

Medical and Dental Sciences

Advanced Prosthodontics

Professor – Noriyuki Wakabayashi

Junior Associate Professor – Kousuke Nozaki, Atsushi Takaichi (~ October), Mariko Hattori (career advancement), Junichiro Wada

Assistant Professor – Kensuke Takakusaki, Natsuko Murakami, Mai Murase (~ December), Toshiki Yamazaki (April ~)

Restart Postdoctoral (RPD) Research Fellowships - Yuka Kajima

Project Assistant Professor - Mihoko Haraguchi, Toshiki Yamazaki (~ March)

Hospital Staff – Kim Eung Yeol (April ~), (Hirokazu Sato (~ March), Shintaro Suzuki (~ March), Kazuki Nakane (April ~), Tomiharu Nagayama (~ March), Hitomi Matsuno (~ March, October ~), Kazuma Mori (April ~), Teruyuki Yoda (April ~), Hiroko Tani, Miyo Tsuji, Kiko Kunisawa (April ~), Satoshi Matsui (April ~), Yuki Mouri (April ~)

Speech-Language-Hearing Therapist - Masaki Keita (Speech Clinic)

Graduate Students - Yurika Ishioka (~ March), Yuji Uchida, Miona Utsumi, Qu Wenri, Wu Huaze (~ March), Naoyasu Kousaka (April ~), Wu Hao (April ~), Yoshio Kobayashi, Kohei Komine, Shinsuke Koyama, Jiang Mengtian, Zhiwei Zhou, Zou Shiqi, Huichuan Xu, Anna Takata (April ~), Satsuki Tanaka, Miyuki Tanimoto, Zhang Yihui, Zhang Maorui (~ March), Zheng Jingpu, Ding Zhiyuan, Thida Phyoo, Dong Jialin, Asuka Hirata, Yuki Mouri, Yang Shiyi, Bin Li, Ami Wakatsuki (April ~), Anshul Chugh (~ March), Hongli Yu (~ March), Islam Elsayed Ali (~ September), Xuwei Han (~ September), Ziyi Bai, Jiangyu Wang, Fan Zhang, Nehasha Pradhan, Ahmed Sameir Mohamed Ali, Bilal Lukman Alkrayem, Menghan Miao, Arwa Hammam Melhem (April ~), Xinyu Pang (April ~), Ayaka Takada (April ~)

Part-time Special Student - Aung Aye Chan, Kuenga Chode, Kazuki Nakane (~ March), Kazuma Mori (~ March), Teruyuki Yoda (~ March), Arwa Hammam Melhem (~ March), Xinyu Pang (~ March), Nosizana Binti Mohd Salleh (October ~)

Registered Resident - Yurika Ishioka, Tetsu Sato

Designated Professor, Science Tokyo - Yuka Sumita

Clinical Professor - Masaru Yatabe

Part-time Lecturer (Faculty of Dentistry) - Yasuha Ikawa, Keigo Isoshima, Hideaki Inagawa, Shusuke Inukai, Yuki Iwaki, Takeshi Ueno, Keichiro Uchikura, Hirofumi Uchida, Hisami Okawara, Takeshi Otsubo, Masahiro Ona, Taihei Kasai (~ March), Ryunosuke Kazama, Kim Eung Yeol (~ March), Hayato Kumagai, Masato Kotake, Hirofumi Sato, Hirokazu Sato (April ~), Natsuki Suzuki, Shintaro Suzuki (April ~), Takashi Sekinishi, Yusuke Toyoshima, Yasuo Hakajima (~ March), Koji Nagata, Kazutoshi Nakamura, Gen Nabeshima, Yoko Hayashi, Hironari Hayama, Kazuyuki Handa, Shiro Hibi (~ March), Masahiro Hirasawa, Kengo Fujiki, Ichiro Minami, Hitomi Matsuno (April ~ September), Chie Watanabe, Takayuki Arai, Mahmoud Ellarousi Elbashti, Noriko Hatano, Yuko Teruyama, Haruka Fujita

Part-time Lecturer (Graduated School) - Yuki Arai, Hideharu Hibi, Kazuhiro Hori, Chihiro Tanikawa, Ken Inohara, Yuka Sumita

Visiting Researcher –

Pengiran Muhammad Badiuzzaman, Mohamad Termizi Bakar, Yan Ming Lee, Malaysia, 22 April-24 May 2024.
Anna Lena Hillebrecht, Germany, 30 September-19 October 2024.

(1) Outline

Historically, our department has inherited the clinical and research backgrounds that the First Department of Prosthodontics and the Department of Masticatory Function Rehabilitation were proud of, and we specialized in removable partial prosthodontics. After the reorganization of prosthodontic departments based on the research fields in 2021 and the acceptance of the staff from the Department of Maxillofacial Prosthetics because of its discontinuation in 2022, as the Department of Advanced Prosthodontics, now we are responsible for bridging the gap between basic sciences and clinical research on development of the prosthetic materials and technologies, as well as teaching and training dental professionals as our future human resources.

