CIRCULATORY FAILURE PROGRAM
Margaret M. Redfield, MD, Director

Cardiac Amyloid Clinic
Evaluates patients with all types of proven or suspected cardiac amyloidosis, most commonly AL, wild-type TTR (senile systemic amyloidosis) or familial TTR amyloidosis.

Martha Grogan, MD, Director
Omar F. Abou Ezzeddine, MD, MS
Barry A. Boilson, MD
Daniel D. Borgeson, MD
Alfredo L. Clavell, MD
Barry L. Karon, MD
Kyle W. Klarich, MD
Grace Lin, MD
Wayne L. Miller, MD, PhD
Margaret M. Redfield, MD
Richard J. Rodeheffer, MD
Janell Grazzini Frantz, APRN, MSN, CNP

Heart Failure Clinic
Specializes in diagnosis and chronic management of heart failure patients with reduced or preserved ejection fraction, eligibility for cardiac replacement or mechanical circulatory support, or novel therapies for heart failure.

Grace Lin, MD, Director
Omar F. Abou Ezzeddine, MD, MS
Barry A. Boilson, MD
Daniel D. Borgeson, MD
Alfredo L. Clavell, MD
Shannon M. Dunlay, MD
Brooks S. Edwards, MD
Robert P. Frantz, MD
Naveen L. Pereira, MD
Margaret M. Redfield, MD
Richard J. Rodeheffer, MD
John A. Schirger, MD
Jean A. Wagner, APRN, CNP

Heart Transplant Clinic
Assesses patients and offers specialized care post-transplantation.

Sudhir S. Kushwaha, MD, Director
Atta Behfar, MD, PhD
Barry A. Boilson, MD
Alfredo L. Clavell, MD
Shannon M. Dunlay, MD
Brooks S. Edwards, MD
Robert P. Frantz, MD
Naveen L. Pereira, MD
Richard J. Rodeheffer, MD
John A. Schirger, MD
Jean A. Wagner, APRN, CNP

Left Ventricular Assist Device Clinic
Assesses and evaluates patients for mechanical circulatory support, either as bridge to transplant or destination therapy, with subsequent follow-up of the patient post implantation.

Cardiology
Sudhir S. Kushwaha, MD, Director
Atta Behfar, MD, PhD
Barry A. Boilson, MD
Alfredo L. Clavell, MD
Shannon M. Dunlay, MD
Brooks S. Edwards, MD
Robert P. Frantz, MD
Naveen L. Pereira, MD
Richard J. Rodeheffer, MD
John A. Schirger, MD
Jean A. Wagner, APRN, CNP

Cardiovascular Surgery
Simon Maitais, MD, PhD, Surgical Director
Richard C. Daly, MD
John M. Stulak, MD

Pulmonary Hypertension Clinic
Provides skilled diagnosis, individual treatment plans and thorough follow-up care in patients with pulmonary arterial hypertension.

Robert P. Frantz, MD, Director
Cardiology
Garvan C. Kane, MD, PhD
Sudhir S. Kushwaha, MD
Robert B. McCully, MD
Joseph G. Murphy, MD

Pulmonology
Nathanial W. Taggart, MD
Charlotte S. Van Dorn, MD

Unexplained Dyspnea Clinic
Evaluates patients with not otherwise specified shortness of breath, edema, right heart failure, exercise intolerance, or deconditioning.

Robert P. Frantz, MD, Director
Daniel D. Borgeson, MD
Barry A. Borlaug, MD
Garvan C. Kane, MD, PhD
Barry L. Karon, MD
Michael J. Krowka, MD
Sudhir S. Kushwaha, MD
Grace Lin, MD
Wayne L. Miller, MD, PhD

HEART RHYTHM SERVICES
Thomas Munger, MD, Director

Heart Rhythm Clinic
Specializes in treatment of arrhythmias and congenital heart disease, new generation drugs and devices for prevention of stroke, including intracardiac and epicardial left atrial appendage occlusion, and remote monitoring of arrhythmias.

