Stanford



Norman H. Silverman

Professor of Pediatrics (Pediatric Cardiology) at the Lucile Salter Packard Children's Hospital, Emeritus

NIH Biosketch available Online Curriculum Vitae available Online

Bio

ACADEMIC APPOINTMENTS

- Honorary Faculty Emeritus, Pediatrics
- Member, Maternal & Child Health Research Institute (MCHRI)

ADMINISTRATIVE APPOINTMENTS

- Professor of Pediatrics (Cardiology), Stanford University Medical Center, (2002- present)
- Professor of Radiology in Residence, University of California, San Francisco, (1985-2002)
- Associate Professor of Pediatrics, University of California, San Francisco, (1979-1985)
- Assistant Professor of Pediatrics, University of California, San Francisco, (1975-1982)
- Assistant Professor of Pediatrics, Stanford University Medical Center, (1974-1975)

HONORS AND AWARDS

- Janet Baldwin Lecture, Society of Pediatric Cardiology of New York (1999)
- Founder's Award, American Society of Echocardiography (2000)
- Sackler Visiting Fellow, University of Tel Aviv Israel (2001, 2004)
- 23rd Annual Katkov-Lundeen Visiting Professorship in Pediatric Cardiology, Minneapolis Children's Hospital (2004)
- 13th Jerome Liebman Visiting Professor, Case Western Reserve University, Cleveland, OH (1996)
- Garbose Lecture, Children’s National Medical Center, Washington DC (1999)
- Fellow, American Heart Association (2004)
- Fellow, American Society of Echocardiography (2004)
- Award for Excellence in Teaching, American Society of Echocardiography (2008)
- Roma and Marvin Auerback Scholar in Pediatric Cardiolgy, Lucile Packard Children's Hospital, Stanford University (2005-current)

PROFESSIONAL EDUCATION

- D.Sc.Med., University of the Witwatersrand , Medicine (1985)
- F.C.P. (S.A.) F.C.P. (S.A.), South African College of Medicine , Pediatrics (1970)
- M.B., B.Ch., University of the Witwatersrand , Medicine (1966)

COMMUNITY AND INTERNATIONAL WORK

- Children's Heartlink Mumbai, India. 2007, Asian Heart Institue

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My research interests center around cardiac ultrasound. I am currently working on several areas in the development of human cardiac ultrasound.

The first is fetal cardiac ultrasound. I have continued to develop and foster research and development in this area. I am associated with the cardiac surgeons and interventional cardiologists to develop a program for fetal cardiac intervention at Stanford.

Secondly, I am currently establishing a program for development of three- dimensional ultrasound to aid conventional echocardiography in diagnosis and management. This program will assess both the prenatal and postnatal capabilities.

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cardiothoracic Surgery (Fellowship Program)

Publications

PUBLICATIONS

- **In Memory of a Brilliant Pediatric Cardiologist: Dr. Abraham Rudolph.** *Pediatric cardiology*
  Silverman, N., Teitel, D.
  2023
- **The development and efficacy of a paediatric cardiology fellowship online preparatory course.** *Cardiology in the young*
  Motonaga, K. S., Sacks, L., Olson, I., Balasubramanian, S., Chen, S., Peng, L., Feinstein, J. A., Silverman, N. H., Hanley, F. L., Axelrod, D. M., Krawczeski, C. D., Arunamata, A., Kwiatkowski, et al
  2022: 1-6
- **Functional assessment of atrial wall excursion and foramen ovale flap tracings in 3rd trimester as predictor of short-term hemodynamic stability in congenital heart defects fetuses.** *Journal of perinatal medicine*
  Sylwestrzak, O., Strzelecka, I., Silverman, N. H., Respondek-Liberska, M.
  2022
- **Risk Factors for Mortality and Circulatory Outcome Among Neonates Prenatally Diagnosed With Ebstein Anomaly or Tricuspid Valve Dysplasia: A Multicenter Study.** *Journal of the American Heart Association*
  Freud, L. R., McElhinney, D. B., Kalish, B. T., Escobar-Diaz, M. C., Komarlu, R., Puchalski, M. D., Jaeggi, E. T., Szwast, A. L., Freire, G., Levasseur, S. M., Kavanaugh-McHugh, A., Michelfelder, E. C., Moon-Grady, et al
  2020: e016684
- **The Natural and Unnatural History of Ventricular Septal Defects Presenting in Infancy: An Echocardiography-Based Review.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*
  Cox, K., Algaze-Yojay, C., Punn, R., Silverman, N.
  2020
- **Postoperative Recovery of Left Ventricular Function following Repair of Large Ventricular Septal Defects in Infants.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*
  Adamson, G. T., Arunamata, A., Tacy, T. A., Silverman, N. H., Ma, M., Maskatia, S. A., Punn, R.
  2019
- **Cardiac Segmental Strain Analysis in Pediatric Left Ventricular Noncompaction Cardiomyopathy** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Arunamata, A., Stringer, J., Balasubramanian, S., Tacy, T. A., Silverman, N. H., Punn, R.
  2019; 32 (6): 763-+

