

Oregon Health & Science University

Cardiovascular Medicine at OHSU: Strengths and Priorities

Prevention

- OHSU is a national leader in studying the developmental origins of disease, such as how certain factors in the prenatal environment can make people more susceptible to heart disease and obesity.
- The OHSU Bob & Charlee Moore Institute for Nutrition & Wellness promotes better heart health through nutrition and obesity prevention.

Diagnosis

- The OHSU Center for Cardiovascular Imaging brings internationally respected experts in ultrasound, MRI, CT, PET and other imaging modes together to create better ways to diagnose and treat heart attacks and artery diseases.
- OHSU's telemedicine technologies and outreach programs extend advanced expertise into communities and clinics across Oregon.
- Sanjiv Kaul, M.D., developer of the powerful micro-bubble-based myocardial contrast echocardiography (MCE) technique, directs the West Coast's only MCE program at OHSU.

Healing

- OHSU is the state's only provider of clinical services for end-stage heart failure and heart transplants.

- OHSU has advanced programs for the placement and follow-up care of the latest Left Ventricle Assist Devices and percutaneous pulmonary artery valves.
- OHSU is one of a small group of U.S. hospitals selected to offer the latest advance in cardiovascular medicine: the transcatheter aortic valve, designed to save the lives of patients too old or sick for open-heart valve replacement.
- OHSU Doernbecher Children's Hospital's pediatric cardiac surgery and intensive care program for congenital heart defects are the region's best.

Discovery

- OHSU heart researchers are identifying the genetic and biochemical underpinnings of heart valve defects, vascular disease, rhythm disorders and other potential targets for drug therapies.
- A multi-institutional team at the OHSU Center for Spatial Systems Biomedicine is exploring key questions in the genetics of heart disease, such as why it runs in some families and which experimental drugs will deliver the most benefit with fewest risks.
- Scientists across OHSU have identified biological markers and promising drug candidates for treatment of cardiac and stroke damage.

Cardiology at OHSU: Milestones and Accomplishments

OHSU's cardiovascular specialists have driven innovation in Oregon — and the nation — for many decades.

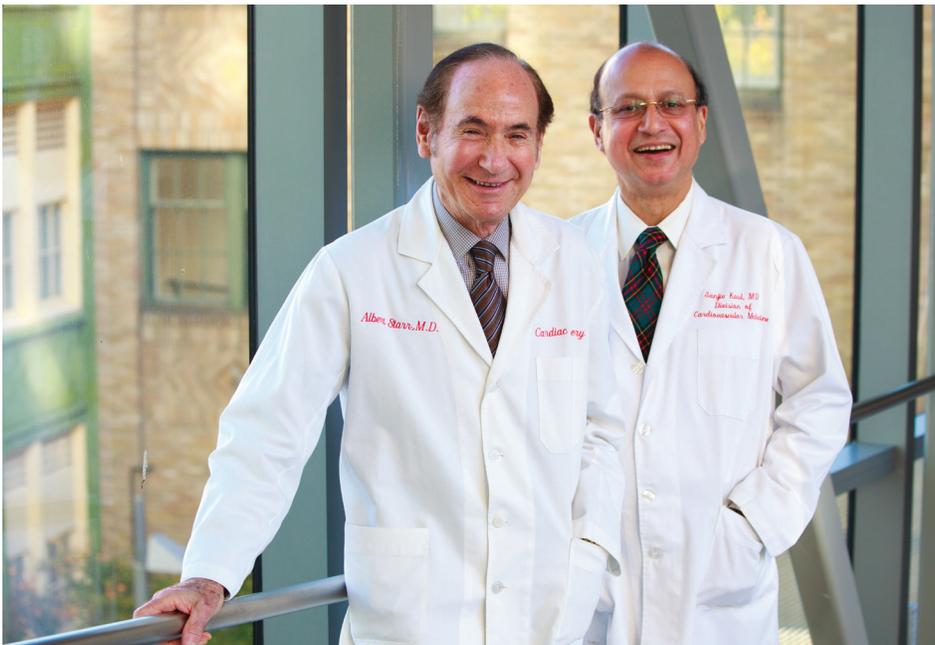
- Performed the first pediatric open-heart surgery in Oregon.
 - First introduced the concept of transluminal angioplasty, using multiple catheters of increasing diameter to open blocked arteries and improve blood flow in patients with peripheral arteriosclerosis.
 - Invented the first prosthetic heart valve (The Starr-Edwards valve).
 - Discovered the role of embryonic heart development and its relationship to long-term cardiovascular health and adult heart disease, illuminating the importance of maternal nutrition during pregnancy.
 - Found that fetal and maternal blood have different oxygen curves.
 - Established a computerized 3-D model of a developing heart.
 - Discovered that strength training has cardiovascular benefits.
 - Revealed that women tend to develop cardiovascular disease 10 years later than men.
 - Identified homocysteine as a risk factor for heart disease and established folic acid as the key to preventing that risk.
- Invented the artificial venous valve that does not require surgery and provides an alternative to traditional supportive treatment, such as special stockings or boots.
 - First in the region and one of a handful in the nation to implant a pulmonary heart valve without open-heart surgery.
 - Discovered a clot-forming protein in the blood that is a precursor to coronary artery disease.
 - Performed what is thought to be the first Ross mitral valve replacement procedure on the West Coast and one of only 10 in the United States. The procedure replaces a patient's mitral valve with a pulmonary valve from the top of the heart, and places a cadaver valve in the pulmonary position.
 - Established the link between diet folate and congenital heart disease.
 - Discovered the association between the CRELD-1 gene and cardiac malformation known as endocardial cushion defects.

OHSU Cardiovascular Institute Leadership

The new OHSU Cardiovascular Institute will be led by Albert Starr, M.D., who launched the modern era of cardiology at OHSU, and Sanjiv Kaul, M.D., OHSU's head of cardiovascular medicine whose pioneering work is helping to define what's next. With their leadership, the OHSU Cardiovascular Institute is ready to make heart disease history.

Albert Starr, M.D., a distinguished professor in OHSU's Division of Cardiovascular Medicine, co-invented and implanted the first artificial heart valve in the 1960s, which transformed survival rates for people with heart disease. Starr will serve as the new institute's chairman, leveraging his extraordinary experience to enhance and build OHSU's public and private partnerships in research, education, clinical care and outreach to improve health in Oregon — and far beyond. Dr. Starr received the nation's highest scientific honor, the Lasker-DeBakey Award, in 2007 for his extraordinary achievements.

Sanjiv Kaul, M.D., Ernest C. Swigert distinguished professor of cardiology, professor of medicine and radiology, and head of OHSU's Division of Cardiovascular Medicine, will serve as the institute's chief executive. Kaul developed a pioneering non-invasive diagnostic procedure called microbubble-based myocardial contrast echocardiography, which detects heart attacks that other methods miss. This revolutionary technology saves lives every day. In March 2012, the American College of Cardiology presented Kaul with its 2012 Distinguished Scientist Award in recognition of his contributions to the advancement of scientific knowledge.



Albert Starr, M.D. (left) and Sanjiv Kaul, M.D. (right)