

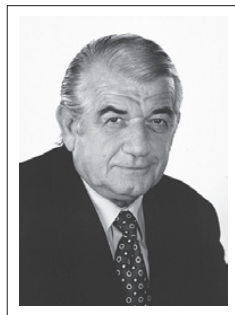
Professor Zbigniew Religa (1938–2009).

An outstanding cardiac surgeon.

Director, Chancellor, Member of Parliament, Senator, and Minister

“In order to ignite enthusiasm in others, you yourself must be burning with it...”

He was born on 16 December 1938 in Miedniewice, a district of Grodzisk Mazowiecki (today Żyrardów), to a family of teachers. He obtained his General Certificate of Secondary School in 1956 from the Limanowski Secondary School in Warsaw. From 1956 to 1963, he studied Medicine at the Warsaw Medical Academy. Following his military service in 1966 he started work at the Wolski Hospital in Warsaw, where under the supervision of Associate Professor Waclaw Sitkowski he specialized in general surgery and where he remained until 1980.



In 1973, he obtained his doctoral degree, with a thesis on: ‘Reactive hyperemia in coronary circulation with myocardial contractility in conditions of assisted circulation in dogs’. He then passed the ECFMG exam (Educational Commission for Foreign Medical Graduates) and was granted a scholar-ship at Mercy Hospital in New York. In 1975 and 1976, he was a resident at the Sinai Hospital in Detroit, where under the supervision of Dr A. Kantrowitz and Dr G. Wesolowski, he gained experience in the field of modern cardiac and vascular surgery.

In 1980, he transferred to the II Clinic of Cardiac Surgery at the Cardiac Surgery Institute in Warsaw run by Prof. Waclaw Sitkowski, a distinguished pioneer in Polish cardiac surgery. In 1981, he earned his post-doctoral qualification and returned to the USA to train in cardiac surgery at the Deborah Heart and Lung Center in New Jersey. In 1983, he was nominated Assistant Professor at the Cardiology Institute in Warsaw.

In 1984, of his own initiative, he moved to Zabrze, where he won the position of Head of the Faculty and Clinic of Cardiac Surgery, at the Sile-

sian Medical Academy. The following year, on 15 August, at the new center, the Regional Center of Cardiology in Zabrze (now known as the Silesian Center for Heart Diseases), he initiated a modern cardiac surgery program. 15 August saw him conduct the first operation with the personal participation of Prof. Waclaw Sitkowski, the guest of honor who performed the surgery. Less than three months later, on 5 November 1985, with a new team, Zbigniew Religa performed the first successful heart transplant. In 1995, he received the title of Associate Professor at the Medical University of Silesia, and in 1997 the title of full Professor.

He ran and dynamically developed the Zabrze Center for 15 years, i.e. until 30 September 1999. In 1987, he performed the first heterotopic heart transplant in Poland in a patient with cardiac failure and pulmonary hypertension. In the same year, on Religa’s initiative, a heart and lung transplantation was attempted, and xenotransplantation of a pig heart into a human was performed. It was only the second clinical experiment of this type made with the approval of the Ethical Committee in Europe, the first being a surgery carried out by the famous heart surgeon M. Yacoub from the United Kingdom. The procedure was preceded by more than a year’s preparations and experimental studies carried out together with Prof. A. Alexander from Brussels, and biologists, Prof. J. Czaplicki and Prof. B. Błońska from the Medical University of Silesia.

With the support of Prof. Religa, Zabrze’s cardiac surgeons actively participated in the angioplasty in fresh myocardial infarction program initiated by Prof. Stanisław Pasyk in Zabrze in 1985. They took part in surgical revascularization in fresh myo-

cardial infarction with the involvement of the trunk, also in the most difficult patients with cardiogenic shock, obtaining good results.