(2) Research

1. Treatment Planning, Treatment and Evaluation in Prosthodontics
2. Design Optimization of Prosthodontic Biomaterials
3. Biological Evaluation of Oral Tissues in Prosthodontic Patients
4. Educational Development in Prosthodontics

< Grants-in-Aid for Scientific Research >

Grants-in-Aid for Scientific Research(B): Noriyuki Wakabayashi Grants-in-Aid for Scientific Research(C): Shunsuke Inukai, Kosuke Nozaki, Mai Murase, Kimihiro Yamashita, Masahiro Ona, Junichiro Wada

Grant-in-Aid for Young Scientists: Hisami Okawara, Kensuke Takakusaki, Hitomi Matsuno, Hideaki Inagawa, Yuka Kajima

AMED Translational Research Program: Mihoko Haraguchi

< Private Grant >

Nissin Dental Products INC. (Noriyuki Wakabayashi)

Nissin Dental Products INC. (Noriyuki Wakabayashi)

MITSUI & CO., LTD. (Noriyuki Wakabayashi)

Tokuyama Dental Corporation (Noriyuki Wakabayashi)

Tokuyama Dental Corporation (Kosuke Nozaki)

Yamaha Corporation, Yamaha Music Foundation (Mariko Hattori)

Tokyo Metropolitan Government (Yuka Sumita)

Foundation for Promotion of Cancer Research in Japan (Mai Murase) (March ~)

Innovation Idea Contest (IIC) 2023 (Mariko Hattori) (~ March)

Innovation Idea Contest (IIC) 2024 (Kiko Kunisawa) (October ~)

< WISE Program >

Huichuan Xu, Bin Li, Miona Utsumi, Zhao Qian, Kohei Komine, Zhang Maorui, Jiang Mengtian, Hongli Yu (~ March), Menghan Miao, Yuki Mouri (April ~), Ayaka Takada (April ~)

(Symposium)

Symposium on supporting the balance of head and neck cancer treatment and employment: Information sharing among medical professional. 21 December 2024.

(3) Education

School of Dentistry

Year 1

Introduction to Dentistry

Year 3

Tooth Carving

Introduction to Clinical Dentistry

Observation and assistance at clinic term I and II

Basic Occlusal Reconstruction

Introduction to Research article writing and Patent acquisition

Year 4

Research Project

Removable Partial Prosthodontics

Advanced knowledge and skill with occlusion

Experience learning of dental practice

Years 5 and 6

Case study

Dental Practice and Clinical Practicum for Comprehensive Patient Care (Clinical Internship)

School of Oral Health Care Sciences, School of Oral Health Care Sciences

Year 2 Prosthodontics

Years 3 and 4 Practice for Dental Hygiene Care

School of Oral Health Care Sciences, Course for Oral Health Engineering

Year 2 Removable Prosthodontics Technology

(4) Lectures & Courses

This Department offers a variety of educational courses pertaining to the specialized clinical management of tooth loss, primarily for undergraduate students at the School of Dentistry. The courses include lectures, tutorials, hands-on sessions, clinical simulations, and clinical internship instructions.

The ability to perform clinical operations on patients with tooth loss, including the skills required for medical interviews, oral examinations, diagnosis, decision making, impression making, bite registration, denture design and technology, and denture delivery and maintenance, is essential for clinical dental professionals. The objectives of our courses are to provide learning and training in contemporary removable prosthodontics and enhance the knowledge and skills of students to help them develop and flourish in their future career as dental and oral health professionals.

(5) Clinical Services & Other Works

All faculty members are assigned to treat patients at the Prosthodontics department in the Dental Hospital of the Tokyo Medical and Dental University. While the rate of tooth retention has increased in comparison with previously reported rates, the number of patients in need of a removable partial denture has increased. Our specialists primarily work on advanced cases that are referred from other departments and outside the hospital. The departmental mission also includes the development and application of new prosthodontic materials, their clinical trial, and the spread of novel and inventive knowledge to the community.

(6) Clinical Performances

The Department specializes in removable partial prosthodontics and aims to restore missing teeth and associated oral tissues; improve physiological functions such as occlusion, mastication, swallowing, and speech; maintain normal oral sensation; and restore the original appearance of individual patients. Treatment modalities, materials, and denture design are all based on the case history and chief complaints of the patients. The ultimate goal is to improve the oral health-related quality of life of patients.

The Department also manages the clinic for Maxillofacial Prosthetics and the clinic for Speech Therapy that do the prosthodontic and/or prosthetic treatment for patients with defects in oral and/or maxillofacial regions.

