

Oral and Maxillofacial Radiology

1. Staffs and Students (April, 2009)

Professor	Tohru KURABAYASHI	
Associate Professor	Mizue IDA	
Junior Associate Professor	Naoto OHBAYASHI,	Norio YOSHINO
Assistant Professor	Akemi TETSUMURA,	Shin NAKAMURA,
	Hiroshi WATANABE,	Kiyoshi OKOCHI
Hospital Staff	Ami KURIBAYASHI,	Akiko IMAIZUMI
Foreign Researcher	Mohammad Abdul MOMIN	
Graduate Student	Mustafa ALKHADER,	Yoshikazu NOMURA,
	Yosuke KAMIYAMA	
Research Student	Sara AHRABI	
Secretary	Izumi MOTOHASHI	

2. Purpose of Education

Oral and maxillofacial radiology is a branch of dental science which deals with the effective application of radiation energy to the diagnosis and treatment of oral and maxillofacial diseases. Main objective of oral and maxillofacial radiology in the graduate course is to provide students opportunity to study advanced imaging modalities including digital imaging, cone-beam CT, multi-detector row CT and MRI, and also to study image processing and image analysis technology. Students are also taught on basic radiation oncology and its related laboratory technology depending on their research project.

3. Research Subjects

- 1) Diagnosis of maxillofacial diseases by CT, MRI and PET imaging
- 2) Advantages of cone-beam CT for clinical dentistry
- 3) Development of high resolution MRI technology.
- 4) Novel MRI techniques for TMJ disorders.
- 5) Factors determining radioresistance of oral and maxillofacial cancers.

4. Clinical Services

Oral and maxillofacial radiology clinic provides a full spectrum of imaging examinations and diagnosis, including CT and MRI. Non-invasive, interventional radiology for patients with salivary gland stone is also performed in the clinic.

5. Publications

Original Article

1. Imaizumi A, Kuribayashi A, Okochi K, Ishii J, Sumi Y, Yoshino N, Kurabayashi T. Differentiation between superficial and deep lobe parotid tumors by magnetic resonance imaging: usefulness of parotid duct criterion. *Acta Radiol* 50:806-811, 2009.
2. Nakamura S, Okochi K, Murata Y, Shibuya H, Kurabayashi T. [18F]fluorodeoxyglucose-PET/CT differentiation between physiological and pathological accumulations in head and neck. *Nucl Med Commun* 30:498-503, 2009.
3. Momin MA, Okochi K, Watanabe H, Imaizumi A, Omura K, Amagasa T, Okada N, Ohbayashi N, Kurabayashi T. Diagnostic accuracy of cone-beam CT in the assessment of mandibular invasion of lower gingival carcinoma: comparison with conventional panoramic radiography. *Eur J Radiol* 72:75-81, 2009.
4. Sakamoto J, Yoshino N, Okochi K, Imaizumi A, Tetsumura A, Kurohara K, Kurabayashi T. Tissue characterization of head and neck lesions using diffusion-weighted MR imaging with SPLICE. *Eur J Radiol* 69:260-268, 2009.
5. Tantanapornkul W, Okochi K, Bhakdinaronk A, Ohbayashi N, Kurabayashi T. Correlation of darkening of impacted mandibular third molar root on digital panoramic images with cone-beam computed tomography findings. *Dentomaxillofac Radiol* 38:11-16, 2009.
6. Inoue-Arai MS, Ono T, Honda E, Kurabayashi T, Moriyama K. Motor coordination of articulators depends on the place of articulation. *Behav Brain Res* 199:307-316, 2009.
7. Katakami K, Mishima A, Kuribayashi A, Shimoda S, Hamada Y, Kobayashi K. Anatomical characteristics of the mandibular lingual foramina observed on limited cone-beam CT images. *Clin Oral Implants Res* 20:386-390, 2009.

8. Kusumah SW, Suzuki S, Itoh K, Higashino R, Ohbayashi N, Kurabayashi T, Moriyama K. Morphological observation of the medial pterygoid muscle by the superimposition of images obtained by lateral cephalogram and MRI. *J Orthod* 36:243-252, 2009.
9. Minato A, Ono T, Miyamoto J, Honda E, Kurabayashi T, Moriyama K. Preferred-chewing-side-dependent two-point discrimination and cortical activation pattern of tactile tongue sensation. *Behav Brain Res* 203:118-126, 2009.
10. Miyazaki H, Kato J, Watanabe H, Harada H, Karizaki H, Tetsumura A, Sato A, Omura K. Intralesional laser treatment of voluminous vascular lesions in the oral cavity. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 107(2):164-172, 2009.
11. Ozawa N, Sumi Y, Chong C, Kurabayashi T. Evaluation of oral vascular anomalies using optical coherence tomography. *Br J Oral Maxillofac Surg* 47:622-626, 2009.
12. Ozawa N, Sumi Y, Shimozato K, Chong C, Kurabayashi T. In vivo imaging of human labial glands using advanced optical coherence tomography. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 108:425-429, 2009.
13. Yamada I, Takeshita K, Saito N, Yoshino N, Tetsumura A, Kumagai J, Shibuya H. Evaluation of gastric cancer by high-resolution three-dimensional CISS MR imaging in vitro. *Clin Imaging* 33(5):354-360, 2009.
14. Yoshimura R, Shibuya H, Miura M, Watanabe H, Ayukawa F, Hayashi K, Toda K. Quality of life of oral cancer patients after low-dose-rate interstitial brachytherapy. *Int J Radiat Oncol Biol Phys* 73(3):772-8, 2009.