



Graduate School of Dentistry
OSAKA UNIVERSITY



Center for Global Oral Health
Osaka University

INTERNATIONAL RESIDENT COURSE IN ORAL AND MAXILLOFACIAL RADIOLOGY

- 1) MRI, Magnetic resonance imaging
- 2) MDCT, Multi-detector computed tomography
- 3) CBCT, Cone-beam computed tomography
- 4) US, Ultrasound sonography
- 5) EBRT, External beam radiation therapy
- 6) HDR-ISBT, High dose rate interstitial brachytherapy

Department of Oral and Maxillofacial Radiology

OSAKA UNIVERSITY DENTAL HOSPITAL

MAIN COURSE TITLE

Oral and Maxillofacial Radiology

TRAINING NEEDS

The progress and development of medicine and medical engineering in recent years has been striking, and the field of dental medicine is no exception. Here too, there has been increased specialization, as a result of which more sophisticated demands have been placed on education specialists in terms of training content. The standard of Japan's medical technology and facilities is among the world's highest, and in the field of oral medicine significant advances have been made in image diagnostic techniques and radiation therapy. So, we will provide six modules below as the image diagnosis and radiation therapy.

While the course centers on practical training including clinical practice, practical exercises and lectures, attempts will be made to meet the individual needs of participants with the possibility of separate individual or group modules.

SUB-COURSE TITLES (4 days course)

- 1) MRI, Magnetic resonance imaging
- 2) MDCT, Multi-detector computed tomography
- 3) CBCT, Cone-beam computed tomography
- 4) US, Ultrasound sonography
- 5) EBRT, External beam radiation therapy
- 6) HDR-ISBT, High dose rate interstitial brachytherapy

COURSE OBJECTIVES

Through the course of the training, participants will be expected to:

- 1) familiarize themselves with the Japanese clinical dentistry and understand the role of radiology for clinical service in oral and maxillofacial region;
- 2) appreciate the depth and breadth of the field of radiology in Japanese dentistry, and thereby enhance their knowledge and technical skills;
- 3) learn, through information exchange with other participants, the typical feature of oral disease in other countries, and gain knowledge of radiological treatment and investigation methods applied them;
- 4) understand the technical standards of imaging apparatus in Japan

NUMBER OF PARTICIPANTS

5

LANGUAGE

English

REQUIREMENT FOR APPLICATION

Applicants should:

1. be graduates of a university-level dental or medical school,
2. be staff members (teaching and/or research) of a dental or medical school, or equivalent institution, e.g. dentists, or doctors specializing in dentistry,
3. have served at university or equivalent institution for over three years,
4. be at present specializing in radiology, or hereafter intending to specialize in radiology,
5. have a sufficient command of spoken and written English,
6. be in good health, both physically and mentally,
7. not be serving in the military.

TRAINING INSTITUTION

Department of Oral and Maxillofacial Radiology
Osaka University Dental Hospital
1-8, Yamadaoka, Suita, Osaka 5650871, JAPAN

LOCAL COSTS and ACCOMMODATIONS

Local costs, such as accommodation, meals, and other personal expenses shall be the responsibility of each participant.

COURSE FEE

340,000 JPY (It does not include national/local consumption taxes.)

NOTES

The Faculty of Dentistry was established in 1951 as the first dental school among Japan's national universities to promote both instructor training and research in dental science and dental health education. The Graduate School was established in 1960.

Sixty students are accepted by the Faculty of Dentistry each year. The students pursue three semesters of pre-dental general education on the Toyonaka Campus, followed by nine semester of basic and clinical dental science in the Faculty of Dentistry and the Dental Hospital on the Suita Campus (total six years).

The faculty building on the Suita Campus was completed in 1983. It has been designed to accommodate a full program of education, research and patient care, and provides laboratories as well as clinical and classroom facilities for the Dental School and the Graduate School.

At present, the Faculty of Dentistry comprises academic 22 chairs and a Research Resources Center: 8 chairs for basic dental science and 13 for clinical dental science.

