

ANNUAL PUBLICATIONS

Department of Dental Radiology

1993.1.-2000.3.

I. Staffs and Students (April, 1999)

Professor	Sasaki T		
Associate Professor	Domon M.		
Lecturer	Ida M.,	Kurabayashi T.,	Takeda M.
Research Associate	Honda E.,	Ohbayashi N.,	Yoshino N.,
	Miura M.		
Hospital Staff	Tetsumura A.,	Nakamura S.	
Clinical Training Staff	Nagaike S.		
Secretary	Motohashi I.		
Graduate Student	Watanabe H.,	Ohkouchi K.,	Vannaporn C.
Special Students	Iwabuchi T.,	Kishino T.,	Shimizu T.
Chief Radiological Technologist	Igarashi M.		
Managing Radiological Technologist	Chiba R.		
Radiological Technologist	Morizono T.,	Tanide A.	
Assistant Radiological Technologist	Mamiya R.		
Assistant Technical Staff	Komatsu S.		
Hospital Secretary	Takahashi N.		

II. Educational Outline of Graduate Course

Dental radiology is a branch of dental science which deals with the effective application of radiation energy to the diagnosis and treatment of dento-maxillo-facial diseases.

Main objective of dental radiology in the graduate course is to provide graduate students opportunity to study advanced imaging modalities including digital imaging, CT and MRI, and also to study image processing and image analysis technology.

Students are also taught on basic radiation oncology, radiotherapy of maxillofacial malignancy and its related laboratory technology depending on their research project.

III. Research Subjects

Followings are the main research subjects.

- 1) Efficacy of digital imaging modalities in dento-maxillo-facial diseases.
- 2) Differential diagnosis of maxillofacial diseases by CT, MRI and MRS.
- 3) Development of high resolution MRI technology.
- 4) Efficient MRI technology for TMJ disorders.
- 5) Efficient MR sialography.
- 6) Factors determining radioresistance of oral and maxillofacial cancers.
- 7) Effect of several gene expressions in tumor cell radioresistance.

IV. Publications (January, 1993-March, 2000)**A. Original Articles**

1. Katoh T., Hayami A., Harata Y., Satoh K., Shimano T., Furumoto K. and Sasaki T.: Variation of organ doses with tube potential and total filtration in dental radiography. Radiat Protec Dosim 49: 117-119, 1993.
2. Kurabayashi T., Ida M., Ohbayashi N., Ishii J. and Sasaki T.: Criteria for differentiating superficial from deep lobe tumours of the parotid gland by computed tomography. Dentomaxillofac Radiol 22: 81-85, 1993.
3. Kurabayashi T., Ohbayashi N., Ida M., Yoshino N., Ishii J. and Sasaki T.: Evaluation of CT-sialographic images for parotid gland mass lesions. Dental Radiol 33: 280-287, 1993 (in Japanese).
4. Sasaki T., Kamata R., Urahashi S. and Yamaguchi T.: Evaluation of uneven fractionation radiotherapy of cervical lymph node — metastases by linear quadratic model. J Jpn Soc Ther Radiol Oncol 5: 59-70, 1993.
5. Sasaki T., Kamata R. and Urahashi S.: Quantitative analysis of radioresistance of solid tumors. J Jpn Soc Ther Radiol Oncol 5:

