



Hong Kong Adventist Hospital – Stubbs Road’s Robotic Surgery Center Commences Services and Features Hong Kong’s First Robotic Surgery System that Targets the Entire Spine and the All-New Robotic Knee Replacement Surgery System

(Hong Kong – May 6, 2024) With continued advancements in medical technology and the rising popularity of precision medicine, patients today enjoy a wide range of treatment options that are safer and offer a reduced risk of postoperative complications. Robotic surgery, an increasingly utilized method of surgery, enables surgeons to perform procedures with a higher degree of precision and accuracy thanks to the assistance of robotic arm systems. Hong Kong Adventist Hospital – Stubbs Road (HKAH – SR) is pleased to announce the establishment of its Robotic Surgery Center, which features some of the latest robotic surgery systems and a comprehensive range of surgical equipment that significantly enhance surgical outcomes and offer patients the best treatment results.

“The establishment of the Robotic Surgery Center is a testament to Hong Kong Adventist Hospital’s commitment to continuously pioneering advanced technologies and pursuing medical excellence,” says Mr. Alex Lan, President and CEO of Hong Kong Adventist Hospital. “Excellence is one of our hospital’s core values, and we consistently strive for the highest standards in clinical and service quality. Our hospital has offered robotic surgery since 2013, employing the use of advanced technologies in an effort to elevate patient care standards, improve the quality of our medical services, and enhance treatment outcomes.”

Introducing Hong Kong’s First Robotic Surgery System that Targets the Entire Spine

The Robotic Surgery Center provides robotic arm-assisted surgical services that target a wide range of diseases and conditions across neurosurgery, orthopedic surgery, and surgical oncology, offering patients more advanced, precise treatment options.

The Center features Hong Kong’s first robotic surgery system that targets the entire spine, which is supported by artificial intelligence and real-time navigation technology to facilitate safe and accurate placement of implants. “With age and improper posture, issues such as herniated or degenerated discs, spinal stenosis, or scoliosis can occur, leading to nerve pain or weakness in the limbs. In severe cases, spinal fusion or corrective spinal treatment may be required,” says Dr. Clarence Leung, Clinical Director of the Minimally Invasive Spine Surgery Center and Consultant in Neurosurgery at HKAH – SR. “The Center is equipped with advanced surgical systems that allow patients to avoid traditional surgeries that require larger incisions. Procedures that involve smaller incisions, less blood loss, and more precise implantation of screws maximize the effectiveness of surgery.”



New Robotic Knee Replacement Surgery System Increases Accuracy of Bone Resection

In addition to spine-related issues, aging can also affect the health of the joints, in which knee degeneration and osteoarthritis is the commonest joint disease in the territory. In severe case of osteoarthritis, patients require total knee replacement surgery as a definitive treatment. A robotic arm-assisted system used for total knee replacement offers patients a safer, more precise treatment option.

“Unlike traditional surgery, where the surgeon determines the positioning of the femur and tibia by primitive measurement and experience, the new robotic surgery does not require patients to undergo complex examinations prior to surgery. After the patient’s X-rays are uploaded, the robotic system generates personalized 3D images and ascertains the bone resection position, thereby reducing the risk of excessive bone resection or malpositioning of the artificial joint,” says Dr. Cheung Man Hong, Consultant in Orthopedics & Traumatology at HKAH – SR. “Furthermore, the system is also able to provide objective soft tissue feedback, offering a more accurate assessment compared to that which relies on a surgeon’s experience and judgment. The system will also adjust the positioning of the artificial joint based on the tension of the patient’s ligaments.”

Robotic Surgery Center Provides Comprehensive, Multidisciplinary Surgical Services

The Robotic Surgery Center also offers a wide range of robotic surgeries targeting areas including cancer surgeries (surgical oncology), for liver cancer, stomach cancer, pancreatic cancer, bile duct cancer etc., as well as other complex surgical procedures. “Robotic surgery systems are equipped with high-definition cameras with 3D capabilities, together with high precision and versatile robotic arms, greatly enhance surgical capability.” says Dr. George Yang, Clinical Director of Robotic Surgery (General Surgery) and Consultant in General Surgery at HKAH – SR. “In addition, with the robotic surgical system, those complex surgeries required big and long open wound, are now made possible to be done through several 8mm keyhole wounds. This not only speed up patient’s post-operative recovery, it also reduces the risk of large open wound related complications such as post-operative pain, bowel adhesion which may lead to bowel obstruction, incisional hernia, and wound infection which may delay cancer patients for their subsequent oncology treatment.”

The establishment of the Robotic Surgery Center marks an important step for HKAH – SR within the field of medical technology. Thanks to this significant advancement in medical service standards, the hospital is poised to provide even more precise and personalized treatment options to patients while benefiting Hong Kong’s healthcare sector as a whole.

Patient Sharing (Robotic Spinal Fusion)

- Mr. Oliver Kadhim, in his 40s
- Started experiencing foot pain, numbness, and paralysis two years ago. At times, he could not walk for more than one minute, which affected his ability to work.



- Previously tried acupuncture and epidural steroid injections, but did not see any improvement.
- As he has four children, he decided to undergo surgical treatment.
- After examination, he discovered he was suffering from a collapsed disc, which was compressing the L5 nerve and required spinal fusion of L5S1 segment.
- In March of this year, he underwent surgery performed with the robotic surgery system mentioned in the press release. He was able to get out of bed a few hours after the surgery and was discharged the next day.
- Approximately three to four weeks after surgery, he had largely recovered and was able to resume normal physical activities.
- He currently attends monthly follow-up consultations to monitor his condition.

Patient Sharing (Robotic Knee Replacement Surgery)

- Ms. Lin, in her 60s
- About seven years ago, she experienced sudden pain and swelling in her left knee that resembled the feeling of having twisted her knee.
- Ms. Lin was traveling at the time, and sought medical advice from multiple orthopedic doctors upon her return to Hong Kong.
- One doctor suggested undergoing magnetic resonance imaging (MRI) to determine whether she had a meniscus tear. Subsequent examinations confirmed that she did indeed have a torn meniscus.
- The doctor recommended surgery, but Ms. Lin was hesitant and instead opted to take anti-inflammatory and pain relief medications to manage the knee pain, which did not impact her daily life much at that point.
- Ms. Lin's knee pain worsened last summer, requiring her to take breaks after walking for short periods of time.
- In late December, she traveled to Chongqing, known as the "mountain city," where she had to walk extensively. After returning to Hong Kong, her knee pain intensified, and she could no longer straighten her leg.
- Ms. Lin sought medical advice again, hoping to undergo surgery to alleviate the pain.
- She found a doctor who arranged for her to undergo robotic knee replacement surgery.
- The entire procedure took approximately 1.5 hours, and she was able to walk with the aid of a walker about two hours after surgery, with no knee pain.
- Three days after the surgery, she was able to walk independently and climb stairs, going up and down two flights.
- The entire process from hospital admission to recovery and discharge took approximately five days.
- Ms. Lin was pleasantly surprised by her quick recovery and is now able to resume traveling and exercising.