(7) Publications

[Original Articles]

1. Wang Y, Hattori M, Masaki K, Sumita YI. Detailed speech evaluation including formant 3 analysis and voice visualization in maxillofacial rehabilitation: A clinical report. J Prosthet Dent. 2024.12; 132(6); 1331.e1-1331.e7

2. Jingpu Zheng, Kosuke Nozaki, Kazuaki Hashimoto, Kimihiro Yamashita, Noriyuki Wakabayashi. Exploring the Biological Impact of -TCP Surface Polarization on Osteoblast and Osteoclast Activity. *Int J Mol Sci.* 2024.12; 26(1);
3. Hattori M, Murase M, Mouri Y, Matsui S, Li B, Wada J, Wakabayashi N. Retention of a speech-aid prosthesis with a magnetic attachment in a patient with cleft palate: A case report. *J J Mag Dent.* 2024.12; 33(2); 23-30
4. Matsui S, Murase M, Mouri Y, Li B, Hattori M, Wada J, Wakabayashi N. The case report of maxillofacial prosthesis using a magnetic attachment after maxillary sinus cancer treatment. *J J Mag Dent.* 2024.12; 33(2); 16-22
5. Wang Y, Hattori M, Liu R, Sumita YI. Digital acoustic analysis of the first three formant frequencies in patients with a prosthesis after maxillectomy. *J Prosthet Dent.* 2024.11; 132(5); 1082-1087
6. Hattori M, Patzelt SBM, Stadler S, Kohal RJ, Vach K, Elbashti ME, Sumita YI. Computerized optical scanning of ears: An in vitro evaluation with an intraoral scanner. *J Prosthet Dent.* 2024.11; 132(5); 1089.e1-1089.e5
7. Ali ASM, Masaki K, Hattori M, Sumita YI, Wakabayashi N. Maxillectomy patients' speech and performance of contemporary speaker-independent automatic speech recognition platforms in Japanese. *J Oral Rehabil.* 2024.11; 51(11); 2361-2367
8. Chugh A, Hattori M, Sumita YI, Wakabayashi N. Custom ocular prosthesis with intraoral obturator for orbital and intraoral defects resulting from mucormycosis: A technical case report. *Cureus.* 2024.11; 16(11); e73579
9. Sumita YI, Hattori M, Semper-Hogg W, Gao Y, Zhang M, Wakabayashi N. Four-dimensional scanning approach to obtain surface data of the face. *Int J Maxillofac Prosthetics.* 2024.11; 7(1); 6-7
10. Hattori M, Stadler S, Sumita YI, Spies BC, Vach K, Kohal RJ, Wakabayashi N. Digitization of dentate and edentulous maxillectomy and mandibulectomy defects with three different intraoral scanners: A comparative in vitro study. *J Clin Med.* 2024.11; 13(22); 6810
11. Elbashti ME. Artificial Intelligence revolution era: Shaping the current and future of maxillofacial prosthodontics. *Int J Maxillofac Prosthetics.* 2024.11; 7(1); 1
12. Elbashti ME, Howes DG. Empowering the next generation: Advancing maxillofacial prosthetic education at the special Sydney edition of yMPE workshop. *Int J Maxillofac Prosthetics.* 2024.11; 7(1); 2-5
13. Ali IE, Towithelertkul C, Sumita YI, Wakabayashi N. Retrospective analysis of medication-related osteonecrosis of the jaw at a maxillofacial prosthetics clinic. *Int J Maxillofac Prosthetics.* 2024.11; 7(1); 8-15
14. Otomaru T, Sumita YI. A digital duplicating obturator with 3D printing technology. *Int J Maxillofac Prosthetics.* 2024.11; 7(1); 16-19
15. Alkayem BL, Yamatani Y, Pradhan N, Sumita YI, Wakabayashi N. CAD-CAM for removable partial denture fabrication after marginal mandibulectomy based on a well-adjusted pre-existing denture. *J Oral Sci.* 2024.10; 66(4); 258-261
16. Hattori M, Elbashti ME, Sumita YI, Wakabayashi N. Influence of blowing musical instruments on geometrical face changes: 3D evaluation study. *Int J Prosthodont.* 2024.10; 0(0); 1-11
17. Hitomi Matsuno, Junichiro Wada, Natsuko Murakami, Kensuke Takakusaki, Tomiharu Nagayama, Kaho Manabe, Yugo Nomura, Shinsuke Koyama, Yuki Mouri, Bin Li, Kazuki Sakamoto, Eung-Yeol Kim, Yurika Ishioka, Miona Utsumi, Noriyuki Wakabayashi. Evaluation of hypermobile teeth deviation during impression taking in a partially edentulous dental arch: An in vitro study comparing digital and conventional impression techniques *Journal of Prosthodontic Research.* 2024.09;
18. Wang J, Murase M, Sumita YI, Notake R, Akiyama M, Yoshimura R, Wakabayashi N. Radioprotection performance evaluation of 3D-printed and conventional heat-cured dental resins for radiotherapy prostheses. *J Funct Biomater.* 2024.09; 15(10); 282