Margaret A. Lloyd, MD, MBA, Director
Samuel J. Asirvatham, MD

ROCHESTER, MINNESOTA
Paul A. Friedman, M.D., Chair, Department of Cardiovascular Medicine
Joseph A. Dearani, MD, Chair, Department of Cardiovascular Surgery
Jonathan N. Johnson, MD, Chair, Division of Pediatric Cardiology

Mayo Clinic in Minnesota welcomes inquiries and referrals, and a request to a specific physician is not required.

Referrals & Consultations in Minnesota
Cardiovascular Medicine: 855-MAYOHRT Fax: 507-266-5278
Cardiovascular Surgery: 866-827-8810 Fax: 507-255-7378
Pediatric Cardiology: 507-284-9969 Fax: 507-538-5817

Pulmonary Hypertension Clinic
Provides skilled diagnosis, individual treatment plans and thorough follow-up care in patients with pulmonary arterial hypertension.

Robert P. Frantz, MD, Director
Cardiology
Garvan C. Kane, MD, PhD
Sudhir S. Kushwaha, MD
Robert B. McCully, MD
Joseph G. Murphy, MD

Pulmonology
Nathanial W. Taggart, MD
Charlotte S. Van Dorn, MD

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Barry A. Borlaug, MD
Garvan C. Kane, MD, PhD
Barry L. Karon, MD
Michael J. Krowka, MD
Sudhir S. Kushwaha, MD
Grace Lin, MD
Wayne L. Miller, MD, PhD

HEART RHYTHM SERVICES
Thomas Munger, MD, Director

Heart Rhythm Clinic
Specializes in treatment of arrhythmias and congenital heart disease, new generation drugs and devices for prevention of stroke, including intracardiac and epicardial left atrial appendage occlusion, and remote monitoring of arrhythmias.

Margaret A. Lloyd, MD, MBA, Director
Samuel J. Asirvatham, MD
Visit mayoclinic.org/medicalprofs for more information | The medical professionals page offers physician-specific information including open clinical trials, upcoming CME's, and e-newsletters covering the latest in diagnosis and treatments.
Structural Interventional Cardiology
Malcom R. Bell MD
Patricia J. M. Best MD
John F. Bresnahan MD
Mackram F. Eleid MD
Rajiv Gulati MD PhD
David R. Holmes Jr MD
Guy S. Reeder MD
Charanjit S. Rihal MD MBA
Gurpreet S. Sandhu MD PhD
Mandeep Singh MD
Brandon M. Wiley MD
R. Scott Wright MD

Early Atherosclerosis Clinic
Provides comprehensive diagnoses and treatment for patients at risk of early atherosclerosis, asymptomatic patients who have a family history of early atherosclerosis, and for patients with abnormal levels of novel risk factors.
Ifitikhar J. Kullo MD, Director
Stephen L. Kopecky MD
Francisco Lopez-Jimenez MD
Robert D. McBane MD
Randal J. Thomas MD

PREVENTIVE CARDIOLOGY PROGRAM
Francisco Lopez-Jimenez MD, Director

Cardiovascular Health Clinic
Offers both risk assessment and risk reduction services for patients of all ages at risk for heart disease or those who have already developed heart disease.
Francisco Lopez-Jimenez MD, Director
Thomas G. Allison PhD MPH
Adelaide M. Arruda-Olson MD PhD
Frank V. Brozovich MD PhD
LaPrincess C. Brewer MD MPH
Thomas C. Gerber MD PhD
Bruce D. Johnson PhD
Birgit Kantor MD
Ifitikhar J. Kullo MD
Thomas P. Olson PhD
Virend Somers MD PhD
Ray W. Squires PhD
Carmen M. Terzic MD PhD
Randal J. Thomas MD
Hector R. Villarraga MD
Kari A. Dessner APRN CNP
Alicia A. Mickow APRN MSN CNP

Invasive Hemodynamics and Physiology
Atta Behfar MD PhD
Barry A. Borlaug MD
Mackram F. Eleid MD
Robert P. Frantz MD
Joerg Herrmann MD
Andre C. Lapeyre III MD
Amir Lerman MD
Rick A. Nishimura MD

