

English Symposium

2025年11月14日(金) 13:20 ~ 14:40 第10会場

[ESY2] English Symposium 2 New Era of Robotic Surgery

Moderator: Micheal Powar (Cambridge University Hospitals), Junichiro Kawamura (Kindai University)

[ESY2-6] Clinical deployment of ANSUR, a surgical robot based on a new concept

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The entry of new technologies has significantly transformed the field of surgical treatment. One of the most significant revolutions in the surgical realm over the past 30 years has been the rise of laparoscopic surgery. In Japan, laparoscopic surgery has become widespread for many diseases, with reports indicating comparable survival rates to standard treatments and good short-term outcomes.

In recent years, the introduction of surgical assistance robots has gained traction, and many surgical procedures for various disease areas have received insurance coverage in Japan. The number of cases using robotic-assisted surgery has been increasing. While the advantages of robots in terms of overwhelming operability are undeniable, studies comparing robotic-assisted surgery and laparoscopic surgery have shown that the superiority of robotic surgery is limited in terms of clinical outcomes, and no studies have proven an increase in survival rates. Considering this point, discussions from multiple perspectives regarding the future direction of robotic-assisted procedures and the development of robotic devices are awaited. We established A-traction Co., Ltd., a venture company focused on "surgical support robot development," and have promoted the creation of Japan's first innovative medical devices with different features and concepts from existing surgical robots, obtaining medical device sales approval in 2023 as a National Cancer Center-certified venture company. The concept of our developed robot involves the surgeon performing dissection operations at the bedside, using the right hand and foot interface to control three robotic arms. In other words, the surgeon can intuitively manage two instruments - in conjunction with an endoscope - single-handedly.

We conducted the First-in-Human (FIH) procedure in November 2023, and it has been implemented in several medical facilities across the country. So far, our hospital has performed over 70 colorectal cancer surgeries, realizing one of our goals, which is the reduction of workload for healthcare.