19. Towithelertkul C, Haraguchi M, Tanabe G, Fujita H, Ali IE, Han X, Sumita YI. Two-piece detachable interlocking mold for low-dose-rate brachytherapy: A dental technique for radiotherapy prosthesis fabrication. *J Prosthet Dent.* 2024.08; 132(2); 467-472
20. Haraguchi M, Towithelertkul C, Ali IE, Han X, Sumita YI. An indirect-direct technique with hot water for fabricating a cast metal crown under an existing removable partial denture. *J Prosthet Dent.* 2024.08; 132(2); 320-325
21. Ali IE, Sumita YI, Wakabayashi N. Advancing maxillofacial prosthodontics by using pre-trained convolutional neural networks: Image-based classification of the maxilla. *J Prosthodont.* 2024.08; 33(7); 645-654
22. Ali ASM, Hattori M, Sumita YI, Wakabayashi N. Dental and bony changes following subtotal glossectomy for cancer: A clinical report. *J Prosthet Dent.* 2024.08;
23. Wada K, Wada J, Uctasli MB, Uctasli S, Yavuz Y, Iwamoto T, Vallittu PK, Garoushi S, Lassila L. Impact of restorative material on fracture behaviors of class II restoration in endodontically treated deciduous molars. *Dental materials journal.* 2024.08;
24. Tonprasong W, Inokoshi M, Tamura M, Yoshihara K, Takahashi R, Nozaki K, Wada T, Minakuchi S. Does dental material type influence bacterial adhesion under the same polishing conditions? Direct observation using a fluorescent staining technique: An in vitro study. *Dent Mater J.* 2024.07; 43(4); 485-494
25. Wada J. Remarkable features of removable partial dentures show great potential in increasingly super-aged societies. *Journal of prosthodontic research.* 2024.07; 68(3); x-xi
26. Takaichi A, Kajima Y, Htat HL, Wakabayashi N. Influences of Different Selective Laser Melting Machines on the Microstructures and Mechanical Properties of Co-Cr-Mo Alloys. *Applied Sciences.* 2024.07; 14(15); 6576
27. Han X, Haraguchi M, Sumita YI, Aboelez MA, Wakabayashi N. Effect of wearing a maxillofacial prosthesis on masticatory rhythm improvement in mandibulectomy patients. *Health.* 2024.07; 16(7); 717-729
28. Chugh A, Hattori M, Aboelez MA, Sumita YI, Wakabayashi N. Assessment of the color stability of two silicone elastomers for maxillofacial prostheses upon exposure to cold beverages. *J Oral Sci.* 2024.04; 66(2); 116-119
29. Bai Z, Han X, Sumita YI, Hattori M, Maki K, Aboelez MA, Wakabayashi N. Predicting maximum occlusal force and tongue pressure using decision tree analysis in patients diagnosed with head and neck tumors. *J Prosthet Dent.* 2024.04;
30. Takayuki Asayama, Ayaka Takada, Yoshikazu Mikami, Hirofumi Yamaguchi, Muneaki Tamura, Kunihito Matsumoto, Kiwa Miyake, Yoshiyuki Yonehara, Hiromasa Tsuda. Possible roles of short-chain fatty acids produced by oral bacteria in the development of alveolar osteitis. *J Oral Sci.* 2024.04; 66(2); 102-106
31. Han, X; Bai, Z; Mogushi, K; Hase, T; Takeuchi, K; Iida, Y; Sumita, YI; Wakabayashi, N. Machine Learning Prediction of Tongue Pressure in Elderly Patients with Head and Neck Tumor: A Cross-Sectional Study *JOURNAL OF CLINICAL MEDICINE.* 2024.04; 13(8);
32. Htat Hein Linn, Takaichi Atsushi, Kajima Yuka, Kittikundecha Nuttaphon, Kamijo Shingo, Hanawa Takao, Wakabayashi Noriyuki. Influence of stress-relieving heat treatments on the efficacy of Co-Cr-Mo-W alloy copings fabricated using selective laser melting *Journal of Prosthodontic Research.* 2024.04; 68(2); 310-318
33. Han X, Hattori M, Sumita YI, Haraguchi M, Wakabayashi N. Factors related to masticatory rhythm in patients with oral tumors. *J Clin Med.* 2024.03; 13(7); 1926
34. Gibreel M, Perea-Lowery L, Garoushi S, Wada J, Lassila L, Vallittu P. Effect of different surface treatments on shear bond strength of autopolymerizing repair resin to denture base materials processed with different technologies. *Journal of Prosthodontic Research.* 2024.02;
35. Chugh A, Hattori M, Towithelertkul C, Sumita YI, Wakabayashi N. Evaluation of the color stability of three maxillofacial silicone materials after exposure to beverages: An in vitro study. *Heliyon.* 2024.02; 10(4); e25529

