Fundació Puigvert

Nota de prensa

Dr. Alberto Breda performs the world's first transcontinental partial nephrectomy, from Bordeaux to Beijing, via tele-surgery

- **The surgery, performed a week ago, involved the removal of a kidney tumor through remote robotic surgery, carried out from Bordeaux (France) to Beijing (China), over 8,000 km apart.**
- **The patient was discharged the day after surgery and, one week later, is recovering at home without complications.**
- **Alberto Breda has set a historic milestone at the European Robotic Urology Symposium (ERUS), marking a major advance in minimally invasive surgery.**
- **International experts predict that this milestone signifies the dawn of "tele-surgery" in the coming years, offering new applications such as collaborative surgery and remote training.**

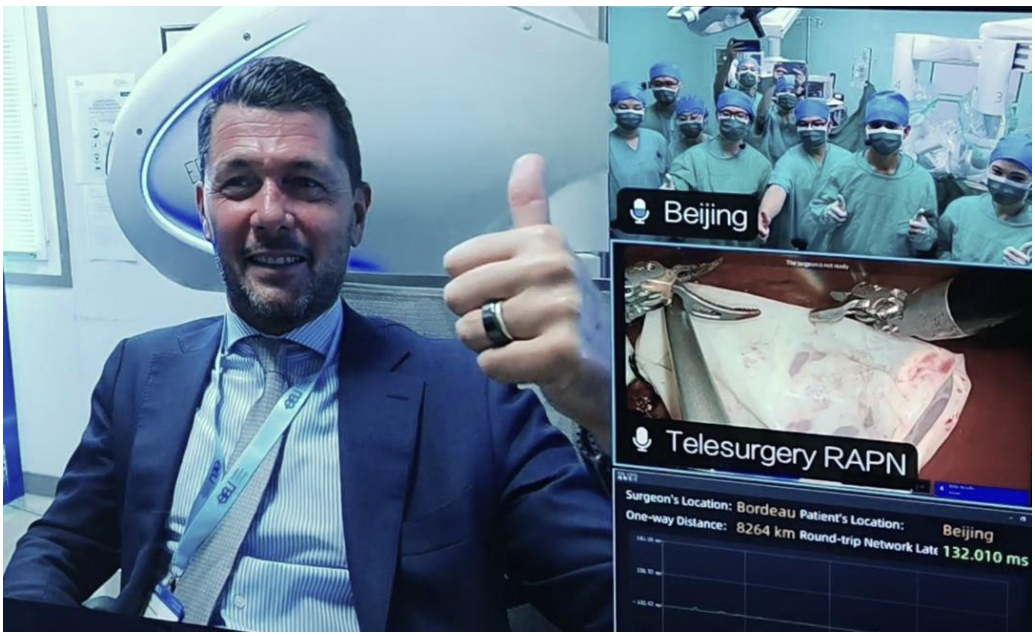

Photo: Dr. Alberto Breda, Head of the Oncological Urology Unit at Fundació Puigvert in Bordeaux (France), sharing the screen with the surgical team in Beijing (China) after performing the world's first nephrectomy via tele-surgery.

Barcelona, September 18, 2024. Exactly one week ago, on September 11, in a hall of the Bordeaux Convention Center in France**, Dr. Alberto Breda, Head of Oncological Urology and the Kidney Transplant Surgical Team at Fundació Puigvert, successfully performed the first-ever transcontinental robotic nephrectomy from Europe to Asia. The patient, a 37-year-old male** with a

3.5 cm kidney tumor, located 8,264 km away, at the General Pla Hospital in Beijing, **was discharged the day after surgery. One week later, he is recovering at home without complications.** Specifically, a nephrectomy involves the partial or total removal of the kidney and is a highly complex surgical procedure performed by urologists with advanced training and extensive experience to minimize the risk of complications.

"This is a historic moment made possible through international collaboration, and it highlights the diversity in modern medical practice", said Dr. Alberto Breda. It is noteworthy that to familiarize himself with the technique and operation of various systems, Dr. Breda performed a tele-surgery nephrectomy on a pig in February 2024, remotely controlling the surgery from Orlando (USA) to a hospital in Shanghai (China), a distance of over 12,800 km.