Sports Cardiology Clinic
Specializes in advising high-performance athletes on safe training and exercise programs, and for patients who have cardiac symptoms during exercise or known cardiac diagnosis who wish to safely exercise.
Thomas G. Allison PhD MPH, Program Director
Todd D. Miller MD, Medical Director
Michael J. Ackerman MD PhD
Alfredo L. Clavell MD
Bernard J. Gersh MB ChB DPhil
Kyle W. Klarich MD
Sudhir S. Kushwaha MD
Wayne L. Miller MD PhD
Steve R. Ommen MD
Peter A. Noseworthy MD
Robert F. Rea MD

Intracoronary Imaging and Physiology
Gregory W. Barsness MD
Malcolm R. Bell MD
Patricia J. M. Best MD
John F. Bresnahan MD
Rajiv Gulati MD PhD
Gurpreet S. Sandhu MD PhD
Mandeep Singh MD MPH

Statin Intolerance Service
Provides expert diagnoses, risk stratification, and treatment of patients with statin-associated side effects.
Stephen L. Kopecky MD, Director
Thomas G. Allison PhD MPH
Frank V. Brozovich MD PhD
Bruce D. Johnson PhD
Birgit Kantor MD
Ifitikhar J. Kullo MD
Francisco Lopez-Jimenez MD
Thomas P. Olson PhD
Virend Somers MD PhD
Ray W. Squires PhD
Carmen M. Terzic MD PhD
Randal J. Thomas MD
Hector R. Villarraga MD

Endovascular Interventional Cardiology
Gregory W. Barsness MD
John F. Bresnahan MD
Rajiv Gulati MD PhD
David R. Holmes Jr MD

Women’s Heart Clinic
Offers risk assessment, heart evaluation and comprehensive treatment to meet the unique needs of women at risk for or diagnosed with cardiovascular disease.
Rekha Mankad MD, Director
Patricia J. M. Best MD
Sharonne N. Hayes MD
Birgit Kantor MD
Marysia S. Tweet MD
Kari A. Dessner APRN CNP

Cardiac Rehabilitation Program
Offers a multidisciplinary, individualized treatment program designed to help patients recover from heart disease.
Randal J. Thomas MD, Director
Carmen M. Terzic MD PhD, Associate Director
Ray W. Squires PhD, Program Director
Stephen L. Kopecky MD
Francisco Lopez-Jimenez MD

Congenital Interventional Cardiology
Jason H. Anderson MD
Allison K. Cabalka MD
Frank Cetta MD
Donald J. Hagler MD
Nathaniel W. Taggart MD

Cardio-Oncology Clinic
Specializes in integrative management for cancer patients with cardiovascular risks or injury.
Joerg Herrmann MD, Director
Amir Lerman MD
Grace Lin MD
Hector R. Villarraga MD

Cardiac Intensive Care Unit
Gregory W. Barsness MD, Director
Nandan S. Anavekar MB BCH
Malcolm R. Bell MD
Courtney E. Bennett DO
Patricia J. M. Best MD
Bernard J. Gersh MB ChB DPhil
Joerg Herrmann MD
Allan S. Jaffe MD
Jacob C. Jentzer MD
Andre C. Lapeyre III MD
Sunil V. Mankad MD
Joseph G. Murphy MD
Jae K. Oh MD
Guy S. Reeder MD
Lawrence J. Sinak MD
R. Thomas Tilbury MD

Cardio-Rheumatology Clinic
Addresses the needs of high-risk patients with rheumatic conditions such as lupus and rheumatoid arthritis whom have increased risk of cardiovascular disease and cardiovascular mortality.
Rekha Mankad MD, Director
Patricia J. M. Best MD
Lori A. Blauvet MD
Sharonne N. Hayes MD

Sports Cardiology Clinic
Offers a multidisciplinary, individualized treatment program designed to help patients recover from heart disease.
Randal J. Thomas MD
Carmen M. Terzic MD PhD
Ray W. Squires PhD
Carmen M. Terzic MD PhD
Randal J. Thomas MD
Hector R. Villarraga MD

Early Atherosclerosis Clinic
Provides comprehensive diagnoses and treatment for patients at risk of early atherosclerosis, asymptomatic patients who have a family history of early atherosclerosis, and for patients with abnormal levels of novel risk factors.
Ifitikhar J. Kullo MD, Director
Stephen L. Kopecky MD
Francisco Lopez-Jimenez MD
Robert D. McBane MD
Randal J. Thomas MD

