The cardiology and heart surgery specialty at Aurora St. Luke’s Medical Center was ranked 37th in the nation in U.S. News & World Report’s 2017-18 Best Hospitals evaluation. For the sixth year in a row, Aurora St. Luke’s is the only Wisconsin heart program to achieve a national ranking.

"Patients with cardiac disease need care from highly trained and experienced medical providers able to develop targeted, individualized treatment strategies appropriate for their health history and lifestyle needs," said Jasbir Sra, MD, co-vice president of the Aurora cardiovascular and thoracic service line.

"Our physicians and the staff who support them are dedicated to this mission, and it is an honor to be recognized for the success of these efforts."

"This standout recognition of Aurora St. Luke’s was achieved thanks to the teamwork, passion and dedication of our caregivers. It demonstrates that we are living our mission to help people live well."

Marie Golanowski, MS, BS, BSN, RN
President, Aurora St. Luke’s Medical Center

The department’s scorecard included an “excellent” ranking for 30-day survival of patients, nurse staffing, use of advanced technologies and patient services.

“Aurora’s state-of-the-art technology enhances the physician’s ability to deliver timely and accurate diagnoses, life-saving cardiac treatments and procedures, and reliable follow-up care,” added Daniel P. O’Hair, MD, co-vice president of the Aurora cardiovascular and thoracic service line.

“At Aurora St. Luke’s, the well-being of our patients is our top priority,” Dr. O’Hair said. “We are committed to giving every patient care from a highly skilled and compassionate team of medical providers with cutting-edge technology at their disposal.”

In addition, U.S. News & World Report labeled the Aurora St. Luke’s program as “high performing,” the highest rank possible, in each of the individual cardiac procedures it studied: abdominal aortic aneurysm repair, aortic valve surgery, heart bypass surgery and heart failure treatment.
AURORA ST. LUKE’S CARDIOLOGY AND HEART SURGERY PROGRAM
IN TOP 50 IN NATION continued from pg. 1

Aurora St. Luke’s cardiac and vascular program offers clinical acumen in structural heart and peripheral vascular diseases, atrial fibrillation, channelopathies, heart failure and pulmonary hypertension, inherited cardiomyopathies, adult congenital heart disease, Marfan syndrome, and aortopathies. In addition, the program benefits from surgical expertise, including in heart transplantation and ventricular assist device implantation, and involvement in diverse clinical trials.

Aurora’s physician-researchers and the scientists from the Center for Integrative Research on Cardiovascular Aging research team had 58 manuscripts published, presented 71 abstracts, and wrote several textbook chapters in 2016. In addition, two Aurora cardiologists have been first author on national clinical trial publications, and the Aurora team is leading the world in a global transcatheter mitral valve replacement trial.

This year, 28 fellows-in-training are participating in Aurora Health Care’s active Cardiovascular Disease, Interventional Cardiology, Clinical Cardiac Electrophysiology, Advanced Clinical Electrophysiology and Heart Failure fellowship programs.

AURORA HEALTH CARE VOLUMES (SYSTEMWIDE)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>CARDIOVASCULAR SURGERY</td>
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<tr>
<td>Coronary artery bypass graft (CABG) total</td>
<td>921</td>
<td>941</td>
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<tr>
<td>CABG on pump</td>
<td>792</td>
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<tr>
<td>CABG off pump</td>
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<tr>
<td>Cardiac ablation – open (Maze)</td>
<td>122</td>
<td>212</td>
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<tr>
<td>Valve repair</td>
<td>93</td>
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<tr>
<td>Mitral valve repair</td>
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<td>39</td>
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<tr>
<td>Other valve repair</td>
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<tr>
<td>VALVE REPLACEMENT</td>
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<tr>
<td>Valve replacement</td>
<td>479</td>
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<tr>
<td>Surgical aortic valve replacement (SAVR)</td>
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<tr>
<td>Surgical mitral valve replacement</td>
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<tr>
<td>Other surgical valve replacement</td>
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<td>Transcatheter aortic valve replacement</td>
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<td>Patent foramen ovale/atrial septal defect closure total</td>
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<tr>
<td>Balloon valvuloplasty (percutaneous)</td>
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<tr>
<td>Transapical mitral valve replacement (TMVR)</td>
<td>14</td>
<td>4</td>
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<tr>
<td>HEART FAILURE AND TRANSPLANT</td>
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<tr>
<td>Ventricular assist device</td>
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<td>39</td>
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<tr>
<td>Heart transplant</td>
<td>24</td>
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<tr>
<td>INTERVENTIONAL CARDIOLOGY</td>
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<tr>
<td>Heart catheterization total</td>
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<td>Cardiac catheterization</td>
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<td>Angiogram without pressures</td>
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<td>Coronary intervention</td>
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<tr>
<td>With stent</td>
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<td>2,206</td>
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<tr>
<td>Without stent</td>
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<td>155</td>
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<tr>
<td>Myocardial biopsy</td>
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<tr>
<td>ELECTROPHYSIOLOGY</td>
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<tr>
<td>Cardioversion</td>
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<td>EP study</td>
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<td>Ablation - percutaneous</td>
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<td>Cardiac mapping</td>
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<tr>
<td>Lead extraction</td>
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</table>

