

Recent Advance of Computer-Assisted Minimally Invasive Surgery

Prof. Makoto Hashizume

Professor,
Department of Advanced Medical Initiatives,
Faculty of Medical Sciences, Kyushu University

日時: 2012年3月8日(木) 10:00-11:00

会場: 東京大学工学部2号館 2F 221 講義室

Surgical robotic system, da Vinci has recently been approved by the Japanese government. It had taken about 10 years to get approval as the medical device in Japan. It is reported that more than 1900 sets of da Vinci have been installed over the world. Although robotic surgery has been widely popularized especially in the field of Urology and Gynecology, it is not in that of general surgery. It is mainly because the advantages have not yet been proven in general surgery.

We have developed a new type of surgical robotic system which is combined with image-guided navigation system. Robotic surgery has successfully performed on pigs under remote control between Fujinomiya and Tokyo in 2002, Seoul and Fukuoka in 2004, and Bangkok and Fukuoka in 2006 to 2008. MRI-guided surgical system and ultrasound-image guided surgical system have been developed to overcome the intraoperative deformity of the images. Another advance is the small sized surgical robotic system for NOTES (natural orifice transluminal endoscopic surgery) or single port surgery.

ENT robot has been developed for surgical training or rehearsal.

International collaboration or tight relationship of medical engineering researchers is important for global marketing. They should search for the real needs on the medical site.

