

Maxillofacial Surgery

Junior Associate Professor: Satoshi YAMAGUCHI, Narikazu UZAWA

Assistant Professor: Hiroyuki YOSHITAKE, Yasuyuki MICHII, Kazuto KUROHARA, Kouichi NAKAKUKI,
Yoshio OHYAMA
(from April) Keiichi MORITA

Hospital Staff: Itaru SONODA, Kunihiro MYO, Nobuyoshi TOMOMATSU, Chie AKATSU, Tomomi SAKUMA,
Ryousuke NAGAOKA, Yoshinori INABA, Jun SUMINO, Chika MIURA,

(from April) Yukihiro HASHIDA, Masahiko TERAUCHI, Machiko KOSUGI

Graduate Student: Reiko HOSHI, Sakie KATSUMURA, Tomoki KANEMARU, Uyannga ENKHBOLD,
Syun NISHIHARA, Erina TONOUCHE, Takasuke INADA, Durugu-nn BATBO-RUDO,
Eri SONE, Narumi OSIBE, Keiichiro NAKAZATO, Hiroshi KATO
Takahiko YAMADA, Yusun KIMU

(from April) Katsuya HYOUDOU, Daisuke YAMAMOTO

Student: (from April) Mari SHIBATA, Kentarou SUGIYAMA, Natsuko HONDA, Mayuko MARUIWA,
Tokiwa OOISHI, Mana TAKAGI

Emeritus Professor: Teruo AMAGASA

Clinical professor: Masashi YAMASHIRO

Part-time Lecturer: Kazuki HASEGAWA, Hitoshi MIYAOKA, Hiroyuki WAKE, Takahumi YAMADA,
Fumiaki SATO, Junichi ISHII, Eizi FUZII, Junzi KOBAYASHI,
Akiko KOBAYASHI, Yutaka SATO, Yasushi NIINAKA, Takao WATANABE
Testuo SUZUKI, Masayuki YAMANE, Takashi MISHIMAGI,
Shigehiro ABE, Miho MIZUTANI, Yasuhiro KURASAWA,
Chieko MICHIKAWA, Erika OUE, Norihiro ENDO

(1) Research

Research Subjects

- 1) Head and Neck Surgery: Innovation of management patients with benign and malignant tumors and cysts in oral and facial region.
- 2) Reconstructive Surgery: Developing method of correcting jaw, facial bone and facial soft tissue trouble left as the result of removal of disease or previous trauma.
- 3) Correction of Birth Defects: Improving surgically correction of birth defects of the face and skull, including cleft lip and palate.
- 4) Dentofacial Deformities and Orthognathic Surgery: Development of new surgical techniques to improving reconstruct and realign the upper and lower jaws.
- 5) Temporomandibular Joint Disorders: Renewing skills in the diagnosis and treatment due to temporomandibular joint problem.
- 6) Oral Mucosa Disease: Creation new method with light and color for diagnosis of oral mucosa disease, including leukoplakia and cancer.

(2) Lectures & Courses

Oral and maxillofacial surgery is a surgical specialty involving the diagnosis, surgical treatment and management of defects and injuries related to the function and aesthetics of the face and jaws. In order to practice the full scope of the specialty, oral and maxillofacial surgeons are required education in dentistry, medicine and surgery for regional requirement.

(3) Clinical Services & Other Works

Total number of new patients was 6312 of 2015.

(4) Clinical Performances

Clinical Services

- 1) Diagnosis, removing and reconstruction of jaw, oral or facial tumor or cyst.
- 2) Diagnosis and treatment of cleft lip and palate.
- 3) Treatment of jaw aligned with orthognathic surgery.
- 4) Therapy of temporomandibular disorder with or without temporomandibular joint surgery.
- 5) Diagnosis and treatment of oral mucosa disease.
- 6) Treatment of inflammation in the region jaw and facial trauma.
- 7) Extraction tooth including wisdom tooth.

(5) Publications

[Original Articles]