- **Aortopulmonary window in tetralogy of Fallot with absent conal septum** *ECHOCARDIOGRAPHY-A JOURNAL OF CARDIOVASCULAR ULTRASOUND AND ALLIED TECHNIQUES*
  Aurigemma, D., Dixon, C., Tucker, S., Davis, C., Silverman, N.
  2019; 36 (2): 411–14

- **Cardiac Segmental Strain Analysis in Pediatric Left Ventricular Noncompaction Cardiomyopathy.** *Journal of the American Society of Echocardiography : official publication of the American Society of Echocardiography*
  Arunamata, A. n., Stringer, J. n., Balasubramanian, S. n., Tacy, T. A., Silverman, N. H., Punn, R. n.
  2019

- **Aortopulmonary window in tetralogy of fallot with absent conal septum.** *Echocardiography (Mount Kisco, N.Y.)*
  Aurigemma, D., Dixon, C., Tucker, S., Davis, C., Silverman, N.
  2018

- **THE DEVELOPMENT AND EFFICACY OF A PEDIATRIC CARDIOLOGY FELLOWSHIP ONLINE PREPARATORY COURSE**
  Motonaga, K., Sacks, L., Olson, I., Balasubramanian, S., Chen, S., Peng, L., Feinstein, J., Silverman, N., Hanley, F., Axelrod, D., Krawczeski, C., Ceresnak, S.
  ELSEVIER SCIENCE INC.2018: 2622

- **Changing Management of the Patent Ductus Arteriosus: Effect on Neonatal Outcomes and Resource Utilization.** *American journal of perinatology*
  Chock, V. Y., Goel, V. V., Palma, J. P., Luh, T. M., Wang, N. A., Gaskari, S., Punn, R., Silverman, N. H., Benitz, W. E.
  2017

- **Assessment of Progressive Pathophysiology After Early Prenatal Diagnosis of the Ebstein Anomaly or Tricuspid Valve Dysplasia** *AMERICAN JOURNAL OF CARDIOLOGY*
  Tierney, E. S., McElhinney, D. B., Freud, L. R., Tworetzky, W., Cuneo, B. F., Escobar-Diaz, M. C., Ikemba, C., Kalish, B. T., Komarlu, R., Levasseur, S. M., Puchalski, M. D., Satou, G. M., Silverman, et al
  2017; 119 (1): 106-111

- **Tricuspid Atresia with Non-compaction: An Early Experience with Implications for Surgical Palliation.** *Pediatric cardiology*
  Nguyen, H. H., Khan, R. n., Silverman, N. H., Singh, G. K.
  2017; 38 (3): 495–505

- **Assessment of Progressive Pathophysiology After Early Prenatal Diagnosis of the Ebstein Anomaly or Tricuspid Valve Dysplasia.** *American journal of cardiology*
  Selamet Tierney, E. S., McElhinney, D. B., Freud, L. R., Tworetzky, W., Cuneo, B. F., Escobar-Diaz, M. C., Ikemba, C., Kalish, B. T., Komarlu, R., Levasseur, S. M., Puchalski, M. D., Satou, G. M., Silverman, et al
  2016