On this occasion, the surgical procedure was broadcast on screens in the Bordeaux auditorium, where the most important annual meeting on robotic surgery was being held. This 21st edition set a new record with over 1,000 attendees. The event was organized by the **Robotic Surgery Section of the European Association of Urology (ERUS), which Dr. Breda has chaired since 2021.** Unlike typical live broadcasts of surgeries, the lead surgeon was not wearing surgical attire; instead, from a control room, he operated remotely via a console (Edge Robotics System), guiding the robotic arms that operated on the patient on the other side of the globe, with a delay of 132 milliseconds. Due to the latency caused by the vast distance, the pace of tele-surgery adoption will depend on the development of 5G telecommunications networks and fiber optics, as well as on further refinement and calibration of robotic systems.

According to experts at ERUS 2024, tele-surgery will have multiple applications in the future beyond remote surgeries. For example, it will enable collaborative surgeries between surgeons in different geographic locations, as well as remote training and mentoring.

There are two previous documented cases of transcontinental tele-surgery: the first in 2000, known as the "Lindbergh Operation," performed by Dr. Jacques Marescaux from New York to a patient in Strasbourg. The second, more recent, occurred in July of this year when Dr. Zhang, Director of the Urology Department at the Third Medical Center of the People's Liberation Army General Hospital, successfully completed the first transcontinental robotic prostatectomy from Rome to Beijing.

About Alberto Breda, Pioneer and International Leader in Minimally Invasive Urological Surgery

Dr. Alberto Breda specializes in oncological urology, particularly kidney cancer, and laparoscopic and robotic surgery. He has pioneered minimally invasive surgical techniques for both kidney and prostate procedures. In 2010, Dr. Breda became the first surgeon in Spain to perform a live donor kidney extraction using the Da Vinci robot. Five years later, together with Dr. Nicolas Doumerc in Toulouse (France), he performed the first complete robotic kidney transplant from a living donor in Europe.

He currently leads the Oncological Urology Unit and the Kidney Transplant Surgical Team at Fundació Puigvert in Barcelona. In July 2021, he was appointed President of ERUS, the Robotic Surgery Section of the European Association of Urology (EAU), a position he will hold until 2029.

Dr. Breda is the principal investigator in several clinical trials in the field of uro-oncology. Throughout his distinguished career, he has received numerous awards and recognitions, including the Arthur Smith Award (2016). He was recently appointed Adjunct Professor of Urology at Mount Sinai Hospital – New

York, and he has authored more than 400 publications in indexed urological journals and 22 chapters in medical and urological books.

About Fundació Puigvert

Fundació Puigvert is a specialized medical institution in Urology, Nephrology, Andrology, and Reproductive Medicine, founded in 1961 by Professor Antoni Puigvert i Gorro, with the goal of becoming a center of excellence in these specialties. It is the only European Center of Excellence in Prostate Cancer in Spain. Currently, as a privately managed, non-profit university hospital, it is dedicated to the medical and surgical treatment of diseases and dysfunctions of the urinary system and genital organs. It is particularly renowned for its expertise in robotic surgery applied to Urology and kidney transplants.

Thanks to its long history and the expertise of a highly specialized medical team with extensive medical, surgical, teaching, and research experience, Fundació Puigvert is one of the leading specialized healthcare centers in Europe, known for clinical excellence in Urology, Nephrology, Andrology, and Reproductive Medicine. Each year, an average of 5,500 surgeries and around 90,000 medical consultations are performed, split between public healthcare, as a partner of the Catalonia Department of Health, and private care through Fundació Puigvert-Barcelona Private Center (BCP).

With a focus on providing comprehensive, effective, and compassionate care for patients, their families, and society at large, while also promoting the scientific advancement of these disciplines through research, training, education, and public health awareness, Fundació Puigvert stands as a national and international reference center.

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