36. Elbashti ME, Aswehlee A, Sumita YI, Schimmel M, Abou-Ayash S, Molinero-Mourelle P. An integration protocol for aligning intraoral scans to facial scans using the nasal geometry reference in a fully dentate patient. *Quintessence Int.* 2024.02; 55(2); 140-146
37. Bai Z, Hattori M, Sumita YI, Wakabayashi N. Case report of a patient with mandibulectomy followed up for 11 years. *J Oral Sci.* 2024.01; 66(1); 88-90
38. Junichiro Wada, Paulina Heponiemi, Kanae Wada, Sufyan Garoushi, Noriyuki Wakabayashi, Tsutomu Iwamoto, Pekka K. Vallittu, Lippo Lassila. Effect of ethylene oxide unit number in bis-EMA on the physical properties of additive-manufactured occlusal splint material *Journal of Prosthodontic Research.* 2024.01;
39. Mai Murase, Haruka Fujita, Meiko Oki, Fumi Yoshioka, Yuichiro Nishiyama, Tetsuo Ohyama, Chihaya Matsumoto, Satomi Usui, Yuji Sato, Tadashi Sado, Hidekazu Takahashi, Keiichi Sasaki, Miwa Matsuyama, Yuka Sumita. Time-study research on maxillofacial prosthetic treatment *Japanese Dental Science Review.* 2024.01; 60; 73-80
40. Towithelertkul C, Murase M, Tamura S, Sumita YI, Wakabayashi N. Digital design of open hollow obturator framework using existing dentures: A dental technique. *The Journal of prosthetic dentistry.* 2024.01;
41. Mihara, T; Nozaki, K; Kowaka, Y; Jiang, MT; Yamashita, K; Miura, H; Ohara, S. Enhanced Photocatalysis of Electrically Polarized Titania Nanosheets *NANOMATERIALS.* 2024.01; 14(2);
1. Ishii Y, Hatano N, Mochida K, Omura K. Reconstruction using a submental island flap after ablation of a retromolar mucoepidermoid carcinoma: a case report. 2024.06; 70(6); 248-254
2. Yamatani Y, Kasahara T, Nakamura H, Hattori M, Masaki K, Sumita YI. Fabrication of a PAP and a mandibular prosthesis using digital technology: A case report. *Maxillofacial Prosthetics.* 2024.06; 47(1); 21-30

[Books etc]

1. The Forefront of Biomedical Engineering Research: Future Sciences in Biodevices, Biomaterials, and Drug Discovery. 2024.11
2. Decision making in abutment tooth selection for fixed/removable prostheses. 2024.06 (ISBN : 978-4-263-46180-8)

[Misc]

1. Annamma LM, Hattori M, Ali IE, Dsouza J, Waqar A, Chugh A, Sumita YI. Frequently used extraoral maxillofacial prosthetic materials and their longevity - A comprehensive review. *Jpn Dent Sci Rev.* 2024.12; 60; 137-147
2. Takaichi A, Kajima Y, Jialin D, Wakabayashi N. Metal Additive Manufacturing Technology for Digital Dentistry. *Health Care Curr Rev.* 2024.07; 12(3); 1000407
3. Ali IE, Tanikawa C, Chikai M, Ino S, Sumita YI, Wakabayashi N. Applications and performance of artificial intelligence models in removable prosthodontics: A literature review. *J Prosthodont Res.* 2024.07; 68(3); 358-367
1. Atsushi Takaichi, Yuka Kajima. Characteristics of surface morphologies of metal additive manufacturing and their effects on adhesion 2024.05; 43(2); 83-86

[Conference Activities & Talks]

1. Dong J, Takaichi A, Kajima Y, Kamijo S, Wakabayash N. The effects of heat treatments on the metal-ceramic bond strength and residual stress of Co-Cr alloy manufactured by selective laser melting under thermal cycling. 11th World Congress on Materials Science and Engineering 2024.12.16 Osaka
2. Murakami N, Komine K, Wada J, Yamazaki T, Zou S, Wakabayashi N.. Impact of Crown and Core Materials Combination on Thermal Behavior. The 72nd Annual Meeting of Japanese Association for Dental, Oral, and Craniofacial Research 2024.11.17 Kagoshima, Japan

