Tetsuzo Akutsu, MD, PhD, was a world expert in the field of artificial heart development. In the 1950s, Dr. Akutsu was a member of Willem Kolff’s artificial heart team at the Cleveland Clinic. In 1957, that group implanted a total artificial heart in an animal that lived for 90 minutes—the first successful experimental implant of a total artificial heart in the United States. Dr. Akutsu was Dr. Kolff’s chief collaborator in these pioneering efforts, and his monumental contribution has been well described.

In 1969, Dr. Denton A. Cooley implanted the first total artificial heart in a human being. Shortly thereafter, in 1972, Dr. Cooley formed the Cullen Cardiovascular Surgical Research Laboratory at the Texas Heart Institute (THI) under the direction of Dr. John Norman. At the time, this laboratory was one of few in the country devoted to the development of mechanical circulatory assist devices. Dr. Akutsu came to THI in 1974 to become the assistant director of the Laboratory. At THI, he continued to develop his total artificial heart.

I became interested in this work in the 1960s while I was a medical student at Baylor and was able to participate in Dr. Michael DeBakey’s artificial heart program. Subsequently, as a thoracic surgery resident at THI, I had the good fortune to work with Dr. Akutsu and with Dr. Norman. Working with Dr. Akutsu was one of the highlights of my early experience in this field. I was always impressed with his professionalism, his dedication, and his fidelity to the mission that he had initiated with Dr. Kolff in the 1950s.

In 1981, Dr. Akutsu’s work culminated in the implantation of the second artificial heart in a human being; this operation was also performed by Dr. Cooley and his team at THI. Successful implantation of that heart was, I know, a great satisfaction to Dr. Akutsu. After he returned to Japan, Dr. Akutsu continued his major leadership role in this field with the publication of *Heart Replacement: Artificial Heart* and with his support of young investigators.

As the current director of the THI Laboratory, I have benefitted greatly from Dr. Akutsu’s kindness, and from his advice and example. His presence will be sorely missed and his contributions long remembered by all who had the privilege of knowing and working with him.

Dr. Akutsu is survived by his 2 children: Misako and Toru Akutsu.

O.H. Frazier, MD,  
Director, Cardiopulmonary Transplantation  
and Cardiovascular Surgical Research,  
Texas Heart Institute

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Addendum

I would also like to express my admiration for Dr. Tet-suzu Akutsu, whom I met during a fascinating period in our careers. His development of a total artificial heart came at a crucial time in the history of cardiac surgery. I was fortunate to have been able to use his Akutsu III heart as a bridge to transplant, to sustain the life of a dying patient until we had time to find a donor heart (see photo this page). Although Dr. Akutsu was somewhat hesitant at the time to have the device used clinically, he was dedicated to ensuring that our patient survived until a donor was found. After leaving the Texas Heart Institute, Dr. Akutsu used his expertise to stimulate other investigators and corporate sponsors to continue development of artificial devices to support the heart and circulation.

Dr. Akutsu and I remained friends throughout our careers. I respected him greatly and will remember him as a leader in the field of cardiovascular medicine.

Denton A. Cooley, MD,
President and Surgeon-in-Chief,
Texas Heart Institute

From Life magazine, September 1981. Dr. Akutsu displays the two halves of the artificial heart that he designed, after its explantation on 27 July 1981. The patient received a donor heart at THI and lived another 8 days. Photograph by Enrico Ferorelli.