

Home > Surgery > Lilavati Hospital performs India's first intravascular ultrasound-guided TAVR in India

**SURGERY**

## Lilavati Hospital performs India's first intravascular ultrasound-guided TAVR in India

The procedure was performed on a 77-year-old patient from Surat with severe aortic stenosis, unfit for open-heart surgery at Lilavati Hospital.

by Staff Writer    September 9, 2025

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Lilavati Hospital has emerged as one of the first hospitals in the country to successfully perform an Intravascular Ultrasound

(IVUS)-guided Transcatheter Aortic Valve Replacement (TAVR) procedure using the Edwards Sapien III Resilia valve.

The pathbreaking procedure was conducted on a 77-year-old patient from Surat suffering from severe aortic stenosis who was unfit for open-heart surgery due to age, prior heart surgeries, multiple stents, and complications.

### **IVUS-guided TAVR ensures precision and safety**

Dr. Ravinder Singh Rao and team at Lilavati performed the procedure through a minimally invasive approach from the patient's right groin. Using IVUS technology, they evaluated the diseased aortic valve in real time, ensured accurate placement, and optimized the expansion of the newly implanted Resilia tissue valve.

This technique not only reduced the risks associated with traditional surgery but also allowed for precise deployment and enhanced long-term outcomes.

### **Key benefits of the Edwards Sapien III Resilia valve and IVUS-guided TAVR at Lilavati:**

- **Longer durability:** Resilia tissue valves have enhanced longevity as demonstrated by preclinical durability studies.
- **Larger valve area:** The valve design ensures superior blood flow, reducing heart pressure and improving patient function.
- **Optimized outcomes:** IVUS allows real-time visualization inside the valve, ensuring maximum and safe expansion for improved durability.
- **Minimally invasive approach:** Access through the groin avoids open surgery, leading to faster recovery and immediate patient responsiveness post-procedure.

## **Commitment to advanced cardiac care**

Commenting on the breakthrough, Dr. Ravinder Singh Rao, MD, DM, FACC, Interventional Structural Cardiologist (TAVR expert) at Lilavati Hospital, said, “With one of the highest experiences in TAVR procedures in the country, Lilavati Hospital has consistently demonstrated the ability to deliver safe and effective outcomes, even in the most complex cases. By integrating IVUS technology with the Edwards Sapien III Resilia valve, we have set a new benchmark in precision and patient safety. This innovation reflects our commitment to ensuring longer valve durability, faster recovery, and improved quality of life for patients suffering from severe aortic stenosis.”

Adding to this, Dr. Nitin Gokhale, Head of Department at Lilavati Hospital, said, “Our strength lies in a team-based approach where highly skilled specialists and dedicated staff work together to manage even the most complex diseases. This collaborative model ensures safe outcomes and reinforces our focus on patient-centric care at every step.”

Commenting on the milestone, Dr. Niraj Uttamani, COO, Lilavati Hospital, said, “At Lilavati, our mission has always been to introduce the best of global healthcare innovations in India and make them available to those patients who require them the most. The successful implantation of IVUS-guided TAVR with the Edwards Sapien III Resilia valve demonstrates our focus on matching state-of-the-art technology with clinical excellence. This is not a feat of one procedure alone, but rather establishing a higher standard of cardiac care and reaffirming our position as an excellence center for complicated treatments.

Also Read: [\*\*Lilavati Hospital launches Mumbai's first OMEGA 3T MRI\*\*](#)

At Lilavati Hospital, TAVR has emerged as a definitive treatment option for elderly patients and those with elevated surgical risk.

Backed by the hospital's extensive expertise in cardiology and operator proficiency, this advancement translates into consistently superior outcomes, further strengthening Lilavati's position as a leader in advanced cardiovascular care.

### **The current procedure ensures proven safety and outcomes at Lilavati Hospital:**

- Procedural mortality: 0.06%
- Pacemaker requirement: minimal
- Stroke risk: less than 0.05%

This achievement builds on Lilavati Hospital's legacy of bringing world-class medical technologies to India. Alongside this milestone, the hospital recently installed Mumbai's first OMEGA 3T MRI, strengthening its diagnostic capabilities.

With continuous adoption of global innovations and proven clinical excellence, Lilavati Hospital remains committed to delivering advanced, safe, and effective healthcare solutions to patients across the country, says Dr. Niraj Uttamani, COO at [Lilavati Hospital](#) and Research Centre.

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