Check out Aurora’s Cardiovascular and Thoracic Outcomes at aurora.org/heartandvascular-outcomes-report
The first transcatheter mitral valve replacement (TMVR) in the pivotal APOLLO Trial was successfully performed at Aurora St. Luke’s Medical Center in October. The trial aims to evaluate the Intrepid™ TMVR system (Medtronic, Dublin) for treatment of patients with severe mitral valve regurgitation.

Principal investigator, cardiothoracic surgeon Daniel P. O’Hair, MD, who also serves as co-vice president of the Aurora cardiovascular and thoracic service line, and Tanvir K. Bajwa, MD, interventional cardiologist, led the implantation team. They serve as Aurora's lead investigators for the global trial.

“TMVR represents a minimally invasive approach to treating mitral regurgitation, which may mean shorter hospital stays, less pain for patients and shorter recovery times when compared to open-heart surgery,” Dr. Bajwa explained. “In addition, some people who are not candidates for open-heart surgery may be able to benefit from TMVR.”

Mitral regurgitation is the backward flow of blood through the mitral valve into the atrium during left ventricular contraction. Untreated, it can lead to heart failure or death.

The APOLLO Trial is designed to evaluate the safety and efficacy of the Intrepid TMVR system in up to 1,200 patients with severe, symptomatic mitral valve regurgitation.

A cohort of patients who are candidates for conventional open-heart mitral valve replacement surgery but not eligible for mitral repair will be randomized to receive either the Intrepid TMVR system or surgical mitral valve replacement.

A separate cohort will enroll patients for whom conventional open-heart surgery is considered too great a risk. They will receive the Intrepid TMVR.

“Our team at Aurora Health Care has been a leader in transcatheter aortic valve replacement since its advent, but until recently, effective options for TMVR were lacking,” Dr. O’Hair said. “We are excited to continue to be on the forefront of a revolution in cardiac care.”

The Intrepid TMVR system integrates self-expanding, dual-stent technology with a replacement tissue heart valve that is delivered to the heart by catheter. It is available for investigational use only, and it is not approved for use outside of clinical studies.

For information about enrolling a patient in this trial, contact Senior Research Coordinator Michelle Bennett, BSN, at 414-385-1889 or michelle.bennett@aurora.org.

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**AURORA MEDICAL EDUCATION EVENTS**

**TBA | Milwaukee, WI**

**Greater Milwaukee Heart Failure Society Series**
Course Director: Nasir Sulemanjee, MD
Find us on Facebook for upcoming dates and speakers

5-6:30 P.M. | Every Tuesday

**Milwaukee, WI**

**Tuesday Evening Cardiology Conference**
Milwaukee Research Institute – accredited
Course Directors: Tanvir Bajwa, MD; Rami Gal, MD

**March 3, 2018 | Milwaukee, WI**

**New Developments in Cardiology**
Course Director: Tanvir Bajwa, MD; Suhail Allaqaband, MD; Jayant Khitha, MD

**May 5, 2018 | Milwaukee, WI**

**Milwaukee Heart Failure Symposium 2018**
Course Directors: Nasir Sulemanjee, MD; Vinay Thohan, MD; Frank Downey, MD

For information, contact Laurel Landis at 414-219-7684 or laurel.landis@aurora.org.