Cardiac Rehabilitation Program
Offers a multidisciplinary, individualized treatment program designed to help patients recover from heart disease.
Randal J. Thomas MD, Director
Carmen M. Terzic MD PhD, Associate Director
Ray W. Squires PhD, Program Director
Stephen L. Kopecky MD
Francisco Lopez-Jimenez MD

Statin Intolerance Service
Provides expert diagnoses, risk stratification, and treatment of patients with statin-associated side effects.
Stephen L. Kopecky MD, Director
Thomas G. Allison PhD MPH
Frank V. Brozovich MD PhD
Bruce D. Johnson PhD
Birgit Kantor MD
Ifitikhar J. Kullo MD
Francisco Lopez-Jimenez MD
Thomas P. Olson PhD
Virend Somers MD PhD
Ray W. Squires PhD
Carmen M. Terzic MD PhD
Randal J. Thomas MD
Hector R. Villarraga MD

Women’s Heart Clinic
Offers risk assessment, heart evaluation and comprehensive treatment to meet the unique needs of women at risk for or diagnosed with cardiovascular disease.
Rekha Mankad MD, Director
Patricia J. M. Best MD
Sharonne N. Hayes MD
Birgit Kantor MD
Marysia S. Tweet MD
Kari A. Dessner APRN CNP

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Offers risk assessment, heart evaluation and comprehensive treatment to meet the unique needs of women at risk for or diagnosed with cardiovascular disease.
Rekha Mankad MD, Director
Patricia J. M. Best MD
Sharonne N. Hayes MD
Birgit Kantor MD
Marysia S. Tweet MD
Kari A. Dessner APRN CNP

Cardio-Oncology Clinic
Specializes in integrative management for cancer patients with cardiovascular risks or injury.
Joerg Herrmann MD, Director
Amir Lerman MD
Grace Lin MD
Hector R. Villarraga MD

Cardio-Rheumatology Clinic
Addresses the needs of high-risk patients with rheumatic conditions such as lupus and rheumatoid arthritis whom have increased risk of cardiovascular disease and cardiovascular mortality.
Rekha Mankad MD, Director
Patricia J. M. Best MD
Lori A. Blauvet MD
Sharonne N. Hayes MD

Women’s Heart Clinic
Offers risk assessment, heart evaluation and comprehensive treatment to meet the unique needs of women at risk for or diagnosed with cardiovascular disease.
Rekha Mankad MD, Director
Patricia J. M. Best MD
Sharonne N. Hayes MD
Birgit Kantor MD
Marysia S. Tweet MD
Kari A. Dessner APRN CNP

*Mayo Clinic Health System
STRUCTURAL HEART DISEASE PROGRAM
Rick A. Nishimura MD, Director

Adult Congenital Heart Disease Clinic
Specializes in diagnosis, treatment, and continuity of care throughout a congenital heart patient’s lifespan, including expert diagnoses and treatment plans, from pregnancy to heart surgery.

Cardiology
Heidi M. Connolly MD, Medical Director
Naser M. Ammash MD
Crystal R. Bonnichsen MD
Frank Cetta MD
Alexander G. Egbe MBBS
Martha Grogan MD
Carole A. Warnes MD
Krista M. Burke APRN MSN CNP

Cardiovascular Surgery
Joseph A. Dearani MD, Surgical Director
M. Sertac Cicek MD
Alberto Pochettino MD
Sameh M. Said MD
Hartzell V. Schaff MD

Heart Brain Clinic
Evaluates and manages patients with patent foramen ovale or atrial fibrillation, and who have had a stroke or transient ischemic attack.

Naser M. Ammash MD, Director, Cardiology
Robert D. Brown Jr MD MPH, Director, Neurology

Cardiology
Naser M. Ammash MD
Samuel J. Asirvatham MD
Paul A. Friedman MD
David R. Holmes Jr MD
Thomas M. Munger MD
Guy S. Reeder MD

Neurology
Robert D. Brown Jr MD
Bruce A. Evans MD
Kelly D. Fienning MD
Jimmy R. Fulgham MD
James P. Klaas MD
Jonathan Graff Radford MD
Irene Meissner MD
George W. Petty MD
Alejandro A. Rabinstein MD
Lindsey N. Williams MD

Hypertrophic Cardiomyopathy Clinic
Addresses highly individualized treatment needs, and offers medical management, as well as expert surgical treatment, including septal myectomy, septal ablation, and ICD implantation.

