

**Prof. Dr. T. Wiggers, MD, PhD, FRCS (em.), surgeon, The Netherlands**

After his residency he specialized in surgical oncology and worked for 16 years in the Daniel den Hoed Cancer Center (DDHCC) as the Head of the Department of Surgical Oncology. In June 2000, he continued his professional career as a Professor in Surgical Oncology and chairman of the Department of Surgery at the University Medical Center Groningen, the Netherlands. From January 1<sup>st</sup> 2011 he retired from clinical practice and continued his career as a consultant in coaching, advising and interim management.

For many years, he was co-editor of the European Journal of Surgery and a member of the advisory board of the European Journal of Surgical Oncology. From 2000 till 2008 he was one of the editors of the Cochrane Colorectal Cancer Group. He served as the treasurer of the Board of the European Society of Surgical Oncology and was a member of the Dutch Governmental Committee for Oncology. Presently he is the chairman of the Dutch Surgical Colorectal Audit.

Clinically his main interest has been in pelvic and colorectal surgery coordinating several prospective clinical studies such as the No-touch isolation technique in colon cancer and the Dutch Total Mesorectal Excision trial. Research activities include also follow-up and imaging studies in rectal cancer, psychosocial studies related to coping strategies for cancer, continuity of information for cancer patients and motives and needs of patients seeking a second opinion. He is (co) author of over 200 publications and 11 book chapters.

Recently he founded the company INCISION. The goal of this company is to provide modern teaching and training material for surgeons worldwide.

Dr. Wiggers will present:

**E-learning and visualization with 3D films as a tool of modern training in surgery**

Traditionally the master-apprentice model is used to teach residents, especially in the surgical field. A supervising surgeon (master) demonstrates how the surgery is performed. After some time the trainee (apprentice) is allowed to perform r steps under supervision. Gradually more and more steps of the procedure are carried out by the trainee. This teaching method requires a great amount of time and effort and is rather inefficient, since the surgeon is not involved in preparing the trainee for the procedure. In this approach, the theoretical knowledge of the trainee and the systematic evaluation of the trainees performance in executing the key steps of the procedure are mostly not clear for both parties. In the light of the enormous demand for highly trained surgeons a more fluent teaching approach is vital. An integrated stepwise teaching method consisting of e-learning and visualization with 3D-instructional movies, could be integrated in current surgical teaching programs while extending the master-apprentice model.

INCISION initiates a platform for Sharing Surgical Skills by appraised surgeons, based on surgical anatomy, scientific evidence and experience. Its aim is to increase quality and efficiency of surgical learning worldwide. The train-the-trainer program provides local surgical trainers with a tool to teach procedures more effectively following a step-by-step approach of the surgery. Detailed 3D-instructional movies and animations give clear surgical views of the anatomical structures and operating hazards. Advanced e-learning tools enable trainees to train themselves with the fundamentals of the surgical steps of procedures. In doing so valuable OR time can be utilized for practical training.

First inventory efforts in Indonesia show a genuine interest by surgeons as well as residents. A questionnaire addressing several aspects of the e-learning and videos was filled out by 75 potential users. The future development options were all perceived as beneficial, especially live or trainer videos. Those who would benefit most from the INCISION approach are residents, followed by young trained surgeons. It is noteworthy that also experienced surgeons are perceived to benefit from the INCISION approach, because of its reference function.

Future perspectives include integration of these teaching methods into the existing local surgical curriculum and providing customized learning and customized teaching settings for trainees as well as local trainers.