**PULMONARY HYPERTENSION PRECEPTORSHIP CLINICS**

**April 18-19, June 6-7, September 26-27, October 24-25, 2018 | Milwaukee, WI**
Medical Director: Dianne Zwicke, MD

For information, contact Patty Maglio, preceptorship coordinator, at 414-646-1909 or patricia.maglio@aurora.org.
Tuberculosis end-stage heart disease

The advanced heart failure team at Aurora St. Luke’s Medical Center reached a new milestone in October 2017 when it implanted its 800th ventricular assist device, giving a 58-year-old man with ischemic cardiomyopathy the opportunity to live a full life while he awaits heart transplantation.

The Donald and Rosemary Tendick, Sr., Center for Advanced Heart Failure Therapies offers top-line care to people with end-stage right and left heart disease, supporting the patient throughout diagnosis and treatment with a multidisciplinary team that includes:

- Heart failure cardiologists
- Thoracic surgeons
- Nurse practitioners
- Pharmacists
- Biomedical engineers
- Psychologists
- Nutritionists
- Palliative care experts
- Pastoral care

“Our team has performed nearly 900 heart transplants and now 800 artificial heart pumps, making our program among the largest in the world to offer life-saving heart replacement options,” said Vinay Thohan, MD, director of the Center for Advanced Heart Failure Therapies.

Outcomes for transplanted grafts and patient mortality rates exceed expected outcomes, based on the Scientific Registry of Transplant Recipients website. Ventricular-assist device implantation survival rates exceed the InterMACs benchmarks for 180-day survival.

Pulmonary Hypertension Clinic

“Pulmonary hypertension – high blood pressure in the arteries in the lungs – stresses the heart and makes breathing difficult. It can be challenging to accurately diagnose,” Dr. Thohan explained.

Aurora’s Pulmonary Hypertension Clinic is one of only 47 in the nation accredited as a center of excellence by the Pulmonary Hypertension Association. Experienced experts help patients understand their diagnosis as well as the treatment options and lifestyle changes that can improve their health and quality of life.
The Advanced Heart Failure and Transplant Fellowship Program at Aurora Health Care has been training physicians for more than 10 years, providing a progressive and structured curriculum with an emphasis on personalized patient care, leadership skill development and best research practices.

The program, designed to provide a comprehensive clinical and academic education, is instructed by a multidisciplinary team of 10 dedicated advanced heart failure and transplant cardiologists and thoracic surgeons.

Nasir Sulemanjee, MD, serves as the fellowship program director. He has been in this role for the past six years.

The fellows spend their time at Aurora St. Luke’s Medical Center, a quaternary center in Milwaukee that is one of 15 hospitals in the Aurora Health Care system.

Aurora St. Luke’s has an exceptionally high volume of all advanced heart failure therapies, with its staff performing 25 to 35 heart transplants and implanting about 50 left ventricular assist devices annually. It boasts the largest experience in Wisconsin, with more than 850 heart transplants and more than 800 mechanical circulatory support device implantations since the inception of the program in 1984.

The Advanced Heart Failure and Transplant Fellowship Program is accredited by the Accreditation Council for Graduate Medical Education. It is a one-year track, with graduating fellows eligible for American Board of Internal Medicine – Advanced Heart Failure certification. The program has a 100% board pass rate, and all of the past fellows have gone on to successful careers.

For information about Aurora’s Advanced Heart Failure and Transplant Fellowship Program, contact Serena Messer at 414-649-5841 or serena.messer@aurora.org, or visit medicalprofessionals.aurorahealthcare.org/meded and click on “Heart Failure.”

Richard Carballo, MD, has been named medical director for vascular services at Aurora Health Care.

In this position, Dr. Carballo provides strategic direction, leadership and oversight in the development of a multispecialty and multidisciplinary vascular program in collaboration with the cardiovascular service line, medical group leadership and local leadership.

Dr. Carballo and his team are responsible for ensuring that integrated, high-quality, cost-effective and comprehensive vascular services are available throughout Aurora’s network of 15 hospitals and more than 150 clinics in Wisconsin and northern Illinois. He oversees the consistent application of clinical and administrative practices that reflect clinical best practices and take into account quality, outcomes and safety standards.

Dr. Carballo joined Aurora in 1995. Prior to his new role, he served as director of vascular surgery at Aurora St. Luke’s Medical Center in Milwaukee.

He received his medical degree from the University of Illinois-Chicago, performed his surgical graduate training at Loyola University Chicago, and completed his vascular surgery fellowship at the Medical College of Wisconsin. His accreditations include the National Board of Medical Examiners and the American Board of Surgery.
Aurora St. Luke’s Medical Center is the only Wisconsin-based clinical trial site participating in a research study to test the effectiveness of a new left atrial appendage (LAA) closure device in reducing the risk of thromboembolism among subjects with nonvalvular atrial fibrillation.