Steve R. Ommen MD, Director

Adult Cardiology
Bernard J. Gersh MB ChB DPhil
Jeffrey B. Geske MD
Kyle W. Klarich MD
Darrell (Brian) B. Newman MD*
Rick A. Nishimura MD

Pediatric Cardiology
Michael J. Ackerman MD PhD
Bryan C. Cannon MD
Frank Cetta MD
David J. Driscoll MD
Ben W. Eidem MD
Johnson Jonathan MD
Patrick W. O’Leary MD
Nathaniel W. Taggart MD
Philip L. Wackel MD

Cardiovascular Surgery
Joseph A. Dearani MD
Sameh M. Said MD
Hartzell V. Schaff MD

Marfan Syndrome and Thoracic Aorta Clinic
Offers an integrated medical, genetic, and surgical team approach with specialized testing for diagnosis and medical/surgical treatment of Marfan syndrome and associated symptoms.

Juan M. Bowen MD, Medical Director
Alberto Pochettino MD, Surgical Director

Adult Cardiology
Naser M. Ammash MD
Nandan S. Anavekar MB BCh
Crystal R. Bonnichsen MD
Heidi M. Connolly MD
Raul E. Espinosa MD
Ifiokhar J. Kullo MD
Andrew G. Moore MD*

Pediatric Cardiology
Jason H. Anderson MD
Allison K. Cabalka MD
Frank Cetta MD
David J. Driscoll MD
Ben W. Eidem MD
Jonathan N. Johnson MD
Patrick W. O’Leary MD
Charlotte S. Van Dorn MD

Pericardial Disease Clinic
Evaluates and manages treatment for various conditions related to the pericardium, including recurrent pericarditis, pericardial effusion, constrictive pericarditis and asymptomatic pericardial cysts.

Jae K. Oh MD, Medical Director
Kevin L. Greason MD, Surgical Director

Cardiology
Nandan S. Anavekar MB BCh
Barry A. Borlaug MD
Raul E. Espinosa MD
Sharonne N. Hayes MD
Garvan C. Kane MD PhD
Rowens M. Melduni MD

Cardiovascular Surgery
Gabor Bagameri MD
M. Sertac Cicek MD
Juan A. Crestanello MD
Richard C. Daly MD
Joseph A. Dearani MD
Kevin L. Greason MD
Simon Maltai MD PhD
Alberto Pochettino MD
Sameh M. Said MD
Hartzell V. Schaff MD
John M. Stulak MD

Valvular Heart Disease Clinic
Addresses native and prosthetic valve diseases, employing advanced diagnostic testing, offers unique surgical therapies such as robotic mitral valve repair and catheter-based therapies, including transcatheter heart valves and periprosthetic leak closure devices with unparalleled results.

Vuyisile T. Nkomo MD, Director
Lori A. Blauwet MD
Mackram F. Eleid MD
Raul E. Espinosa MD
Titus C. Evans Jr MD
David A. Foley MD
Bernard J. Gersh MB ChB DPhil
Jeffrey B. Geske MD
Sushil (Allen) A. Luis MBBS
Joseph F. Maalouf MD
Rekha Mankad MD
Sunil V. Mankad MD
Hector I. Michelena MD
Joseph G. Murphy MD
Rick A. Nishimura MD
Jae K. Oh MD
Ratnasari Padang MBBS PhD
Sorin V. Piscaru MD
Guy S. Reeder MD
R. Scott Wright MD
Courtney S. Swenson APRN CNP MSN

*Mayo Clinic Health System
GONDA VASCULAR CENTER
Haraldur Bjarnason MD, Director

Noninvasive Vascular Lab
Paul W. Wennberg MD, Director
Ana I. Casanegra MD
David A. Froehling MD
Iftikhar J. Kullo MD
Robert D. McBane MD
Thom W. Rooke MD
Roger F. Shepherd MB BCh
Raymond C. Shields MD

Thrombophilia Clinic
Provides treatment of acute thrombosis, peri-procedure management of chronically anticoagulated patients, assessment and recommendations for patients at high risk for postoperative VTE, and suspected familial or acquired thrombophilia, as well as chronic anticoagulation care.

