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Endo-oncology, Today and Future

Professor and Chairman, Department of Urology, School of Medicine, National Taiwan University, Taipei, Taiwan
Jun Chen, M. D.

Endo-oncology, or urologic oncology treated by minimally invasive surgery (MIS), or endourologic oncology, or laparoscopic urologic oncology, or whatever it may be, has been revolutionizing the conventional open surgery for urologic oncology ever since Clayman and coworkers successfully completed the first laparoscopic radical nephrectomy for a patient with renal cell carcinoma in 1991. The invincible tide hit the urologic community worldwide, broke through the barriers of doubts that the poor and stubborn traditionalists have left behind. In the new millennium eventually, almost every traditional incisional surgery has been replaced by the MIS counter-part. Nowadays the uro-oncologists against the tide will find themselves without company and also without clients.

The trends in the future of endo-oncology might include the followings:

The use of robotic laparoscopic surgery, especially how to make it economically accessible to the Asian countries, and how to overcome the lack of tactile and tension feedbacks of robotics such as Da Vinci.

The development of augmented-reality-assisted laparoscopic surgery or laparoscopic "navigating" system for three-dimensional image-guided surgery might further mitigate the steep learning curve of endo-oncology.

However mighty and invincible the tide of endo-oncology might be, when sweeping through globally it is not without rankles and noises. The mortality cases in the hands of less-experienced endo-oncologists reported sporadically worldwide expose the potentially "even-more-dangerous" nature of endo-oncology. As we all know, Japan is one of the pioneer countries in the licensing of laparoscopic surgeons. We try to learn from Japanese experiences in order to minimize the tragedy-to-come.

So most important of all, how to educate and help the next-generation-urologists to perform quality-guaranteed endo-oncology surgery will be the biggest issue in the years to come.