- **Decompressing vein and bilateral superior venae cavae in a patient with hypoplastic left heart syndrome.** *Echocardiography (Mount Kisco, N.Y.)*
  Stauffer, K. J., Arunamata, A., Vasanawala, S. S., Behera, S. K., Kipps, A. K., Silverman, N. H.
  2016; 33 (9): 1428-1431

- **Discordant Fetal and Post-Natal Diagnosis Can We Do Better?** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
  Silverman, N. H., Moon-Grady, A. J.
  2016; 68 (9): 931–33

- **Postnatal Outcome of Fetal Left Ventricular Hypertrabeculation/Noncompaction** *PEDIATRIC CARDIOLOGY*
  Stoellberger, C., Wegner, C., Benatar, A., Chin, T. K., Dangel, J., Majoor-Krakauer, D., Mondal, T. K., Sivanandam, S., Silverman, N. H., van Waning, J., Finsterer, J.
  2016; 37 (5): 919-924

- **Routine intra-operative trans-oesophageal echocardiography yields better outcomes in surgical repair of CHD.** *Cardiology in the young*
  Madriago, E. J., Punn, R., Geeter, N., Silverman, N. H.
  2016; 26 (2): 263-268

- **Near-fatal neonatal coronary ischaemia associated with intermittent aortic regurgitation: successful surgical treatment** *CARDIOLOGY IN THE YOUNG*
  Likes, M. L., Silverman, N. H., Albers, E. L., Choy, R., Bhat, A., McMullan, D. M.

2015; 25 (8): 1531-1535

- **Echocardiographic presentation of anomalous origin of the left coronary artery from the pulmonary artery** *CARDIOLOGY IN THE YOUNG*
  Silverman, N. H.
  2015; 25 (8): 1512-1523
- **Outcomes and Predictors of Perinatal Mortality in Fetuses With Ebstein Anomaly or Tricuspid Valve Dysplasia in the Current Era A Multicenter Study** *CIRCULATION*
  Freud, L. R., Escobar-Diaz, M. C., Kalish, B. T., Komarlu, R., Puchalski, M. D., Jaeggi, E. T., Szwast, A. L., Freire, G., Levasseur, S. M., Kavanaugh-McHugh, A., Michelfelder, E. C., Moon-Grady, A. J., Donofrio, et al
  2015; 132 (6): 481-489
- **Echocardiography of congenital mitral valve disorders: echocardiographic-morphological comparisons** *CARDIOLOGY IN THE YOUNG*
  Silverman, N. H.
  2014; 24 (6): 1030-1048
- **Evaluation of Risk Factors for Prediction of Outcome in Fetal Spectrum of Atrioventricular Septal Defects** *CONGENITAL HEART DISEASE*
  Bader, R. S., Punn, R., Silverman, N. H.
  2014; 9 (4): 286-293
- **Predictors of bronchopulmonary dysplasia or death in premature infants with a patent ductus arteriosus.** *Pediatric research*
  Chock, V. Y., Punn, R., Oza, A., Benitz, W. E., Van Meurs, K. P., Whittemore, A. S., Behzadian, F., Silverman, N. H.
  2014; 75 (4): 570-575
- **Transcatheter Device Closure of a Congenital Aortic-Left Atrial Tunnel** *CONGENITAL HEART DISEASE*
  Sun, H. Y., Buccola, K. J., Punn, R., Silverman, N. H., Peng, L. F., Perry, S. B., Balasubramanian, S.
  2014; 9 (1): E23-E26
- **Transcatheter device closure of a congenital aortic-left atrial tunnel.** *Congenital heart disease*
  Sun, H. Y., Buccola, K. J., Punn, R., Silverman, N. H., Peng, L. F., Perry, S. B., Balasubramanian, S.
  2014; 9 (1): E23-6
- **The essential echocardiographic features of tetralogy of Fallot** *6th World Congress of Pediatric Cardiology and Cardiac Surgery*
  Silverman, N. H.
  CAMBRIDGE UNIV PRESS.2013: 871–82
- **Echocardiography of transposition of the great arteries** *CARDIOLOGY IN THE YOUNG*
  Mahle, W. T., Gonzalez, J. H., Kreeger, J., Marx, G., Duldani, G., Silverman, N. H.
  2012; 22 (6): 664-670
- **Echocardiographic Diagnosis and Prognosis of Fetal Left Ventricular Noncompaction** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Arunamata, A., Punn, R., Cuneo, B., Bharati, S., Silverman, N. H.
  2012; 25 (1): 112-120
- **Costs of Prenatal Detection of Congenital Heart Disease** *AMERICAN JOURNAL OF CARDIOLOGY*
  Jegatheeswaran, A., Oliveira, C., Batsos, C., Moon-Grady, A. J., Silverman, N. H., Homberger, L. K., Coyte, P., Friedberg, M. K.
  2011; 108 (12): 1808–14
- **Fetal Predictors of Urgent Balloon Atrial Septostomy in Neonates with Complete Transposition** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Punn, R., Silverman, N. H.
  2011; 24 (4): 425-430
- **Use of Intravenous Gamma Globulin and Corticosteroids in the Treatment of Maternal Autoantibody-Mediated Cardiomyopathy** *JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY*
  Trucco, S. M., Jaeggi, E., Cuneo, B., Moon-Grady, A. J., Silverman, E., Silverman, N., Hornberger, L. K.
  2011; 57 (6): 715–23
- **Aortic and Mitral Valve Stenosis with Regurgitation: Not Due to Rheumatic Heart Disease** *ECHOCARDIOGRAPHY-A JOURNAL OF CARDIOVASCULAR ULTRASOUND AND ALLIED TECHNIQUES*