Waldemar E. Wysokinski MD PhD, Director
Anel E. Ashrani MD
Matthew A. Bartlett MB BCh BA
Ana I. Casanegra MD
Paul R. Daniels MD
David A. Froehling MD
Robert D. McBane MD
Raymond C. Shields MD

Vascular Medicine Clinic
Robert D. McBane MD, Director
Ana I. Casanegra MD
Mark G. Costopoulos MD
David A. Froehling MD
Iftikhar J. Kullo MD
Ian R. McPhail MD
Thom W. Rooke MD
Roger F. Shepherd MB BCh
Raymond C. Shields MD
Paul W. Wennberg MD
Waldemar E. Wysokinski MD PhD

Vascular Wound Clinic
Treats patients with vascular wounds, addresses the underlying disease process, and provides management directives to optimize wound healing.

Karen L. Andrews MD, Director
Ana I. Casanegra MD
Paul L. Claus MD
Robert Haddon MD MS
Robert D. McBane MD
Ian R. McPhail MD
Raymond C. Shields MD
Waldemar E. Wysokinski MD PhD
Carol J. Boohan APRN CNP DNP
Dalene M. Bott-Kitslaar APRN CNP
Alice J. Malecha APRN CNP MSN
Danielle T. Vlazny PA-C MS

Vascular Surgery
Thomas C. Bower MD, Chair
Randall R. De Martino MD
Jill K. Johnstone MD
Manju Kalra MD
Gustavo S. Oderich MD
Fahad Shuja MBBS

Vein Clinic
Specializes in the treatment of venous diseases such as spider veins, varicose veins, and treatment of non-healing ulcers and blood clots. Interventional treatment options include sclerotherapy, phlebectomy, radiofrequency endovenous laser ablation, and laser pulsed-light treatment.

Melissa J. Neisen MD, Director
Gregory W. Barsness MD
Emily C. Bendel MD
Haraldur Bjarnason MD
J. Wells Askew III MD
Raymond J. Gibbons MD
John H. Haley MD
Todd D. Miller MD
Martin G. Rodriguez-Porcel MD

Vascular Wound Clinic
KAREN L. ANDREWS MD, DIRECTOR
ANA I. CASANEGRA MD
PAUL L. CLAUS MD
ROBERT HADDON MD MS
ROBERT D. MCBANE MD
IAN R. MCPHAIL MD
RAYMOND C. SHIELDS MD
WALDEMAR E. WYSOKINSKI MD PhD
CAROL J. BOOHAN APRN CNP DNP
DALENE M. BOTT-KITSLAAR APRN CNP
ALICE J. MALECHA APRN CNP MSN
DANIELLE T. VLAZNY PA-C MS

Vascular Surgery
THOMAS C. BOWER MD, CHAIR
RANDALL R. DE MARTINO MD
JILL K. JOHNSTONE MD
MANJU KALRA MD
GUSTAVO S. ODERICH MD
FAHAD SHUJA MBBS

Vein Clinic
MELISSA J. NEISEN MD, DIRECTOR
GREGORY W. BARSNESS MD
EMILY C. BENDEL MD
HARALDUR BJARNASON MD
J. WELLS ASKEW III MD
RAYMOND J. GIBBONS MD
JOHN H. HALEY MD
TODD D. MILLER MD
MARTIN G. RODRIGUEZ-PORCEL MD

Vascular Medicine Clinic
ROBERT D. MCBANE MD, DIRECTOR
ANA I. CASANEGRA MD
MARK G. COSTOPoulos MD
DAVID A. FROEHLING MD
IFTIKHAR J. KULLO MD
IAN R. MCPHAIL MD
THOM W. ROOKE MD
ROGER F. SHEPHERD MB BCh
RAYMOND C. SHIELDS MD
PAUL W. WENNBerg MD
WALDEMAR E. WYSOKINSKI MD PhD