3. Wada J, Wada K, Gibreel M, Garoushi S, Wakabayashi N, Iwamoto T, Vallittu PK, Lassila L. Adhesion of *Streptococcus mutans* to additive-manufactured occlusal splint materials. The 72nd Annual Meeting of Japanese Association for Dental, Oral, and Craniofacial Research 2024.11.17 Kagoshima
4. Haraguchi M, Tachikawa N, Tani H, Tsuji M, Sumita YI, Murase M, Hattori M, Wakabayashi N. Prosthetic rehabilitation to a patient underwent total glossectomy and hemi-mandibulectomy for tongue cancer in youth. The 71st Annual Meeting of the American Academy of Maxillofacial Prosthetics 2024.11.03 Naples Grande Beach Hotel (Naples, Florida USA)
5. Tani H, Haraguchi M, Sumita YI, Murase M, Hattori M, Wakabayashi N. The effects of a night denture with an obturator for maxillectomy patients: A case report. The 71st Annual Meeting of the American Academy of Maxillofacial Prosthetics 2024.11.03 Naples Grande Beach Hotel (Naples, Florida USA)
6. Miao M, Hattori M, Aida J, Murase M, Haraguchi M, Wakabayashi N. The survival rates and risk factors of dental prostheses: A retrospective study. The 71st Annual Meeting of the American Academy of Maxillofacial Prosthetics 2024.11.03 Naples Grande Beach Hotel (Naples, Florida USA)
7. Uchida Y, Takaichi A, Kajima Y, Wakabayashi N. Digitalization of removable partial dentures -Consideration of bonding method between metal framework and denture base. The 4th International Symposium on Design & Engineering by Joint Inverse Innovation for Materials Architecture(DEJI2MA-4) 2024.10.03 Tokyo
8. Miao M, Sumita YI, Hattori M, Wakabayashi N. Using a convolutional neural network for image-based classification of the CLP patients. CLEFT TOKYO 2024, The 16th world congress of the International Cleft Lip and Palate Foundation 2024.07.18 Yasuda Auditorium, The University of Tokyo (Tokyo, Japan)
9. Sumita YI, Shibui T. How to support the patient with lip and palate in community dental care.: Considerations from a long-term case study. CLEFT TOKYO 2024, The 16th world congress of the International Cleft Lip and Palate Foundation 2024.07.18 Yasuda Auditorium, The University of Tokyo (Tokyo, Japan)
10. Mouri Y, Murase M, Matsui S, Wakabayashi N. Use of digital technology in maxillofacial prosthetic treatment on cleft-lip and palate patients with severe periodontitis: A case report. The 133rd Annual Meeting of the Japan Prosthodontic Society / The 14th Biennial Congress of the Asian Academy of Prosthodontics (AAP) 2024.07.07 Makuhari Messe (Chiba, Japan)
11. Otomaru T, Sumita YI. A digital duplicating obturator with 3D printing technology. The 133rd Annual Meeting of the Japan Prosthodontic Society / The 14th Biennial Congress of the Asian Academy of Prosthodontics (AAP) 2024.07.07 Makuhari Messe (Chiba, Japan)
12. Murase M, Matsui S, Mouri Y, Pradhan N, Yamatani Y, Wakabayashi N. A case of using predictively designed digital obturator for medication-related osteonecrosis of the jaw. The 133rd Annual Meeting of the Japan Prosthodontic Society / The 14th Biennial Congress of the Asian Academy of Prosthodontics (AAP) 2024.07.07 Makuhari Messe (Chiba, Japan)
13. Ahmed Sameir Ali , Yuka Sumita , Natsuko Murakami , Noriyuki Wakabayashi. Nasal function in maxillectomy patients with different obturator designs, a computational fluid dynamics (CFD) study. 公益社団法人日本補綴歯科学会 第 133 回学術大会 2024.07.06 千葉
14. Sumita YI, Hagino A, Murase M, Haraguchi M, Hattori M, Wakabayashi N. How to support the nutrition of patients with head and neck cancer?: The first International Dysphagia Diet Awareness workshop. The 133rd Annual Meeting of the Japan Prosthodontic Society / The 14th Biennial Congress of the Asian Academy of Prosthodontics (AAP) 2024.07.06 Makuhari Messe (Chiba, Japan)
15. Melhem AH, Ali ASM, Hattori M, Wakabayashi N. Evaluating the accuracy of intaglio surface in immediately fabricated removable dentures: A preliminary digital and laboratory study. The 133rd Annual Meeting of the Japan Prosthodontic Society / The 14th Biennial Congress of the Asian Academy of Prosthodontics (AAP) 2024.07.06 Makuhari Messe (Chiba, Japan)
16. Jiang Mengtian; Kosuke Nozaki; Takeshi Ueno; Noriyuki Wakabayashi. Antibacterial Efficiency by Silver, Copper, and Cerium Doped Titania. 2024 International Association for Dental, Oral, and Craniofacial Research 2024.03.15

