

Division of Oral and Maxillofacial Radiology
Department of Human Biology and Pathophysiology

Outline

Oral and Maxillofacial Radiology consists of radiation physics, radiation biology, radiation protection, the principle of medical imaging, and clinical imaging diagnosis. The study of Oral and Maxillofacial Radiology includes the improvement of imaging diagnosis, and quantitative analysis by the image processing for the oral and maxillofacial lesion. The themes of our research are shown below.

Faculty members

Professor; Eiji NAKAYAMA, D.D.S., Ph.D.

Assistant professor/full-time lecturer; Atsutoshi NAKATANI, D.D.S., Ph.D.

Assistant professor/research associate; Kazutaka SUGIURA, D.D.S.

Main research in progress

- 1) Image findings analysis of the disease and study on Interventional Radiology in the oral and maxillofacial region
- 2) Research on the development of a three-dimensional analysis method for diagnostic TMJ imaging using CT
- 3) Study on effective dose evaluation of dental cone beam CT

Current publications

- 1: Masayasu Tashiro, Atsutoshi Nakatani, Kazutaka Sugiura, Eiji Nakayama Analysis of image defects in digital intraoral radiography based on photostimulable phosphor plates. *Oral Radiology* 39, 355-365, 2023. <https://doi.org/10.1007/s11282-022-00645-8>
- 2: Ryota Takaoka, Kotaro Kuyama, Hirofumi Yatani, Shoichi Ishigaki, Hiroki, Kayashima, Yukiko Koishi, Takafumi Kato, Hiroshi Egusa, Yuka Uchiyama, Atsutoshi Nakatani, Hiroaki Shimamoto Involvement of an FTO gene polymorphism in the temporomandibular joint osteoarthritis. *Clin Oral Investig.* 39, 2965-2973, 2022.

- 3: Masayasu Tashiro, Tomoaki Sano, Kazutaka Sugiura, Yasuhito Minamida, Yoshihiro Abiko, Hiroki Nagayasu, Eiji Nakayama Medial clavicle fracture with bone destruction after radical neck dissection combined with postoperative chemotherapy for secondary cervical lymph node metastasis of tongue cancer: a case report *Oral Radiology* 37, online, February, 2021. DOI: 10.1007/s11282-021-00515-9
- 4: Nagwan Elsayed, Tsuyoshi Shimo, Masayasu Tashiro, Eiji Nakayama, Hiroki Nagayasu Disuse atrophy of masticatory muscles after intracranial trigeminal schwannoma resection: A case report and review of literature. *International Journal of Surgery Case Reports* 75, 23-28, September, 2020. DOI: 10.1016/j.ijscr.2020.08.059
- 5: Hiroaki Takebe, Kazuki Akizuki, Keiko Fujita, Shalehin Nazmus, Naohiko Kawamura, Akihiro Hosoya,, Eiji Nakayama, Kazuharu Irie. Three-dimensional morphological analysis of Dens invaginatus using micro CT. *The dental journal of Health Sciences University of Hokkaido* 39, 11-15, June, 2020.
- 6: Nagwan Elsayed, Tsuyoshi Shimo, Fumiya Harada, Shigehiro Takeda, Daichi Hiraki, Yoshihiro Abiko, Eiji Nakayama, Hiroki Nagayasu. Masticatory muscle tendonaponeurosis hyperplasia diagnosed as temporomandibular joint disorder: A case report and review of literature. *International Journal of Surgery Case Reports*, 78,120-125, January 2021, DOI: org/10.1016/j.ijscr.2020.11.150.