Talluto, C. J., Silverman, N. H.
2011; 28 (2): E24-E27

- **Anomalous coronary arteries from the opposite sinus of Valsalva in asymptomatic siblings treated with pulmonary arterial translocation** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
  Obayashi, D. Y., Yeh, J., Silverman, N. H., Hanley, F. L.
  2010; 140 (6): 1430-1432
- **Echocardiography of the aortopulmonary window, aorto-ventricular tunnels, and aneurysm of the sinuses of Valsalva** *CARDIOLOGY IN THE YOUNG*
  Mahle, W. T., Kreeger, J., Silverman, N. H.
  2010; 20: 100-106
- **Echocardiographic imaging of anomalous origin of the coronary arteries** *CARDIOLOGY IN THE YOUNG*
  Cohen, M. S., Herlong, R. J., Silverman, N. H.
  2010; 20: 26-34
- **Surgical management of life threatening events caused by intermittent aortic insufficiency in a native valve: case report** *JOURNAL OF CARDIOTHORACIC SURGERY*
  Martin, M. H., Perry, S. B., Prochazka, J. V., Hanley, F. L., Silverman, N. H.
  2010; 5
- **A continuous heparin infusion does not prevent catheter-related thrombosis in infants after cardiac surgery** *PEDIATRIC CRITICAL CARE MEDICINE*
  Schroeder, A. R., Axelrod, D. M., Silverman, N. H., Rubesova, E., Merkel, E., Roth, S. J.
  2010; 11 (4): 489-495
- **Response to "Chromosomal Abnormalities and Neuromuscular Disorders Predict Severity and Outcome of Noncompaction in Addition to Cardiac Comorbidities"** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Punn, R., Silverman, N. H.
  2010; 23 (3): 338–39
- **Cardiac Segmental Analysis in Left Ventricular Noncompaction: Experience in a Pediatric Population** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Punn, R., Silverman, N. H.
  2010; 23 (1): 46-53
- **A Simple Echocardiographic Screening Tool for Aortic Root Dilatation in Children With Marfan Syndrome**
  Kemna, M., Murphy, D., Silverman, N.
  LIPPINCOTT WILLIAMS & WILKINS.2009: S597–S598
- **Screening for Aortic Root Dilation in Marfan Syndrome Using the Ratio of the Aortic Root to Descending Aortic Diameters in Children** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Kemna, M. S., Murphy, D. J., Silverman, N. H.
  2009; 22 (10): 1109-1113
- **Doppler Assessment of the Ratio of the Systolic to Diastolic Duration in Normal Children: Relation to Heart Rate, Age and Body Surface Area** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Sarnari, R., Kamal, R. Y., Friedberg, M. K., Silverman, N. H.
  2009; 22 (8): 928-932
- **Prenatal Detection of Congenital Heart Disease** *JOURNAL OF PEDIATRICS*
  Friedberg, M. K., Silverman, N. H., Moon-Grady, A. J., Tong, E., Nourse, J., Sorenson, B., Lee, J., Hornberger, L. K.
  2009; 155 (1): 26-31
- **Anatomy, echocardiography, and surgical approach to double outlet right ventricle** *8th International Symposium on Congenital Heart Disease*
  Mahle, W. T., Martinez, R., Silverman, N., Cohen, M. S., Anderson, R. H.
  CAMBRIDGE UNIV PRESS.2008: 39–51
- **Morphological studies of pulmonary arteriovenous shunting in a lamb model of superior cavopulmonary anastomosis** *PEDIATRIC CARDIOLOGY*