17. Qu Wenrui, Takaichi Atsushi, Kajima Yuka, Kamijo Shingo, Wakabayashi Noriyuki. Trueness and adaptation of maxillary complete denture frameworks fabricated with contactless support by selective laser melting. 国際・産学連携インヴァーシブイノベーション 材料創出 (DEJ2MA) プロジェクト 公開討論会 2024.03.09 名古屋
18. Hattori M, Murase M, Mouri Y, Matsui S, Li B, Wada J, Wakabayashi N. Retention of a speech-aid prosthesis with a magnetic attachment in a patient with cleft lip and palate: A case report. The 23rd International Conference on Magnetic Applications in Dentistry 2024.02.26 JSMAD web site: <http://jsmad.jp/international/23/>
19. Matsui S, Murase M, Mouri Y, Li B, Hattori M, Wada J, Wakabayashi N. The case report of maxillofacial prosthesis using a magnetic attachment after maxillary sinus cancer treatment. The 23rd International Conference on Magnetic Applications in Dentistry 2024.02.26 JSMAD web site: <http://jsmad.jp/international/23/>
1. Li Yajie, Yuka Inamochi, Tatsuhiko Anzai, Noriyuki Wakabayashi, Kunihiro Takahashi, Kenji Fueki. An Explainable Artificial Intelligence for Designing Removable Partial Denture Framework. The 89th Annual Meeting of the Stomatological Society, Japan 2024.12.07 Institute of Science Tokyo
2. Li B, Mouri Y, Matsuno H, Xie C, Okawara H, Murakami N, Wakabayashi N. Stress induced in peri-implant bone by mechanical loading affect bone metabolism.. 2024 Annual Meeting of the Tokyo Branch of the Japanese Society of Prosthetic Dentistry 2024.12.01 Tokyo, Hatanodai
3. Koyama S, Wada J, Hokketo A, Murakami N, Takakusaki K, Kousaka N, Takata A, Wakabayashi N. Impact of occlusal contact loss in the molar region of the habitual chewing side on masticatory function. 2024.12.01 Tokyo
4. Koyama S, Wada J, Hokketo A, Murakami N, Takakusaki K, Kousaka N, Takata A, Wakabayashi N. Impact of occlusal contact loss in the molar region of the habitual chewing side on masticatory function. 2024.12.01 Tokyo
5. Haraguchi M, Tachikawa N, Tani H, Hattori M. The long-term follow-up of a postoperative patient for ameloblastoma of the left mandible wearing an implant-supported partial overdenture: A case report. The 28th Annual Meeting of Japanese Academy of Maxillofacial Implants / The 41st Annual Meeting of Japanese Academy of Maxillofacial Prosthetics 2024.11.30 Fukuoka (Japan)
6. Kasahara T, Nakamura H, Yamatani Y, Murase M, Haraguchi M, Hattori M. Application of digital technology in the fabrication of temporary devices used during the repair period of maxillofacial prostheses. The 28th Annual Meeting of Japanese Academy of Maxillofacial Implants / The 41st Annual Meeting of Japanese Academy of Maxillofacial Prosthetics 2024.11.30 Fukuoka (Japan)
7. Tani H, Haraguchi M, Masaki K, Hattori M, Murase M. A case report of applying nasal speaking to improve valve for severer trismus patient after radiotherapy for oropharynx cancer. The 28th Annual Meeting of Japanese Academy of Maxillofacial Implants / The 41st Annual Meeting of Japanese Academy of Maxillofacial Prosthetics 2024.11.30 Fukuoka (Japan)
8. Murase M, Tachikawa N, Hasegawa Y, Adachi W, Matsui S, Mouri Y, Takada A, Wada J, Marukawa E, Hattori M. Implant supported maxillofacial prosthesis with right side maxillectomy. The 28th Annual Meeting of Japanese Academy of Maxillofacial Implants / The 41st Annual Meeting of Japanese Academy of Maxillofacial Prosthetics 2024.11.30 Fukuoka (Japan)
9. Otomaru T, Murase M, Sumita Y. The dental maintenance of a patient with the bone anchored device for wide edentulous area at a general dental practice; A case report. The 28th Annual Meeting of Japanese Academy of Maxillofacial Implants / The 41st Annual Meeting of Japanese Academy of Maxillofacial Prosthetics 2024.11.30 Fukuoka (Japan)
10. A case of an elderly oral cancer patient who found it difficult to take tablets before surgery so that we could consider how to deal with the problem. 2024.08.30
11. Nitta K, Aramaki M, Murase M, Notake R, Suzuki S, Yagihashi T, Yamanaka M, Sato N, Shimo T, Goto S, Shiba S, Hayashizaki N. Effect of dental material activation for BNCT. The 20th Congress on Neutron Capture Therapy 2024.07.27 Osaka (Japan)

