

Oral Radiation Oncology

1. Staffs and Students (April 2009)

Professor	Masahiko MIURA	
Tokunin Assistant Professor	Shigehiro ABE,	Yoko MORI
Graduate Students(Doctor)	Mayuko ISHIKAWA,	Atsushi KAIDA,
(Master)	Kazuma FUKUDA	
Special Research Student	Motoshi NAKAYAMA,	Kazunori TAKADA
Research Associate	Keisuke OHTA,	Masahiro ISHIMA

2. Purpose of Education

Oral Radiation Oncology is a branch of radiation oncology dealing with basic radiobiology, translational research, and radiotherapy for oral cancer. Main objective of this branch in the graduate course is to provide opportunities to study biological strategies for radiosensitization, development of radiosensitizers, molecular mechanism of tumor radioresistance, the state of the art technology of radiotherapy, and basis of individualized radiotherapy depending on each student's research projects.

3. Research Subjects

- 1) Signal transduction of insulin-like growth factor I (IGF-I) receptor
- 2) Tumor radiosensitization and antiangiogenic mechanism by sulfoglycolipids
- 3) Visualization of radioresponse by molecular imaging
- 4) Radiotherapy for oral cancer

4. Clinical Services

Oral Radiation Oncology clinic provides radiotherapeutic treatment for head and neck cancer patients, especially brachytherapy for oral cancer, in cooperation with Diagnostic and Therapeutic Radiology clinic in the Medical Hospital.

5. Publications

Original article

1. Ishikawa, M., Hagiwara, and Miura, M.: Visualization of Radiation-induced Cell Cycle-Associated Events in Tumor Cells Expressing the Fusion Protein of Azami Green and the Destruction Box of Human Geminin. *Biochem. Biophys. Res. Commun.*, 389, 426-430 (2009).
2. Sermsathanasawad, N., Ishii, H., Igarashi, K., Miura, M., Yoshida, M., Inoue, Y., and Iwai, T.: Enhanced Adhesion of Early Endothelial Progenitor Cells to Radiation-induced Senescence-like Vascular Endothelial Cells in vitro. *J. Radiat. Res.* 50, 469-475 (2009).
3. Yoshimura, R., Shibuya, H., Miura, M., Watanabe, H., Ayukawa, F., Hayashi, K. and Toda, K.: Quality of life of oral cancer patients after low-dose-rate interstitial brachytherapy. *Int. J. Radiat. Oncol. Biol. Phys.* 73, 772-778 (2009).