McMullan, D. M., Reddy, V. M., Gottliebson, W. M., Silverman, N. H., Perry, S. B., Chan, F., Hanley, F. L., Riemer, R. K.
2008; 29 (4): 706-712

- **Idiopathic premature closure of the ductus arteriosus: An indication for early delivery** *ECHOCARDIOGRAPHY-A JOURNAL OF CARDIOVASCULAR ULTRASOUND AND ALLIED TECHNIQUES*
  Soslow, J. H., Friedberg, M. K., Silverman, N. H.
  2008; 25 (6): 650-652

- **Extension of Doppler-derived echocardiographic measures of pulmonary vascular resistance to patients with moderate or severe pulmonary vascular disease** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Vlahos, A. P., Feinstein, J. A., Schiller, N. B., Silverman, N. H.
  2008; 21 (6): 711-714

- **Surgical management of coronary artery arising from the wrong coronary sinus, using standard and novel approaches** *85th Annual Meeting of the American-Association-for-Thoracic-Surgery*
  Gulati, R., Reddy, V. M., Culbertson, C., Helton, G., Suleman, S., Reinhartz, O., Silverman, N., Hanley, F. L.
  MOSBY-ELSEVIER.2007: 1171–U12

- **Heparin and catheter-related thrombosis in infants following cardiac surgery: Interim results from a randomized trial** *80th Annual Scientific Session of the American-Heart-Association (AHA)*
  Schroeder, A. R., Silverman, N., Axelrod, D. M., Merkel, E., Roth, S. J., Packard, L.
  LIPPINCOTT WILLIAMS & WILKINS.2007: 515–15

- **Right ventricular mechanical dyssynchrony in children with hypoplastic left heart syndrome** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Friedberg, M. K., Silverman, N. H., Dubin, A. M., Rosenthal, D. N.
  2007; 20 (9): 1073-1079

- **The systolic to diastolic duration ratio in children with hypoplastic left heart syndrome: A novel doppler index of right ventricular function** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Friedberg, M. K., Silverman, N. H.
  2007; 20 (6): 749-755

- **Mechanical dyssynchrony in children with systolic dysfunction secondary to cardiomyopathy: A Doppler tissue and vector velocity imaging study** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Friedberg, M. K., Silverman, N. H., Dubin, A. M., Rosenthal, D. N.
  2007; 20 (6): 756-763

- **Diagnosis of patent ductus arteriosus by a neonatologist with a compact, portable ultrasound machine** *JOURNAL OF PERINATOLOGY*
  Lee, H. C., Silverman, N., Hintz, S. R.
  2007; 27 (5): 291-296

- **Right ventricular mechanical dyssynchrony in children with hypoplastic left heart syndrome: A target for cardiac resynchronization therapy?**
  Friedberg, M. K., Silverman, N. H., Dubin, A. M., Rosenthal, D. N.
  ELSEVIER SCIENCE INC.2007: 257A

- **Echocardiographic diagnosis of persistent fifth aortic arch** *ECHOCARDIOGRAPHY-A JOURNAL OF CARDIOVASCULAR ULTRASOUND AND ALLIED TECHNIQUES*
  Bernheimer, J., Friedberg, M., Chan, F., Silverman, N.
  2007; 24 (3): 258-262

