CARDIOVASCULAR QUALITY AND OUTCOMES*  
Dehmer, G. J., Grines, C. L., Bakaeen, F. G., Beasley, D. L., Beckie, T. M., Boyd, J., Cigarroa, J. E., Das, S. R., Diekemper, R. L., Frampton, J., Hess, C. N., Ijioma, N., Lawton, et al  
2023; 16 (9): e00121
- **Fetal Echocardiographic Z-Score Pilot Project: Study Design and Impact of Gestational Age and Variable Type on Reproducibility of Measurements Within and Across Investigators.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Moon-Grady, A. J., Lee, H., Lopez, L., Fatusin, O., Freud, L. R., Hogan, W., Krishnan, A., McFarland, C., LuAnn Minich, L., Morris, S. A., Pinto, N., Presson, A. P., Tacy, et al  
2023
- **Appropriateness of cardiovascular computed tomography and magnetic resonance imaging in patients with conotruncal defects.** *Journal of cardiovascular computed tomography*  
Pickard, S. S., Armstrong, A. K., Balasubramanian, S., Buddhe, S., Crum, K., Kong, G., Lang, S. M., Lee, M. V., Lopez, L., Natarajan, S. S., Norris, M. D., Parra, D. A., Parthiban, et al  
2023
- **Video-Based Deep Learning for Automated Assessment of Left Ventricular Ejection Fraction in Pediatric Patients.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Reddy, C. D., Lopez, L., Ouyang, D., Zou, J. Y., He, B.  
2023
- **Quality Improvement in a Pediatric Echocardiography Laboratory: A Collaborative Process.** *Children (Basel, Switzerland)*  
Sganga, D., Behera, S., Beattie, M. J., Stauffer, K. J., Burlinson, A., Lopez, L., Tierney, E. S.  
2022; 9 (12)
- **Targeted Neonatal Echocardiography in Patients With Hemodynamic Instability.** *Pediatrics*  
Rahde Bischoff, A., Bhombal, S., Altman, C. A., Fraga, M. V., Punn, R., Rohatgi, R. K., Lopez, L., McNamara, P. J.

2022; 150 (Suppl 2)

- **Intraoperative epicardial echocardiography or transoesophageal echocardiography in CHD: how much does it matter?** *Cardiology in the young*  
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2022: 1-8
- **Leftward and Posterior Deviation of the Septum Primum Predicts Morbidity in Patients with Hypoplastic Left Heart Syndrome.** *Pediatric cardiology*  
Gill, K., Lopez, L., Taylor, T., Muniz, J. C.  
2022
- **Post-operative Morbidity and Mortality After Fontan Procedure in Patients with Heterotaxy and Other Situs Anomalies.** *Pediatric cardiology*  
Duong, S. Q., Zaniletti, I., Lopez, L., Sutherland, S. M., Shin, A. Y., Collins, R. T.  
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- **Nomenclature for Pediatric and Congenital Cardiac Care: Unification of Clinical and Administrative Nomenclature - The 2021 International Paediatric and Congenital Cardiac Code (IPCCC) and the Eleventh Revision of the International Classification of Diseases (ICD-11).** *World journal for pediatric & congenital heart surgery*  
Jacobs, J. P., Franklin, R. C., Beland, M. J., Spicer, D. E., Colan, S. D., Walters, H. L., Bailliard, F., Houyel, L., St Louis, J. D., Lopez, L., Aiello, V. D., Gaynor, J. W., Krogmann, et al  
2021: 21501351211032919
- **Nomenclature for Pediatric and Congenital Cardiac Care: Unification of Clinical and Administrative Nomenclature - The 2021 International Paediatric and Congenital Cardiac Code (IPCCC) and the Eleventh Revision of the International Classification of Diseases (ICD-11).** *Cardiology in the young*  
Jacobs, J. P., Franklin, R. C., Beland, M. J., Spicer, D. E., Colan, S. D., Walters, H. L., Bailliard, F., Houyel, L., St Louis, J. D., Lopez, L., Aiello, V. D., Gaynor, J. W., Krogmann, et al  
2021; 31 (7): 1057-1188
- **Height Versus Body Surface Area to Normalize Cardiovascular Measurements in Children Using the Pediatric Heart Network Echocardiographic Z-Score Database.** *Pediatric cardiology*  
Mahgerefteh, J., Lai, W., Colan, S., Trachtenberg, F., Gongwer, R., Stylianou, M., Bhat, A. H., Goldberg, D., McCrindle, B., Frommelt, P., Sachdeva, R., Shuplock, J. M., Spurney, et al  
2021
- **Aortic size in children: Systolic measurements are different from diastolic measurements** *ANNALS OF PEDIATRIC CARDIOLOGY*  
Al-Mousily, M. F., Lopez, L., Muniz, J., Sasaki, N., Seltzer, I., Gruber, J., Welch, E.  