12. Asuka Hirata, Kensuke Takakusaki, Kosuke Nozaki, Natsuko Murakami, Junichiro Wada, Miyuki Tanimoto, Noriyuki Wakabayashi. Effect of time degradation on surface characteristics of light-polymerized denture liners.. The 133rd annual meeting of the Japan Prosthodontic Society 2024.07.07 Chiba
13. Komine K, Murakami N, Yamazaki T, Utsumi M, Li B, Wada J, Wakabayashi N. Thermal stress behavior in restorative materials using finite element method. 2024.07.06
14. Yuji Uchida, Atsushi Takaichi, Yuka Kajima, Hidekazu Takahashi, Manabu Kanazawa, Noriyuki Wakabayashi. Digitalization of removable partial dentures -Consideration of bonding method between metal framework and denture base. The 133rd Annual Meeting of the Japan Prosthodontic Society 2024.07.06 Chiba
15. Evaluation of hypermobile teeth deviation during impression-taking in the partially edentulous dentition: comparison between digital and conventional impression techniques. The 133rd Annual Meeting of the Japan Prosthodontic Society 2024.07.06
16. Li Yajie, Yuka Inamochi, Tatsuhiko Anzai, Kazuki Sakamoto, Eung-Yeol Kim, Hirokazu Sato, Taku Nemoto, Noriyuki Wakabayashi, Kunihiko Takahashi, Kenji Fueki. An Explainable Artificial Intelligence for Designing Removable Partial Denture Framework. The 14th Biennial Congress of the Asian Academy of Prosthodontics 2024.07.06 Makuhari Messe
17. Takita M, Nozaki K, Komada W, Otake S, Fueki K. Enhancement of Bond Strength of Composite Resin to PEEK by UV irradiation. The 133rd Annual Meeting of the Japan Prosthodontic Society 2024.07.06
18. Wada J. Information-sharing between dentist and dental technician in removable partial denture fabrication. The 133rd Annual meeting of Japan Prosthodontic Society 2024.07.06 Makuhari
19. Haraguchi M, Tachikawa N, Michi Y, Harada H, Sumita YI, Hattori M, Murase M. Clinical assessment of masticatory function using dental-implant prostheses for extensive oro-maxillary defects after surgery in head and neck tumor patients. The 48th Annual Meeting of Japan Society for Head and Neck Cancer 2024.06.21 Hamamatsu (Japan)
20. Sumita YI, Hattori M, Murase M, Haraguchi M, Kawabe H, Asakage T. A qualitative study on how head and neck cancer patients manage work and treatment concurrently. The 48th Annual Meeting of Japan Society for Head and Neck Cancer 2024.06.20 Hamamatsu (Japan)
21. Mouri Y, Hattori M, Yamatani Y, Takada A, Murase M, Haraguchi M, Sumita YI. Use of digital technology in prosthetic treatment on cleft-lip and palate patients: A case report. The 48th Annual Meeting of Japanese Cleft Palate Association 2024.05.30 Nagoya (Japan)
22. Kobayashi Y, Takaichi A, Kajima Y, Wakabayashi N. The effect of the modified island scanning strategies on the fit accuracy of fixed dental prosthesis prepared by selective laser melting . The 82nd General Session of the Japanese Society for Dental Materials and Devices 2024.04.21 Kagoshima
23. Aramaki M, Hayashizaki N, Murase M, Nitta K, Nagata H, Notake R. Study on the effects of in vivo metals activation for Boron Neutron Capture Therapy. The 71st JSAP Spring Meeting 2024 2024.03.25 Tokyo (Japan)
24. Koabyashi Y, Kajima Y, Takaichi A, Wakabayashi N. Impact of modified island scan strategy on the fitness of bridge produced by powder bed fusion. Design & Engineering by Joint Inverse Innovation for Materials Architecture Public Discussion Meeting 2024.03.09 Nagoya

[Awards & Honors]

1. The 133rd Annual Meeting of the Japan Prosthodontic Society, Oral Presentation Award (Ali ASM), Japan Prosthodontic Society, 2024.07
2. The 133rd Annual Meeting of the Japan Prosthodontic Society / The 14th Biennial Congress of the Asian Academy of Prosthodontics (AAP), IPROSI AWARD (Sumita YI), Japan Prosthodontic Society / Asian Academy of Prosthodontics (AAP), 2024.07

[Others]

1. Symposium on supporting the balance of head and neck cancer treatment and employment: Information sharing among medical professional, 2024.12
Symposium on supporting the balance of head and neck cancer treatment and employment: Information sharing among medical professional was hosted by the Tokyo Metropolitan Government and organized by the Maxillofacial Prosthetics team of Institute of Science Tokyo, December 21, 2024. It was supported by the Tokyo Metropolitan Government.