1. Okuyama K, Michi Y, Mizutani M, Yamashiro M, Kaida A, Harada K. Clinical study on mandibular fracture after marginal resection of the mandible. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2016;
2. Kato Y, Ogasawara S, Oki H, Honma R, Takagi M, Fujii Y, Nakamura T, Saidoh N, Kanno H, Umetsu M, Kamata S, Kubo H, Yamada M, Sawa Y, Morita K, Harada H, Suzuki H, Kaneko MK. Novel Monoclonal Antibody LpMab-17 Developed by CasMab Technology Distinguishes Human Podoplanin from Monkey Podoplanin. *Monoclon Antib Immunodiagn Immunother.* . 2016; 35(2); 109-116
3. Kohmoto T, Tsuji A, Morita K, Naruto T, Masuda K, Kashimada K, Enomoto K, Morio T, Harada H, Imoto I. A novel COL11A1 missense mutation in siblings with non-ocular Stickler syndrome. *Hum Genome Var.*. 2016; 7(3); 16003
4. Khanom R, Nguyen CT, Kayamori K, Zhao X, Morita K, Miki Y, Katsube K, Yamaguchi A, Sakamoto K. Keratin 17 Is Induced in Oral Cancer and Facilitates Tumor Growth. *PLoS One.* . 2016; 11(8); e0161163
5. Pal SK, Nguyen CT, Morita KI, Miki Y, Kayamori K, Yamaguchi A, Sakamoto K. THBS1 is induced by TGFB1 in the cancer stroma and promotes invasion of oral squamous cell carcinoma. *J Oral Pathol Med.*. 2016; 45(10); 730-739
6. Sato M, Morita K, Kabasawa Y, Harada H. Bilateral nasolabial cysts: a case report. *J Med Case Rep.*. 2016; 10(1); 246
7. Kondo Y, Ohno T, Nishii N, Harada K, Yagita H, Azuma M. Differential contribution of three immune checkpoint (VISTA, CTLA-4, PD-1) pathways to antitumor responses against squamous cell carcinoma. *Oral Oncology.* 2016; 57; 54-60
8. Matsushita Y, Nakakuki K, Kosugi M, Kurohara K, Harada K. Does Intraoral miniplate fixation have a good postoperative stability after sagittal splitting ramus osteotomy?: Comparison with intraoral bicortical screw fixation. *Journal of Oral and Maxillofacial Surgery.* 2016.01; 74; 181-189

9. Nakajima K, Kho DH, Yanagawa T, Harazono Y, Hogan V, Chen W, Ali-Fehmi R, Mehra R, Raz A. Galectin-3 cleavage alters bone remodeling: Different outcomes in breast and prostate cancer skeletal metastasis. *Cancer Res.* 2016.03; 76(6); 1391-1402
10. Morita T, Yamashiro M, Kayamori K, Mizutani M, Nakakuki K, Michi Y, Uzawa N, Izumo T, Harada K. Primary intraosseous squamous cell carcinoma derived from a maxillary cyst: A case report and literature review. *Mol Clin Oncol.* 2016.04; 4(4); 553-558
11. Kayamori K, Katsube K, Sakamoto K, Ohyama Y, Hirai H, Yukimori A, Ohata Y, Akashi T, Saitoh M, Harada K, Harada H, Yamaguchi A. NOTCH3 Is Induced in Cancer-Associated Fibroblasts and Promotes Angiogenesis in Oral Squamous Cell Carcinoma. *PLoS One.* 2016.04; 11(4); e0154112
12. Suzuki M, Deno M, Myers M, Asakage T, Takahashi K, Saito K, Mori Y, Saito H, Ichikawa Y, Yamamoto-Mitani N, Miyashita M. Anxiety and depression in patients after surgery for head and neck cancer in Japan. *Palliat Support Care.* 2016.05; 299(8); 1110-1120
13. Okuyama K, Michi Y, Mizutani M, Yamashiro M, Kaida A, Harada K. Clinical study on mandibular fracture after marginal resection of the mandible. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2016.05; 121(5); 461-467
14. Badri MK, Zhang H, Ohyama Y, Venkitapathi S, Kamiya N, Takeda H, Ray M, Scott G, Tsuji T, Kunieda T, Mishina Y, Mochida Y. *Ellis van Creveld2* is required for postnatal craniofacial bone development. *Anat Rec (Hoboken).* 2016.05; 299(8); 1110-1120
15. Yoshitake H, Kayamori K, Wake S, Sato F, Kino K, Harada K. Synovial chondromatosis of the right side temporomandibular joint extending to the middle cranial fossa: A case report with 7-year postoperative follow up and expression of a biomarker of cell proliferative activity. *Anat Rec (Hoboken).* 2016.06; 20; 133-137
16. Kondo Y, Ohno T, Nishii N, Harada K, Yagita H, Azuma M. Differential contribution of three immune checkpoint (VISTA, CTLA-4, PD-1) pathways to antitumor responses against squamous cell carcinoma. *Oral Oncol.* 2016.06; 57; 54-60
17. Ohyama Y, Lin JH, Govitvattana N, Lin IP, Venkitapathi S, Alamoudi A, Husein D, An C, Hotta H, Kaku M, Mochida Y. FAM20A binds to and regulates FAM20C localization. *Sci Rep.* 2016.06; 6; 27784
18. Wake S, Yoshitake H, Kayamori K, Izumo T, Harada K. Expression of CD90 decreases with progression of synovial chondromatosis in the temporomandibular joint. *Cranio.* 2016.07; 34(4); 250-256
19. Jaha H, Husein D, Ohyama Y, Xu D, Suzuki S, Huang GT, Mochida Y. N-terminal Dentin Sialoprotein fragment induces type I collagen production and upregulates dentinogenesis marker expression in osteoblasts. *Biochemistry and Biophysics Reports.* 2016.07; 6; 190-196
20. Shuji Hibiya, Kiichiro Tsuchiya, Ryohei Hayashi, Keita Fukushima, Nobukatsu Horita, Sho Watanabe, Tomoaki Shirasaki, Ryu Nishimura, Natsuko Kimura, Tatsunori Nishimura, Noriko Gotoh, Shigeru Oshima, Ryuichi Okamoto, Tetsuya Nakamura, Mamoru Watanabe. Long-term inflammation transforms intestinal epithelial cells of colonic organoids. *J Crohns Colitis.* 2016.10;
21. Masanori Kobayashi, Shigeru Oshima, Chiaki Maeyashiki, Yoichi Nibe, Kana Otsubo, Yu Matsuzawa, Yasuhiro Nemoto, Takashi Nagaishi, Ryuichi Okamoto, Kiichiro Tsuchiya, Tetsuya Nakamura, Mamoru Watanabe. The ubiquitin hybrid gene UBA52 regulates ubiquitination of ribosome and sustains embryonic development. *Sci Rep.* 2016.11; 6; 36780
22. Morita T, Uzawa N, Mogushi K, Sumino J, Michikawa C, Takahashi KI, Myo K, Izumo T, Harada K. Characterizing Genetic Transitions of Copy Number Alterations and Allelic Imbalances in Oral Tongue Carcinoma Metastasis. *Genes Chromosomes Cancer.* 2016.12; 55; 975-986
23. Terauchi M, Inada T, Tonegawa A, Tamura A, Yamaguchi S, Harada K, Yui N. Supramolecular inclusion complexation of simvastatin with methylated α -cyclodextrins for promoting osteogenic differentiation. *Int. J. Biol. Macromol.* 2016.12; 93(PtB); 1492-1498