In 1988, thanks to the efforts of Prof. Religa, the lecturers at the International Congress of Cardio-Thoraco-Vascular Surgery in Katowice were professors who were then world leaders in cardiac surgery: Sir Brian Barratt-Boyes (New Zealand), Donald Ross (United Kingdom), Ronald Hetzer (Germany), Gerald Buckberg (USA), Walt Angel (USA), L. Gonzalez-Lavin (USA), Bruno Messmer (Germany), Freddy Vermeulen (Holland), John Bailey (United Kingdom), Daniel Walther (Belgium), Francis Hitchcock (Holland), Andree Moulert (Holland), and many others.

Between 1985 and 1999, under the guidance of Prof. Religa, the Zabrze center, with the active participation of its students and employees, enriched Polish cardiac surgery by new, previously unknown in Poland, solutions, such as arterial revascularization with the introduction of both thoracic arteries (1987), the inferior epigastric artery (1992) and the radial artery (1995) in the treatment of ischemic heart disease.

Blood cardioplegia was introduced in 1988 and additionally administered into the coronary sinus in coronary and valve defect surgery. New in Poland treatment methods of paroxysmal ventricular tachycardia were developed, together with intraoperative mapping and new methods of autooxygenation using the patient's own lungs. In 1993, for the first time in Poland, in Zabrze, pulmonary thromboendarterectomy was carried out in chronic pulmonary venous thromboembolism.

In collaboration with world-leading surgeons and cardiac surgeons, new pioneering treatment methods were introduced in Zabrze. In 1993, Dr Stuart Jamieson of the University of San Diego performed in Zabrze the pulmonary thromboendarterectomy. Dr J. Chachques carried out the first cardiomyoplasty using the latissimus dorsi to support the work of the failing heart, while Randal Batista from Brazil performed in Zabrze a reduction ventriculoplasty.

Poland's first implantation of a stentless aortic valve was performed in 1998 in a 75 year-old patient by S. Westaby from the University of Oxford. The first implantation of prototype stent grafts of the center's own production was carried out in 1998 in Zabrze by Prof K. Lauterjung from Munich, Germany in patients with thoracic aortic aneurysm. In 1999, Dr Kit Arom from the University of Minneapolis conducted the first minimally invasive mitral valve implantation, thereby starting the program of minimally invasive mitral valve surgery in Zabrze.

Prof. Religa's students and alumni have created and developed modern cardiac surgery units in Poland: Marian Zembala with Piotr Knapik, Roman Przybylski, Jerzy Pacholewicz, Bogdan Ryfiński, Bronisław Czech, and Jacek Wojarski in Zabrze; Andrzej Bochenek, Stanisław Woś, Ryszard Bachowski, and Tadeusz Ceglarek in Zabrze and Katowice-Ochojec; Jacek Moll in Zabrze and Łódź; Janusz Skalski in Zabrze and Kraków; Michał Wojtalik in Zabrze and Poznań; Bronisław Czech, Jacek Wojarski and Ewa Kucewicz in Zabrze and Białystok, Tadeusz Gburek in Zabrze and Zamość; Jacek Skiba, Witold Gwóźdź and Roman Cichoń in Zabrze and Wrocław; Jacek Kaperczak and Jan Borzymowski in Zabrze and Opole; and Ireneusz Haponiuk in Gdańsk.

In 1987, Prof. Religa initiated an educational aid program in the field of modern cardiac surgery and cardiology, training doctors from Ukraine and Georgia. Today, this is the largest Polish professional training aid program in cardiovascular diseases, and includes 22 cardiology and cardiac surgery centers, not only in Ukraine and Russia, but also Cyprus, Kosovo and Slovakia.

Due to Zbigniew Religa's special interest in mechanical circulatory assistance, in 1986 the Clinic in Zabrze began co-operation with the then recognized and accessible to us international medical centers in Brno, Czechoslovakia and Moscow, USSR. As a result of this international collaboration of teams led by Prof. Religa with foreign partners including professors Jaromir Vasku and Stefan Czerny from Brno and Sergey Shumakow from Moscow, the first clinical implantation of Czech pneumatic left ventricular assist pumps was performed in Zabrze: BRNO-VAD (1986) and BRNO-TAH (1987). The POL-VAD (1993) and POL-TAH (1996) Polish pumps assisting the failing were an original achievement and a personal success of Zbigniew Religa and his team of cardiac surgeons and bioengineers (R. Curator, Z. Nawrat, P. Wilczek) in Zabrze.