TIMETABLE SUB-COURSE SCHEDULE

1) MRI Magnetic resonance imaging

Day-1

AM: Briefing, Visiting tour to Dental Hospital

Lunch

PM: Lecture on principle of MRI imaging

Day-2

AM: MRI scanning of phantom

Lunch

PM: Experience of MRI examination

Day-3

AM: Observation of outpatient clinic in MRI

Lunch

PM: Image interpretation of MRI image

Day-4

AM: Image interpretation of MRI image

Lunch

PM: Functional MRI

2) MDCT Multi-detector computed tomography

Day-1

AM: Briefing, Visiting tour to Dental Hospital

Lunch

PM: Lecture on principle of MDCT imaging

Day-2

AM: MDCT scanning of phantom

Lunch

PM: Experience of MDCT examination, as requested

Day-3

AM: Observation of outpatient clinic in MDCT

Lunch

PM: Image interpretation of MDCT image

Day-4

AM: Image interpretation of MDCT image

Lunch

PM: CT Angiography

3) CBCT Cone-beam computed tomography

Day-1

AM: Briefing, Visiting tour to Dental Hospital

Lunch

PM: Lecture on principle of CBCT imaging

Day-2

AM: CBCT scanning of phantom

Lunch

PM: Experience of CBCT examination, as requested

Day-3

AM: Observation of outpatient clinic in CBCT

Lunch

PM: Image interpretation of CBCT image

Day-4

AM: Image interpretation of CBCT image

Lunch

PM: Implant CBCT, TMJ CBCT, Measurement using CBCT

4) US Ultrasound sonography

Day-1

AM: Briefing, Visiting tour to Dental Hospital

Lunch

PM: Lecture on principle of ultra sonography

Day-2

AM: US scanning of phantom

Lunch

PM: Experience of US examination

Day-3

AM: Observation of outpatient clinic in US

Lunch

PM: Image interpretation of US image

Day-4

AM: Image interpretation of US image

Lunch

PM: 3D and 4D ultra sonography

5) EBRT External beam radiation therapy

Day-1

AM: Briefing, Visiting tour to Dental Hospital

Lunch

PM: Lecture on principle of radiation therapy

Day-2

AM: Lecture on principle of external beam radiation therapy

Lunch

PM: Observation of outpatient clinic in EBRT

Day-3

AM: 3D EBRT planning

Lunch

PM: Observation of outpatient clinic in EBRT

Day-4

AM: IMRT & IGRT planning

Lunch

PM: Observation of outpatient clinic in EBRT

6) HDR-ISBT High dose rate interstitial brachytherapy

Day-1

AM: Briefing, Visiting tour to Dental Hospital

Lunch

PM: Lecture on principle of radiation therapy

Day-2

AM: Lecture on principle of interstitial brachytherapy

Lunch

PM: Observation of operation in theater

Day-3

AM: 3D HDR-ISBT planning

Lunch

PM: Observation of irradiation

Day-4

AM: Making spacer with lead

Lunch

PM: Observation of irradiation

ANNEX

1) Questionnaire

Please check which subject(s) you would choose to study in the oral and maxillofacial radiology field.

Practical Apparatus

- Conventional Radiography
- Cone Beam Computed Tomography
- Multi-Detector Computed Tomography
- Ultrasound Sonography
- Digital Subtraction Angiography
- Magnetic Resonance Imaging
- External Beam Radiation Therapy
- Interstitial Brachytherapy

Disease

- Lesions related to teeth
- Cyst, benign tumor and tumorous lesion
- Malignant tumor
- Injury
- Anomalies, systemic disease and syndrome
- TMJ dysfunction

Research

- Basic experimental research on radiation biology
- Clinical research as the case report
- Clinical research on diagnostic imaging
- Clinical research on radiation therapy for oral cancer

If you have interest in other fields in the oral and maxillofacial radiology, please write them down in detail below.

2) County Report

Please explain the present situation of university-level dental schools in your country and the position within them of oral and maxillofacial radiology.