Masayuki Takano, DDS, PhD

Department of Oral and Maxillofacial Surgery, Tokyo Dental College
Professor and Vice President of Tokyo Dental College Suidobashi Hospital

Professional Education:

1976-1982 Tokyo Dental College, DDS
1982-1987 Tokyo Dental College Graduate School PhD course

Professional Experience:

1987 -1992 Assistant Professor, 1st Dept. of OMFS,
Tokyo Dental College
1992-1998 Assistant Professor, Dept. of OMFS, Tokyo Dental College
1998 -2013 Associate Professor, Dept. of OMFS, Tokyo Dental College
2010- Manager of OMFS, Tokyo Dental College Suidobashi Hospital
2010- Vice President of Tokyo Dental College Suidobashi Hospital
2013- Professor, Dept. of OMFS, Tokyo Dental College
Suidobashi Hospital

Position Held in Scientific and Professional Organizations:

1992- Board-certified specialists of Japanese Society of Oral and Maxillofacial Surgeons
1998- Board-certified specialists Instructor of Japanese Society of Oral and Maxillofacial Surgeons
2007- Regional Faculty of AO/ASIF FEAC
2009- Instructor of Japanese Board of Cancer Therapy
2010- Trustee of Japanese Society of Oral and Maxillofacial Surgeons
2012- Faculty of AOCMF Japan
Board-certified specialists of Japanese Academy of Maxillofacial Implants

2013- Executive Director of Japanese Society of Advanced Digital Technology in Head and Neck
2013- Trustee of Japanese Society for Jaw Deformities
2014- Director, Advanced Digital Technology in Head and Neck
2015- President of Japanese Society of Advanced Digital Technology in Head and Neck
Board-certified specialists of the Japanese Society for Regenerative Medicine
2016- Executive board of Japanese Society for Jaw Deformities

How to educate the recent young doctor

Masayuki Takano, DDS, PhD

Medical education to young doctors is one of the important roles for OMF surgeons who should be trained not only broad knowledge of medicine but also safety surgical technics. Especially surgical trainings are difficult problems because surgeries in real operation room should be only constrained trainings for the young doctors in many situations. Traditionally, as we know, surgical trainings have been studied personally and have carried on from master hands to pupil hands by strict apprenticeship. We know it is not fully outdated way, but recent young students and residents are not always prefer to hard process like that. On the one hand, surgical procedures nowadays in the fields of plastic and reconstructive surgery are changing with innovations of medical procedures. Those innovative changes will need makeover of educational methods for surgery. Recent rapid advances of digital technology as typified by 2D and 3D imaging, real-sized 3D modeling and virtual reality system are playing considerable roles for surgical trainings. Recently, we also ordinarily use digital technological tools for educations and surgical training of the orthognathic treatment and the reconstructive surgery for young doctors and trainees in our OMS department. At the first step on a surgical treatment of jaw deformity, a young doctor makes cephalometric analyses on PC software (ex, Quick Ceph). As next step, after loading CT/DICOM data to PC software (ex, mimics), he simulates surgical planning for the surgical case. In this working process he can configure and study proper osteotomy lines with his tutor or trainer and he can also be aware of moving distances and cutting zones of bone segments. Next step is a real-size model simulation using real-sized 3D models made by 3D printer (ex, Stratasys). On these models he can move and fix the bone segments to the position that he had set from 2D and 3D analyses. And at this step, if the simulative model-operation is done on the premise of real surgical operation, he can also make pre-bended mini plates for fixtures. In some difficult cases we will make surgical guide for osteotomies. For personal surgical training, he can watch the HD movies that record his tutor's surgeries or his previous training surgery. In 3D movie, he can use 3D monitor with glasses or head-mount 3D display for training as virtual reality (VR). In recent years, various virtual training systems are tried in a lot of medical fields, especially endoscopic surgery, microscopic surgery and laparoscopic surgery. It is need to establish useful vertical training systems orthognathic surgery and reconstructive surgery in head and neck.