[Conference Activities & Talks]

1. Morita K, Naruto T, Tanimoto K, Yasukawa C, Oikawa Y, Masuda K, Imoto I, Inazawa J, Omura K, Harada H. Simultaneous detection of both single nucleotide variations and copy number alterations by next-generation sequencing in gorlin syndrome. . The 13th International Congress of Human Genetics 2016.04.03 Kyoto
2. Uezono M, Takakuda K, Hiratsuka T, Ogasawara T, Oshima S, Sato T, Kikuchi M, Suzuki S, Harada K, Moriyama K. Mechanical properties of newly formed bone around subperiosteal devices evaluated with micro-indentation test.. 10th World Biomaterials Congress (WBC) 2016.05.17 Montreal, Canada.
3. Masahiko Terauchi, Takasuke Inada, Atsushi Tamura, Satoshi Yamaguchi, Nobuhiko Yui. Osteoregeneration by supramolecular sulfonated polyrotaxane/BMP-2 polyelectrolyte complexes in mouse calvarial defect model.. 11th International Conference Medical Applications of Novel Biomaterials and Nanotechnology, 5th International Conference Smart and Multifunctional Materials Structures & Systems. Centro Congressi 2016.06.05 Italy
4. Uezono M, Takakuda K, Hiratsuka T, Ogasawara T, Kikuchi M, Harada K, Suzuki S, Moriyama K.. Yield Strength of Newly Formed Bone Around Subperiosteal Anchorage Devices. 94th General Session & Exhibition of International Association for Dental Research. 2016.06.22 Seoul, Korea
5. Kondo Y, Ohno T, Azuma M. Combined VISTA and CTLA-4 immune-checkpoint blockade enhances antitumor immunity. 94th Annual Meeting of the International Association for Dental Research (IADR 2016) 2016.06.22 Seoul, Korea
6. Horita N, Demitrack ES, Gifford GB, Keeley TM, Siebel CW, Samuelson LC. Notch1 and Notch2 regulate epithelial cell proliferation in mouse and human gastric corpus. The 2016 Gordon Research Conference on Notch Signaling in Development, Regeneration & Disease 2016.08.01 Lewiston (USA)
7. Yoshitake H. Development of the new instrument for measurement of mouth opening and mouth-opening pathway. 23rd Congress of the European Association for Cranio Maxillo-Facial Surgery 2016.09.13 London, UK
8. Yoshitake H. Development of the new TMJ rehabilitation device that induces a protrusive sliding movement of the mandibular condyle. 23rd Congress of the European Association for Cranio Maxillo-Facial Surgery 2016.09.13 London, UK
9. Masahiko Terauchi, Atsushi Tamura, Nobuhiko Yui.. Supramolecular Sulfonated Polyrotaxanes complexed with Bone Morphogenetic Protein-2 for Bone Tissue Engineering. International Dental Materials Congress 2016 2016.11.04 Indonesia
10. Ogasawara T, Uezono M, Takakuda K, Kikuchi M, Hiratsuka T, Suzuki S, Moriyama K. Finite element analysis of bone bonding strength for the orthodontic subperiosteal devices. The 75th Annual Meeting of the Japanese Orthodontic Society 2016.11.07 Tokushima

[Patents]

1. MEDICAL DEVICE, DEVICE STRUCTURE FOR DENTAL, HEAD AND NECK SURGICAL AND ORTHOPEDIC USE, AND METHOD FOR JOINING MEDICAL DEVICE TO BONE , Announcement Number : WO 2016136913