Electrophysiologist Jasbir Sra, MD, and interventional cardiologist Tanvir Bajwa, MD, are the local principal investigators for the AMPLATZER Amulet LAA Occluder Trial (Amulet IDE) (clinicaltrials.gov identifier: NCT02879448).

“Atrial fibrillation increases the risk of stroke by five times,” explained Dr. Sra, co-vice president of the Aurora cardiovascular and thoracic service line. “And when stroke does occur, a person with atrial fibrillation tends to have a worse prognosis.”

The AMPLATZER Amulet (manufactured by Abbott) is designed to seal the left atrial appendage, a small opening in the left atrial muscle wall where blood can clot and later re-enter the circulation, possibly causing a stroke.

“LAA closure devices offer an alternative to anticoagulant therapy in patients with atrial fibrillation, avoiding the increased bleeding risks associated with these blood thinners,” Dr. Bajwa noted.

The Amulet IDE study is a randomized, multicenter active-control study being conducted at various medical centers around the globe. Subjects randomized to the treatment arm will receive an Amulet LAA occlusion device, while those in the control arm will receive a U.S. Food and Drug Administration-approved LAA closure device.

To be eligible for the study, an adult patient must have documented paroxysmal, persistent or permanent nonvalvular atrial fibrillation and must not have been diagnosed with rheumatic mitral valve heart disease. Further, the patient must be at high risk of stroke or systemic embolism, and must have an appropriate rationale for seeking an alternative to anticoagulation medication.

The study will examine procedure-related complications, device performance and participant outcomes, including major bleeding, ischemic stroke, systemic embolism and death.

In the U.S., the Amulet is an investigational device limited by federal law to investigational use.

For more information, contact Senior Research Coordinator Anthony Chambers, BSN, at 414-385-2565 or anthony.chambers@aurora.org.

**Physician Recruitment**

**David Demos, MD • Thoracic Surgery**

Dr. Demos joined the Cardiovascular and Thoracic Surgery Department in July, and practices at both Aurora St. Luke’s Medical Center in Milwaukee and Aurora Medical Center in Summit. He provides diagnosis and treatment for all diseases of the lungs, airway, pleura, mediastinum, chest wall and esophagus, utilizing minimally invasive and robotic techniques. Dr. Demos earned his medical degree at the Wayne State University School of Medicine in Detroit. He completed his general surgery residency at Henry Ford Hospital in Detroit, a Cardiothoracic Surgery Fellowship at the Stanford University School of Medicine in Stanford, California, and a Research Fellowship at the University of Michigan Extracorporeal Life Support Laboratory. Dr. Demos is board certified.

**Peter Diamond, MD • Noninvasive Cardiology**

Dr. Diamond joined the Cardiology Department at Aurora Memorial Hospital of Burlington in June. He is board certified in internal medicine and cardiovascular disease. After earning a medical degree from the Loyola University Chicago Stritch School of Medicine, he completed his residency and a Cardiovascular Disease Fellowship at Loyola University Chicago. Prior to joining Aurora Health Care, Dr. Diamond practiced in Illinois, where he also served as a clinical assistant professor of medicine in the Section of Cardiology at the University of Illinois Hospital & Health Sciences System, at the University of Illinois at Chicago. He is a fellow of the American College of Cardiology, Society for Cardiac Angiography and Interventions, and American College of Physicians, as well as a member of the Alpha Sigma Nu Jesuit Honor Society and a clinical advisor of the American Running and Fitness Association.
**Asad Ghafoor, MD • Advanced Heart Failure Therapies**

Dr. Ghafoor began seeing patients at the Center for Advanced Heart Failure Therapies at Aurora St. Luke’s Medical Center in Milwaukee in September. He earned his medical degree from Khyber Medical College in Peshawar, Pakistan, and undertook his residency and a Cardiovascular Disease Fellowship at the University of Arizona Medical Center in Tucson. He completed an Advanced Heart Failure and Transplant Cardiology Fellowship at the University of Michigan Health System. Dr. Ghafoor is board certified in advanced heart failure and transplant cardiology, cardiovascular disease and internal medicine.