In 1992–1995, Zbigniew Religa was an adviser to the President of Poland, Lech Wałęsa. At the same time, he continued to supervise work on the Polish artificial heart. In 1991, together with Dr. Jan Sarna and Silesian cardiac surgeons and bioengineers, he created the Foundation for Cardiac Surgery Development. The Foundation's objectives are the implementation of new technologies into clinical practice, scientific research, and a training and scholarship program for Polish and foreign medical personnel.

In 1993, Zbigniew Religa became Director of the Institute of Heart Prosthesis of the Foundation

for Cardiac Surgery Development. He was a member of the Scientific Council (1992) and the National Council of Transplantation (1993) at the Ministry of Health.

Also in 1993, at the personal request of President Wałęsa, he ran for the Senate and won a mandate for the 1993–1997 term.

Beside active participation in the country's political life, he was also the Vice Chancellor of the Silesian Medical Academy from 1996 to 1999. In 1999, after returning to Warsaw from Zabrze, he was invited to run the Central Clinical Hospital in Warsaw, where he launched the first heart transplant program in the capital. In 2000, he became involved in the realization of a scientific grant aiming to create a prototype of a Polish cardiosurgical robot.

From 2001, he ran the II Clinic of Cardiac Surgery and was Director of the Institute of Cardiology in Warsaw-Anin. During that time, he was re-elected to the Senate (2001–2005). He participated in numerous official foreign delegations of the Polish parliament. In 1998–2001, he was national expert in cardiac surgery. From 2005 to 2007, he was Minister of Health in the governments of first Kazimierz Marcinkiewicz, and then Jarosław Kaczyński.

Professor Religa authored more than 160 original scientific papers and books, including 'Outline of Cardiac Surgery' (1987) and 'Pediatric Cardiac Surgery' (2003). He was the initiator and executor of scientific research programs on the clinical use of the artificial heart, and the creation of a Polish biological valve and a prototype artificial heart.

His contribution to the development of international scientific contacts was outstanding. He maintained active co-operation with renowned foreign centers, such as the Transplantation Institute in Cambridge (United Kingdom), Cardiology Clinic in San Diego (USA), the Favaloro Foundation in Argentina, the Academy of Medical Sciences in Georgia, the Medical University of Lvov (Ukraine), the National Institute of Cardiology in Mexico, and

the Institute of Transplantation and Artificial Organs in Moscow (Russia).

He was a member of many scientific societies, including: the European Society for Cardiovascular Surgery, International Society for Heart and Lung Transplantation, European Association for Cardio-Thoracic Surgeons, the European Society of Artificial Organs, the American College of Angiology, the Association of Polish Surgeons, the Polish Cardiac Society and the Polish Society of Transplantation. He was invited to deliver more than 100 papers at international congresses and scientific meetings.

For his outstanding and pioneering work in the field of cardiac surgery and transplantation, he was awarded the highest national honors, including the Commander's Cross with Star of the Order of Polonia Restituta (1995), the Grand Cross of the Order of Polonia Restituta (1998), and the Order of the White Eagle (2009).

He was Doctor *Honoris Causa* of five universities: the Medical University of Lvov (1997), the Białystok Medical Academy (1998), the Medical University of Silesia (2000), the University of Opole (2002) and the Medical University of Warsaw (2004).

He received the first degree award from the Minister of Health five times. His medals included: the Tadeusz Orłowski Medal of the Polish Association of Surgeons, the Gloria Medicinae of the Polish Medical Association, the gold medal of the Association of Polish Physicians 'Medicus' in New York, the Alfred Jurzykowski award in New York and the Commander's Cross of the Order of Innovation, given by the Supreme Commission of Distinctions of the Kingdom of Belgium. He was also awarded the Order of the Smile.

His passions were fishing and supporting Górnik Zabrze, his favourite soccer team.

He died of lung cancer on 8 March 2009 in Warsaw.

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