- 99-106, 1993.
6. Shibuya H., Takeda M., Mastumoto S., Hoshina M., Suzuki S. and Takagi M.: The efficacy of radiation therapy for a malignant melanoma in the mucosa of the upper jaw: An analytic study. *Int J Radiat Oncol Biol Phys* 26: 35-39, 1993.
7. Shibuya H., Hoshina M., Takeda M., Mastumoto S., Suzuki S. and Okada N.: Brachytherapy for stage & oral tongue cancer: An analysis of past cases focusing on control and complications. *Int J Radiat Oncol Biol Phys* 26: 51-58, 1993.
8. Shibuya H., Takeda M., Mastumoto S., Hoshina M., Shagdarsuren M. and Suzuki S.: Brachytherapy for non — metastatic squamous cell carcinoma of the buccal mucosa. *Acta Oncologica* 32: 327-330, 1993.
9. Yoshinouchi M., Miura M., Gaozza E., Li S. and Baserga R.: Basic fibroblast growth factor stimulates DNA synthesis in cells overexpressing the insulin- like growth factor receptor. *Mol Endocrinol* 7: 1161-1168, 1993.
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11. Coppola D., Ferber A., Miura M., Sell C., D'Ambrosio C., Rubin R. and Baserga R.: A functional insulin- like growth factor I receptor is required for the mitogenic and transforming activities of the epidermal growth factor receptor. *Mol Cell Biol* 14: 4588-4595, 1994.
- 12. Hirayama Y.: Detectability of intra-osseous lesions of jaws with computed panoramic radiography. *J Stomatol Soc Jpn* 61: 290-308, 1994 (in Japanese).
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14. Honda E., Sasaki T., Shibasaki H., Ida M., Ohbayashi N. and Yoshino N.: Evaluation of quality assurance program in dental radiography. *Dental Radiol* 34: 8-14, 1994 (in Japanese).
15. Li S., Ferber A., Miura M. and Baserga R.: Mitogenicity and transforming ability of the insulin- like growth factor I receptor with mutations in the tyrosine kinase domain. *J Biol Chem* 269: 32558-32564, 1994.
16. Matsubara S., Katoh T., Kubota N., Yoshino N., Sasaki T. and Sasaki M.S.: The effects of X- ray energy and an iodine — based contrast agent on chromosome aberrations. *Radiat Res* 137: 231-237, 1994.
17. Miura M., Li S., Dumenil G. and Baserga R.: Platelet- derived growth factor- induced expression of messenger RNA for the proliferating cell nuclear antigen (PCNA) requires a functional receptor for the insulin- like growth factor I. *Cancer Res* 54: 2472-2477, 1994.
18. Sell C., Dumenil G., Devaud C., Miura M., Coppola D., Efstratiadis A. and Baserga R.: Effect of a null mutation of insulin- like growth factor I receptor gene on growth and transformation of mouse embryo fibroblasts. *Mol Cell Biol* 14: 3604-3612, 1994.
19. Kurabayashi T., Ida M., Yoshino N., Hosokawa A., Sasaki T., Ishii J., Kishi T. and Kusama M.: Usefulness of CT images for diagnosis of odontogenic maxillary sinusitis. *Oral Radiol* 11: 21-30, 1995.
20. Miura M., Li S. and Baserga R.: Effect of a mutation at tyrosine 950 of the insulin- like growth factor I receptor on the growth and transformation of cells. *Cancer Res* 55: 663-667, 1995.
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22. Sasaki T., Iwai K., Okano T., Katoh T. et al.: Guideline for intra-oral radiography using highly sensitive films. *Jpn J Dent Assoc* 48: 4-13, 1995 (in Japanese).
23. Shibuya H., Takeda M. and Matsumoto S.: Radiotherapy of oropharyngeal squamous cell carcinomas. *Head and Neck Cancer* 21: 161-165, 1995 (in Japanese).
24. Yasumoto M., Shibuya H., Hoshina M., Takeda M., Matsumoto S. and Suzuki, S.: External and interstitial radiotherapy in the treatment of oropharyngeal squamous cell carcinoma. *Brit J Radiol* 68: 630-635, 1995.
25. Yasumoto M., Shibuya H., Takeda M. and Korenaga T.: Squamous cell carcinoma of the oral cavity: MR findings and value of T1-versus T2-weighted fast spin-echo images. *AJR* 164: 981-987, 1995.
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 33. Miura M., Nakamura S., Sasaki T., Takasaki Y., Shiomi T. and Yamaizumi M.: Roles of XPG and XPF/ERCC1 endonucleases in UV-induced immunostaining of PCNA in fibroblasts. *Exp Cell Res* 226: 126-132, 1996.
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 36. Sunahara Y., Taniguchi H., Inoue T., Takeda M. et al.: Application of the spacer in interstitial brachytherapy for cancer of buccal mucosa. *Maxillofacial Prosthesis* 19: 117-123, 1996 (in Japanese).
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 41. Ida M., Tetsumura A., Kurabayashi T. and Sasaki T.: Periosteal new bone formation in the jaws: A computed tomographic study. *Dentomaxillofac Radiol* 26: 169-176, 1997.
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 48. Shimura M., Ishizaka Y., Yuo A., Hatake K., Oshima M., Sasaki T. and Takaku F.: Characterization of room temperature induced apoptosis in HL-60. *FEBS Letters* 417: 379-384, 1997.
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 50. Wang Y., Cheong N., Miura M. and Iliakis G.: Overexpression of insulin-like growth factor (IGF)- I receptor enhances inhibition of DNA replication in mouse cells exposed to x-rays. *Radiation and Environmental Biophysics* 36: 117-123, 1997.
 51. Yoshioka T., Kobayashi C., Suda H. and Sasaki T.: Quantitative subtraction with direct digital dental radiography. *Dentomaxillofac Radiol* 26: 286-294, 1997.
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 53. Ida M., Kurabayashi T., Tanaka A., Sasaki T., Kishi T., Hoshi K. and Okada N.: Case report: Thrombosed varix in the submandibular space. *Dentomaxillofac Radiol* 27: 367-370, 1998.
 54. Katoh H., Saitoh H., Matsumoto M., Ohbayashi N. and Sasaki T.: Application of DICOM Supplement 32 to computed radiography and digitized film image. *Jap J Med Phys Suppl* 57: 204-207, 1998.
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- Ther Radiol Oncol 10: 171-175, 1998 (in Japanese).
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 - 57. Komori K.: Cross-resistance to radiation in human squamous cell carcinoma cells with induced cisplatin resistance. *J Stomatol Soc Jpn* 65: 202-212, 1998 (in Japanese).
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 - 64. Ohbayashi N., Yamada I., Yoshino N. and Sasaki T.: Sjögren syndrome: Comparison of assessments with MR sialography and conventional sialography. *Radiology* 209: 683-688, 1998.
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 - 74. Watanabe H., Miura M. and Sasaki T.: Differential effects of the insulin-like growth factor I receptor on radiosensitivity and spontaneous necrosis formation of human glioblastoma cells grown in multicellular spheroids. *Exp Cell Res* 250: 99-111, 1999.
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B. Books

