

Vietnam's Vinmec Marks a New Milestone in AI-Integrated Robotic Knee Surgery with Immediate Post-Operative Mobilit

DA NANG, VIETNAM, April 22, 2026 /EINPresswire.com/ -- For the first time in Central Vietnam, AI-integrated robotic technology has been successfully utilized in knee replacement surgery at [Vinmec](#) Da Nang International Hospital, representing a major advancement in precision orthopedics and personalized surgical care.

The landmark procedure significantly improved surgical accuracy while optimizing patient outcomes. Notably, the patient was able to stand and begin walking immediately following the operation, underscoring the effectiveness of the technology in accelerating post-operative recovery.

Years of Progressive Decline

At 63, the Da Nang resident Phan Thi Nghiep endured chronic knee pain that transformed ordinary movements into calculated efforts.

Despite persistent treatment through medication, physical therapy, and rehabilitation, her condition continued to worsen. Pain intensified, sleep became increasingly disrupted, and mobility declined to the point where she grew progressively dependent on family members.

At Vinmec Da Nang, clinicians diagnosed her with Grade 4 knee osteoarthritis, which is the most severe stage, characterized by near-complete cartilage loss and significant joint deformity. At this



Vinmec surgeons selected the AI-integrated CORI robotic system for the procedure.



The patient was able to walk with staff assistance within hours of surgery.

stage, delayed intervention can lead to continued loss of mobility and, in severe cases, permanent disability.

After comprehensive examination and multidisciplinary consultation, Vinmec surgeons determined that total knee replacement offered the optimal treatment pathway to restore function.

Precision Measured in Millimeters

Given the severity of the deformity, Vinmec's surgical team opted for the CORI robotic system for Nghiep's procedure, marking the first use of AI-integrated orthopedic robotics in Central Vietnam.

The clinical rationale aligns with evidence supporting robotic assistance in complex orthopedic procedures. A 2025 Journal of Robotic Surgery review analyzing 25 studies found that AI-assisted robotic surgeries reduced operative time by 25% and intraoperative complications by 30% compared with manual methods.

Developed in the United States, the CORI platform combines robotic execution with AI-powered intraoperative navigation and decision support. In Vietnam, Vinmec is the first private healthcare provider to implement this technology, supported by surgical teams trained and certified by international experts.

The system allows surgeons to plan bone cuts, implant positioning, and soft tissue balancing with an error margin of less than 1 millimeter. A further advantage is its ability to generate a real-time 3D model of the patient's knee intraoperatively, enabling highly individualized treatment without the need for a pre-operative CT scan.

"Robotic assistance reduces dependence on subjective experience while optimizing surgical outcomes," Dr. Le Quang Minh, Head of Surgery at Vinmec Da Nang, noted. "This means less invasive procedures, reduced pain, and shortened recovery times."

That precision translated into measurable clinical recovery. Within hours of surgery, Nghiep was able to stand and begin walking with staff assistance, which is an early mobility milestone in elderly orthopedic patients.

"It feels like these are truly my own legs," the patient shared.

A Center for Specialized Care



Vinmec Da Nang became a center for advanced treatment in Central Vietnam.

According to Prof. Dr. Tran Trung Dung, CEO of Vinmec Healthcare System, deploying robotic knee surgery at Vinmec Da Nang represents an important step in bringing modern medical technology closer to Central Vietnam.

This development is part of Vinmec's ongoing technology implementation. Over the past decade, Vinmec Healthcare System has built the capabilities to handle complex and previously untreatable cases, from hospital-based 3D printing and limb-salvage bone cancer surgery to CAR-T cell therapy, genomic medicine, and precision imaging.

Since opening in 2017, Vinmec Da Nang has progressively established itself as a center for advanced diagnostics and treatment in Central Vietnam. With a quality management score of 959/1000, Vinmec Da Nang has also emerged as a credible destination for medical tourism, attracting both domestic patients and international visitors.

The successful deployment in Vinmec Da Nang demonstrates that advanced robotic surgery can be made accessible at the regional level when backed by the right infrastructure, specialist training, and clinical expertise.

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