**Rajeev Gupta, MD • Vascular Surgery**

Dr. Gupta joined Aurora’s vascular surgery program in July. He sees patients at Aurora St. Luke’s Medical Center in Milwaukee and Aurora West Allis Medical Center. Dr. Gupta earned his medical degree at Sawai Man Singh Medical College in Jaipur, India, and completed his residency in general surgery and fellowship in vascular surgery at Northwell Health in Manhasset, NY. He is board certified in general and vascular surgery, and has earned the Registered Physician in Vascular Interpretation credential. Dr. Gupta provides endovascular repair of abdominal and thoracic aortic aneurysms, open and endovascular repair of aortoiliac disease, carotid endarterectomy, endovascular intervention for peripheral vascular disease, infrainguinal reconstruction, inferior vena cava filter placement and retrieval, and treatment for aortic dissection, renal or mesenteric vascular diseases and varicose veins. Clinical interests include combined open and endovascular revascularization for peripheral vascular disease.

**Patrycja Galazka, MD • Noninvasive Cardiology**

Dr. Galazka completed an Advanced Multimodality Cardiovascular Imaging Fellowship at Brigham and Women’s Hospital in Boston before taking a position with Aurora Health Care in October. She sees patients at Aurora West Allis Medical Center, and reads cardiovascular imaging studies at Aurora St. Luke’s Medical Center in Milwaukee. Dr. Galazka’s clinical interests include multimodality cardiovascular imaging, preventive cardiology, women’s cardiovascular health and valvular heart disease. She earned her medical degree at Jagiellonian University Medical College in Krakow, Poland, and completed her residency at Advocate Lutheran General Hospital in Park Ridge, IL. She is fellowship trained in Cardiovascular Disease and Multimodality Imaging. She completed a program in clinical effectiveness at the Harvard T.H. Chan School of Public Health, and is board certified in internal medicine and cardiovascular disease.

**Setu Trivedi, DO, MSE • Interventional Cardiology**

Dr. Trivedi, who joined the Cardiology Department at Aurora Medical Center in Kenosha in August, recently completed an Interventional Cardiology Fellowship at Detroit Medical Center. He also has completed a Cardiovascular Disease Fellowship at Aurora Sinai/Aurora St. Luke’s Medical Centers in Milwaukee. Dr. Trivedi earned his doctorate in osteopathic medicine from Midwestern University’s Arizona College of Osteopathic Medicine and completed his residency at University Hospital in Cincinnati. He holds a master’s degree in biomedical engineering with a research focus in cardiovascular biomechanics. His clinical interests include cardiac catheterization and percutaneous coronary interventions.

**Dajun Wang, MD • Interventional Cardiology**

Dr. Wang joined the interventional cardiology staff at Aurora Medical Center in Kenosha in July, after graduating from the Cardiovascular Disease and Interventional Cardiology Fellowship programs at Aurora Sinai/Aurora St. Luke’s Medical Centers in Milwaukee. He earned his medical degree from the Medical College of Xi’an Jiaotong University in Xi’an, China, and completed his residency at Aurora Sinai/Aurora St. Luke’s. Dr. Wang is board certified in internal medicine and cardiology. In addition to his clinical interests, Dr. Wang has a strong background in medical research. His practice interests include cardiac catheterization and percutaneous coronary interventions. He is fluent in English and Chinese (Mandarin).

**Firas Zahwe, MD • Electrophysiology**

Dr. Zahwe, board certified in clinical cardiac electrophysiology, cardiovascular disease and internal medicine, joined the staff at Aurora St. Luke’s Medical Center in Milwaukee in July. He provides complex arrhythmia mapping and ablation for conditions including atrial fibrillation, atrial flutter, supraventricular tachycardia, and ventricular arrhythmia; non-pharmacological stroke management and prevention; and advanced lead and device management, including cardioverter-defibrillator (ICD), pacemaker, biventricular device, subcutaneous ICD, and leadless pacemaker implantation, as well as laser lead extraction. Dr. Zahwe is interested in atrial fibrillation screening, management and prevention and participates in local and national clinical research studies. He has completed fellowships in cardiovascular disease, cardiac electrophysiology and advanced cardiac electrophysiology at Aurora Sinai/Aurora St. Luke’s Medical Centers in Milwaukee. Dr. Zahwe earned his medical degree from Tishreen University in Lattakia, Syria and completed his residency at Advocate Christ Medical Center in Chicago.
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