2021; 14 (2): 165-169
- **Pediatric Heart Network Echocardiographic Z Scores: Comparison with Other Published Models.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Lopez, L., Frommelt, P. C., Colan, S. D., Trachtenberg, F. L., Gongwer, R., Stylianou, M., Bhat, A., Burns, K. M., Cohen, M. S., Dragulescu, A., Freud, L. R., Frommelt, M. A., Lytrivi, et al  
2020
- **Physician variation in ordering of transthoracic echocardiography in outpatient pediatric cardiac clinics.** *Echocardiography (Mount Kisco, N.Y.)*  
Stern, K. W., McCracken, C. E., Gillespie, S. E., Lang, S. M., Statile, C. J., Lopez, L., Verghese, G. R., Choueiter, N. F., Sachdeva, R.  
2020
- **Challenges and lessons learned from the Pediatric Heart Network Normal Echocardiogram Database study.** *Cardiology in the young*  
Truong, D., Lopez, L., Frommelt, P. C., Stelter, J., Ni, B., Cohen, M. S., Prakash, A., Colan, S. D., Spurney, C., Soslow, J., Pearson, G. D., Mahgerefteh, J., Sachdeva, et al  
2020: 1-6
- **ACC/AHA/ASE/HRS/ISACHD/SCAI/SCCT/SCMR/SOPE 2020 Appropriate Use Criteria for Multimodality Imaging During the Follow-Up Care of Patients With Congenital Heart Disease** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*  
Sachdeva, R., Valente, A., Armstrong, A. K., Cook, S. C., Han, B., Lopez, L., Lui, G. K., Pickard, S. S., Powell, A. J., Bhave, N. M., Pickard, S. S., Baffa, J. M., Banka, et al  
2020; 75 (6): 657-703

- **Unilateral branch pulmonary artery origin from a solitary arterial trunk with major aortopulmonary collaterals to the contralateral lung: anatomic and developmental considerations.** *Seminars in thoracic and cardiovascular surgery*  
Adamson, G. T., Houyel, L. n., McElhinney, D. B., Maskatia, S. A., Ma, M. n., Hanley, F. L., Lopez, L. n.  
2020
- **Recommendations for Multimodality Assessment of Congenital Coronary Anomalies: A Guide from the American Society of Echocardiography: Developed in Collaboration with the Society for Cardiovascular Angiography and Interventions, Japanese Society of Echocardiography, and Society for Cardiovascular Magnetic Resonance.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Frommelt, P. n., Lopez, L. n., Dimas, V. V., Eidem, B. n., Han, B. K., Ko, H. H., Lorber, R. n., Nii, M. n., Printz, B. n., Srivastava, S. n., Valente, A. M., Cohen, M. S.  
2020; 33 (3): 259–94
- **2019 ACC/AHA/ASE Key Data Elements and Definitions for Transthoracic Echocardiography A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Data Standards (Writing Committee to Develop Clinical Data Standards for Transthoracic Echocardiography) and the American Society of Echocardiography** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*  
Douglas, P. S., Carabello, B. A., Lang, R. M., Lopez, L., Pellikka, P. A., Picard, M. H., Thomas, J. D., Varghese, P., Wang, T. Y., Weissman, N. J., Wilgus, R., Bozkurt, B., Jneid, et al  
2019; 32 (9): 1161–1248
- **How Well Does the Neonatal Heart Measure Up?** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Lopez, L., Colan, S. D.  
