Advanced Course in Oral and Maxillofacial Radiology II

Lecture/Lab./Clinic Academic year 1,2 credits 2,4

[Keywords] oral and maxillofacial region, diseases, imaging, examination, diagnosis, pathology, quantitative image analysis

[Academics] Eiji Nakayama

[Course aims]
The aims of this class are for students to:
1. Understand a variety of disease patterns affecting the oral and maxillofacial region and understand how these diseases are visualized on diagnostic images in order to diagnose and analyze quantitatively these diseases by imaging examinations.
2. Acquire the ability to diagnose common diseases based on imaging information.
3. Understand the characteristics of various diagnostic imaging methods and perform basic quantitative analysis using the imaging data.
4. Improve accuracy of diagnostic imaging by comparing image information with histopathologic information.
5. Understand basic histopathologic analysis to improved diagnostic skills.

[Course objectives]
The goals of this course are for students to be able to:
(1) Explain the types and characteristics of diseases affecting the oral and maxillofacial region.
(2) Explain the characteristics of various diagnostic imaging methods.
(3) Explain imaging findings for diseases in the oral and maxillofacial region.
(4) Perform basic quantitative analysis by using image data for the human body.
(5) Compare diagnostic imaging findings for diseases in the oral and maxillofacial region with basic histopathologic findings.
(6) Perform the common image processing methods and quantitative measurement of human body images, and identify any statistically significant findings by statistical analysis.

[Course content]

Class	Theme	Content	Academics
1	Lecture on disease patterns in the oral and maxillofacial region.		Eiji Nakayama
2	Seminar on practical aspects of anatomic analysis of imaging in the oral and maxillofacial region.		Eiji Nakayama
3	Lecture and seminar on various diagnostic imaging methods.		Eiji Nakayama
4	Lecture and seminar on basic quantitative analysis using image data for the human body.		Eiji Nakayama
5	Seminar on comparison of the findings on diagnostic imaging with basic histopathologic findings in the oral and maxillofacial region.		Eiji Nakayama
6	Seminar on image processing for the human body and statistical analysis of quantitative data obtained by image processing.		Eiji Nakayama
7	Simulation of a presentation at an academic meeting and publication of a paper.		Eiji Nakayama

[Class implementation method]

Combination of face-to-face learning and distance learning
Class implementation depends on the implementation policy of each department (graduate school) or school.

[Grading policies]
Your overall grade in class will be decided based on class attendance and reports.

[Textbook]
Students will be informed of which textbook to use.

[Reference book]
Students will be informed of which reference book to use.

[Preparation for course]
Students must understand the course objectives and prepare appropriately for classes.