- **The systolic to diastolic duration ratio in children with heart failure secondary to restrictive cardiomyopathy** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Friedberg, M. K., Silverman, N. H.
  2006; 19 (11): 1326-1331

- **Segmental wall-motion abnormalities after an arterial switch operation indicate ischemia** *ANESTHESIA AND ANALGESIA*
  Rouine-Rapp, K., Rouillard, K. P., Miller-Hance, W., Silverman, N. H., Collins, K. K., Cahalan, M. K., Bostrom, A., Russell, I. A.
  2006; 103 (5): 1139–46

- **Morphology and function of the bicuspid aortic valve with and without coarctation of the aorta in the young** *AMERICAN JOURNAL OF CARDIOLOGY*
  Ciotti, G. R., Vlahos, A. P., Silverman, N. H.
  2006; 98 (8): 1096–1102

- **Aortopulmonary window with anomalous origin of the right coronary artery from the pulmonary artery: Two cases highlighting the importance of complete pre-operative echocardiographic evaluation of the coronary arteries in all conotruncal anomalies** *EUROPEAN JOURNAL OF ECHOCARDIOGRAPHY*
  Greenway, S. C., Bradley, T. J., Caldarone, C. A., Silverman, N. H., Hanley, F. L., Smallhorn, J. F.
  2006; 7 (5): 379-382

- **Diagnosis and prognosis of fetuses with double outlet right ventricle** *PRENATAL DIAGNOSIS*
  Kim, N., Friedberg, M. K., Silverman, N. H.
  2006; 26 (8): 740-745

- **Images in cardiovascular medicine. Near sudden death from cardiac lipoma in an adolescent.** *Circulation*
  Friedberg, M. K., Chang, I. L., Silverman, N. H., Ramamoorthy, C., Chan, F. P.
  2006; 113 (21): e778-9

- **Near sudden death from cardiac lipoma in an adolescent** *CIRCULATION*
  Friedberg, M. K., Chang, I. L., Silverman, N. H., Ramamoorthy, C., Chan, F. P.
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- **Echo-morphological correlates concerning the functionally univentricular heart in the setting of isomeric atrial appendages** *5th Annual International Symposium on Congenital Heart Disease*
  Mahle, W. T., Silverman, N. H., Marx, G. R., Anderson, R. H.
  CAMBRIDGE UNIV PRESS.2006: 35–42

- **Cardiac ventricular diastolic and systolic duration in children with heart failure secondary to idiopathic dilated cardiomyopathy** *AMERICAN JOURNAL OF CARDIOLOGY*
  Friedberg, M. K., Silverman, N. H.
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- **Isomerism of the left atrial appendage associated with ventricular noncompaction** *AMERICAN JOURNAL OF CARDIOLOGY*
  Friedberg, M. K., Ursell, P. C., Silverman, N. H.
  2005; 96 (7): 985-990

- **Myofibroblastic tumor of the heart: A rare intracardiac tumor** *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*
  Gandy, K. L., Burtelow, M. A., Reddy, V. M., Silverman, N. H.
  2005; 130 (3): 888-889

- **Right ventricular outflow tract obstruction in an infant.** *Heart*
  Friedberg, M., Silverman, N. H.
  2005; 91 (6): 748-?

- **Mitral valve leaflet excursion velocity in the pediatric population: A comparable diastolic index to the color m-mode propagation velocity** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Friedberg, M. K., Silverman, N. H.
  2005; 18 (2): 142-147

- **Measurement of the Tei index: A comparison of m-mode and pulse Doppler methods** *JOURNAL OF THE AMERICAN SOCIETY OF ECHOCARDIOGRAPHY*
  Tham, E. B., Silverman, N. H.
  2004; 17 (12): 1259-1265

- **Changing indications for fetal echocardiography in a University Center population** *PRENATAL DIAGNOSIS*
  Friedberg, M. K., Silverman, N. H.
  2004; 24 (10): 781-786

- **Changing indications for Fetal Echocardiography in a university center population**
  Friedberg, M. K., Silverman, N. H.

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