2019; 32 (7): 906–8
- **2019 ACC/AHA/ASE Key Data Elements and Definitions for Transthoracic Echocardiography: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Data Standards (Writing Committee to Develop Clinical Data Standards for Transthoracic Echocardiography) and the American Society of Echocardiography** *CIRCULATION-CARDIOVASCULAR IMAGING*  
Douglas, P. S., Carabello, B. A., Lang, R. M., Lopez, L., Pellikka, P. A., Picard, M. H., Thomas, J. D., Varghese, P., Wang, T. Y., Weissman, N. J., Wilgus, R.  
2019; 12 (7): e000027
- **Challenges With Left Ventricular Functional Parameters: The Pediatric Heart Network Normal Echocardiogram Database.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Frommelt, P. C., Minich, L. L., Trachtenberg, F. L., Altmann, K. n., Camarda, J. n., Cohen, M. S., Colan, S. D., Dragulescu, A. n., Frommelt, M. A., Johnson, T. R., Kovalchin, J. P., Lin, L. n., Mahgerefteh, et al  
2019
- **Echocardiographic surveillance in children after tetralogy of Fallot repair: Adherence to guidelines?** *International journal of cardiology*  
Annavaijhala, V. n., Valente, A. M., Lopez, L. n., Sachdeva, R. n., Glickstein, J. S., Natarajan, S. S., Buddhe, S. n., Altmann, K. n., Soriano, B. D., Colquitt, J. L., Altman, C. A., Sasaki, N. n., Sakarovitch, et al  
2019
- **Classification of Ventricular Septal Defects for the Eleventh Iteration of the International Classification of Diseases-Striving for Consensus: A Report From the International Society for Nomenclature of Paediatric and Congenital Heart Disease.** *The Annals of thoracic surgery*  
Lopez, L., Houyel, L., Colan, S. D., Anderson, R. H., Béland, M. J., Aiello, V. D., Bailliard, F., Cohen, M. S., Jacobs, J. P., Kurosawa, H., Sanders, S. P., Walters, H. L., Weinberg, et al  
2018; 106 (5): 1578-1589
- **Cardiovascular imaging in Turner syndrome: state-of-the-art practice across the lifespan.** *Heart (British Cardiac Society)*  
Mortensen, K. H., Young, L. n., De Backer, J. n., Silberbach, M. n., Collins, R. T., Duijnhouwer, A. L., Pandya, B. n., Gravholt, C. H., Lopez, L. n., Roos-Hesselink, J. W.  
2018; 104 (22): 1823–31
- **Cardiovascular Health in Turner Syndrome: A Scientific Statement From the American Heart Association.** *Circulation. Genomic and precision medicine*  
Silberbach, M. n., Roos-Hesselink, J. W., Andersen, N. H., Braverman, A. C., Brown, N. n., Collins, R. T., De Backer, J. n., Eagle, K. A., Hiratzka, L. F., Johnson, W. H., Kadian-Dodov, D. n., Lopez, L. n., Mortensen, et al  
2018; 11 (10): e000048

- **Relationship of Echocardiographic Z Scores Adjusted for Body Surface Area to Age, Sex, Race, and Ethnicity: The Pediatric Heart Network Normal Echocardiogram Database.** *Circulation. Cardiovascular imaging*  
Lopez, L., Colan, S., Stylianou, M., Granger, S., Trachtenberg, F., Frommelt, P., Pearson, G., Camarda, J., Cnota, J., Cohen, M., Dragulescu, A., Frommelt, M., Garuba, et al  
2017; 10 (11)
- **Recommendations for quantification methods during the performance of a pediatric echocardiogram: a report from the Pediatric Measurements Writing Group of the American Society of Echocardiography Pediatric and Congenital Heart Disease Council.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*  
Lopez, L., Colan, S. D., Frommelt, P. C., Ensing, G. J., Kendall, K., Younoszai, A. K., Lai, W. W., Geva, T.  
2010; 23 (5): 465-95; quiz 576-7