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8. Katoh T.: Radiation protection for radiological workers. In: Radiation Protection in Dental Practice. Sasaki T. et al. eds., Jpn Soc Oral Maxillofacial Radiol, Ishiyaku publishers, Tokyo, p.89-110, 1994 (in Japanese).
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16. Sasaki T., Honda E., Umino K. and Takahashi Y.: A simulation system with three-dimensional CT images for maxillofacial surgery and prediction of post-operative facial appearance. In: IADMFR/CMF'97 Advances in Maxillofacial Imaging. Farman AG. et al. eds., Elsevier, Amsterdam, p.197-203, 1997.
17. Kurabayashi T. and Sasaki T.: Imaging diagnosis for tooth extraction. In: Guidebook of Tooth Extraction. Amagasa T. and Ohishi M. eds., Nippon dental review publishers, Tokyo, p.17-30, 1997 (in Japanese).
18. Ohbayashi N.: Computed radiography. In: Frontier in Oral and Maxillofacial Imaging. Dental Outlook Extra Issue. Sasaki T. ed., Ishiyaku publishers, Tokyo, p.7-20, 1997 (in Japanese).
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25. Katoh T.: Image communication with standardized protocol. In: Frontier in Oral and Maxillofacial Imaging. Dental Outlook Extra Issue. Sasaki T. ed., Ishiyaku publishers, Tokyo, p.91-98, 1997 (in Japanese).
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- Dental Outlook Extra Issue. Sasaki T. ed., Ishiyaku publishers, Tokyo, p.101-106, 1997 (in Japanese).
27. Ida M.: Image diagnosis of inflammatory diseases in oral region. In: Frontier in Oral and Maxillofacial Imaging. Dental Outlook Extra Issue. Sasaki T. ed., Ishiyaku publishers, Tokyo, p.107-114, 1997 (in Japanese).
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 35. Yoshino N.: Image diagnosis of neurovascular diseases. In: Frontier in Oral and Maxillofacial Imaging. Dental Outlook Extra Issue. Sasaki T. ed., Ishiyaku publishers, Tokyo, p.173-178, 1997 (in Japanese).
 36. Yoshino N.: Non-surgical removal of sialoliths. In: Frontier in Oral and Maxillofacial Imaging. Dental Outlook Extra Issue. Sasaki T. ed., Ishiyaku publishers, Tokyo, p.196-200, 1997 (in Japanese).
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