VASCULAR WOUND CLINIC
KAREN L. ANDREWS MD, DIRECTOR
ANA I. CASANEGRA MD
PAUL L. CLAUS MD
ROBERT HADDON MD MS
ROBERT D. MCBANE MD
IAN R. MCPHAIL MD
RAYMOND C. SHIELDS MD
WALDEMAR E. WYSOKINSKI MD PhD
CAROL J. BOOHAN APRN CNP DNP
DALENE M. BOTT-KITSLAAR APRN CNP
ALICE J. MALECHA APRN CNP MSN
DANIELLE T. VLAZNY PA-C MS

VASCULAR SURGERY
THOMAS C. BOWER MD, CHAIR
RANDALL R. DE MARTINO MD
JILL K. JOHNSTONE MD
MANJU KALRA MD
GUSTAVO S. ODERICH MD
FAHAD SHUJA MBBS

VEIN CLINIC
MELISSA J. NEISEN MD, DIRECTOR
GREGORY W. BARSNESS MD
EMILY C. BENDEL MD
HARALDUR BJARNASON MD
J. WELLS ASKEW III MD
RAYMOND J. GIBBONS MD
JOHN H. HALEY MD
TODD D. MILLER MD
MARTIN G. RODRIGUEZ-PORCEL MD

CARDIAC STRESS AND IMAGING
J. Wells Askew III MD, Director

Cardiopulmonary Stress Laboratory
Francisco Lopez-Jimenez MD, Director
Thomas G. Allison PhD MPH
Adelaide M. Arruda-Olson MD PhD
Amanda R. Bonikowske PhD
Frank V. Brozovich MD PhD
Bruce D. Johnson PhD
Birgit Kantor MD
Stephen L. Kopecky MD
Iftikhar J. Kullo MD
Thomas P. Olson PhD
Virend Somers MD PhD
Ray W. Squires PhD
Randal J. Thomas MD
Hector R. Villarraga MD

Nuclear Cardiology Laboratory
Panithaya Chareonthaitawee MD, Director
Omar F. Abou Ezzedine MD MS
Nandan S. Anavekar MD
J. Wells Askew III MD
Raymond J. Gibbons MD
John H. Haley MD
Todd D. Miller MD
Martin G. Rodriguez-Porcel MD

Stress Echocardiography
Robert B. McCully MD, Director
Naser M. Ammash MD
Nandan S. Anavekar MB BCh
Adelaide M. Arruda-Olson MD PhD
J. Wells Askew III MD
Sandia K. Birchem DO*
Lori A. Blauwet MD
Roger L. Click MD PhD
Michael W. Cullen MD*
Raul E. Espinosa MD
Monique A. Freund MD*
John H. Haley MD*
Robert J. Houlihan MD*
Garvan C. Kane MD PhD
Kyle W. Klarich MD
Joseph F. Maalouf MD
Sunil V. Mankad MD
Rowlens M. Melduni MD
Hector I. Michelaena MD
Fletcher A. Miller Jr MD
Andrew G. Moore MD*
Vuyisile T. Nkomo MD
Jae K. Oh MD
Steve R. Ommen MD
Patricia K. Pelilikka MD
Tyler J. Peterson MD*
Sorin V. Pislaru MD PhD
Lawrence J. Sinak MD
Peter C. Spittell MD

*Mayo Clinic Health System
Mechanical Circulatory Support
Simon Maltais MD PhD, Director
Richard C. Daly MD
John M. Stulak MD

Pediatric Cardiovascular Surgery
M. Sertac Cicek MD
Joseph A. Dearani MD
Sameh M. Said MD

Robotic Heart Surgery
Richard C. Daly MD
Joseph A. Dearani MD
Simon Maltais PhD

Transcatheter Aortic Valve Replacement/ Hybrid Surgery
Gabor Bagameri MD
Juan A. Crestanello MD
Kevin L. Greason MD
Simon Maltais PhD
Alberto Pochettino MD

PEDIATRIC CARDIOLOGY
Offers a full range of cardiology services for infants, children and adolescents, including evaluation and treatment of all forms of congenital heart disease, heart rhythm disorders, cardiomyopathy, heart failure, and genetic heart conditions.

Jonathan N. Johnson MD, Chair
Michael J. Ackerman MD PhD
Jason H. Anderson MD
Samuel J. Asirvatham MD
Allison K. Cabalka MD
Bryan C. Cannon MD
David J. Driscoll MD
Ben W. Eidem MD
Donald J. Hagler MD
Justin M. Horner MD
Timothy J. Nelson MD PhD
Patrick W. O'Leary MD
Timothy M. Olson MD
M. Yasir Qureshi MBBS
Nathaniel W. Taggart MD
Charlotte S. Van Dorn MD
Philip L. Wackel MD
Carole A. Warnes MD
Katy M. Bos APRN CNS MS
Sonja H. Dahl APRN DNP CNP

WILLIAM J. VON LIEBIG CENTER FOR TRANSPLANTATION AND CLINICAL REGENERATION
Charles B. Rosen MD, Director

Cardiology
Sudhir S. Kushwaha MD, Medical Director
Transplantation and VAD Program
Atta Bozhar MD PhD
Barry A. Bozhar MD
Alfredo L. Clavel MD
Shannon M. Dunlay MD
Brooks S. Edwards MD
Robert P. Frantz MD
Naveen L. Pereira MD
Richard J. Rodeheffer MD
John A. Schirger MD
Jean A. Wagner APRN CNP

Cardiovascular and Thoracic Surgery
Richard C. Daly MD, Surgical Director
Heart and Lung Transplantation
Stephen D. Cassivi MD
Joseph A. Dearani MD
Simon Maltais PhD
Alberto Pochettino MD
Sameh M. Said MD
John M. Stulak MD

Pediatric Cardiology
Jonathan N. Johnson MD, Medical Director
Pediatric Heart Transplantation
David J. Driscoll MD
Patrick W. O'Leary MD
Sonja H. Dahl APNR DNP CNP

Pulmonology
J. P. Scott MD, Medical Director
Lung Transplantation
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<tr>
<th>Name</th>
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<tr>
<td>Si M. Pham, MD</td>
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<td>Erol V. Belli, MD</td>
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<td>Magdy M. El-Sayed Ahmed, MD</td>
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<td>Samuel Jacob, MD</td>
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<td>Kevin P. Landolfo, MD MSc</td>
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<td>Ian A. Makey, MD</td>
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<td>Mathew Thomas, MBBS</td>
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### Heart Transplant and Mechanical Circulatory Support

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<tr>
<td>Kevin P. Landolfo, MD MSc</td>
<td>Surgical Director</td>
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<td>Daniel S. Yip, MD, MD</td>
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<td>Jeffrey D. Hosenpud, MD</td>
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<td>Juan Carlos Leoni Moreno, MD</td>
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<td>Parag C. Patel, MD</td>
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<td>Si M. Pham, MD</td>
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### Circulatory Failure

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<tr>
<td>Mohamad H. Yamani, MD</td>
<td>Director</td>
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<td>Leslie T. Cooper Jr, MD</td>
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<td>Keith R. Oken, MD</td>
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<td>J. Norman Patton, MD</td>
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<td>Steven Ung, MD</td>
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### Heart Rhythm Services

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<tr>
<td>Fred Kusumoto, MD, MD</td>
<td>Director</td>
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<tr>
<td>Thomas R. Flipse, MD, PhD</td>
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<tr>
<td>Christopher J. McLeod, MB ChB PhD</td>
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<td>Kalpathi L. Venkatachalum, MD</td>
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### Hypertrophic Cardiomyopathy

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<tr>
<td>Joseph L. Blackshear, MD</td>
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<td>Brian P. Shapiro, MD</td>
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### Ischemic Heart Disease

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<tr>
<td>Shahyar (Michael) Gharacholou, MD</td>
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<tr>
<td>Gary E. Lane, MD</td>
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<td>Dilip P. Pillai, MD</td>
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<td>Peter M. Pollak, MD</td>
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<td>Henry H. Ting, MD</td>
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### Marfan Syndrome Clinic

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<tr>
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<tr>
<td>Charles J. Bruce, MD</td>
<td>MD</td>
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<td>Keith R. Oken, MD</td>
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<td>Pragnesh P. Parikh, MD</td>
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### Pulmonary Hypertension Cardiology

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<td>Brian P. Shapiro, MD</td>
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### Sports Cardiology

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