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Introduction and Organization

Department of Pathology and Diagnostic Pathology is responsible for the practice of diagnostic pathology, education, and research in conjunction with Division of Diagnostic Pathology of the University Hospital*. Our aim is the construction of “pathology as clinical medicine” as well as “next-generation pathology incorporating cutting-edge science and technology”.

Lecturer Dr. Takazawa moved as vice chairman of Division of pathology, the Cancer Institute, Japanese Foundation of Cancer Research. Dr. Sasaki (Associate Professor, Yokohama Municipal

University) took up a position, chief of Telepathology & Remote Diagnosis Promotion Section (TRD-PS). Dr. Ushiku was promoted as Associate Professor, and Dr. Morikawa as Lecturer, respectively. Dr. Ikemura became Lecturer (Hospital), and Dr. Abe started his career as one of Associates. Dr. Miyagawa is now engaged in research of predicting the effect of radiotherapy for cancer patients in our laboratory as Associate of Cancer Professional Training Program. Dr. Matsusaka moved to Department of Molecular Oncology, Graduate School of Medicine, Chiba University in October, and Dr. Shinozaki-Ushiku changed her position to the hospital.

Three postgraduate students (Ichimura, Halimi, and Hayashi) finished the course and received Ph.D. In the new fiscal year, 2014, four new students will enter the postgraduate course, and there will be 16 postgraduates.

We are responsible for the pathology practice of the University Hospital, and are carrying forward the morphology-based research targeting human diseases. As for the education for the medical students, we take charge of the following courses; General Pathology Course for the 1st grade students in collaboration with Department of Molecular Pathology, Systemic Pathology for the 2nd grade, Clinical Clerkship for the 3rd grade, and Bedside-learning (BSL) for the 4th grade students. Programs for postgraduates and junior residents are also included in our education activities.

Clinical activities (diagnostic pathology and autopsy)

Together with Division of Diagnostic Pathology, we are responsible for the pathologic diagnosis and autopsy in the University Hospital. We set up Telepathology & Remote Diagnosis Promotion Section (TRD-PS), and started Outpatient Clinic of Pathology (see the corresponding section of Division of Diagnostic Pathology).

Surgical pathology conferences are regularly held with each clinical division, and the cases of various tumors are discussed, including thoracic organs, liver and pancreato-biliary tract, urology, gynecology, breast, and orthopedics, as well as biopsy cases of kidney, skin and GI tract.

Clinico-pathological conferences (CPCs) for two autopsy cases are held every month in the hospital. Both CPCs and weekly autopsy conferences are useful for the education of clinical residents. Digest versions of CPC slides are now open in the hospital (Dr. Shintani), and we also started e-learning programs for clinical residents to facilitate the understanding of the CPC contents. (Dr. Ikemura). All of residents were obligated to take the course for their training this year.

A model project for the survey analysis of deaths related to medical treatment (DRMT) has been in operation since September 2005, and we continue to be a member of the autopsy inspection of the project (Dr. Shibahara).

Teaching activities

We take on General Pathology Course for the 1st grade of undergraduate students, especially in its morphological field.

Each class of Systemic Pathology Course and exercises are held in parallel with that of Systemic Medicine Course. Handouts are available in every half course of the pathological exercises, and all slides used in the course are accessible on our website as virtual slides (digital images of the slides).

In BSL for 4th grade medical students, following courses are included; autopsy pathologic practices with a case presentation for paired students, surgical pathologic practices using various tumor sections, and a tour of the pathology laboratory. The past examination questions for Systemic Pathology for the second grade students are referred to the website. Three students chose the clinical clerkship course for 3rd grade medical students.

As for the free quarter program, we received two students of M0 and four of M1 in this fiscal year.

We also set up the lecture series of tumor pathology for the Cancer Profession Training Program in postgraduate school.

Research activities

The first major theme is “chronic inflammation and neoplasms”, especially Epstein-Barr virus (EBV) associated gastric carcinoma (GC) (Drs. Kunita, Shinozaki-Ushiku, Matsusaka, and Abe). We are focusing on abnormalities of microRNA molecules and stem cell biology in the development and progression of EBV-associated GC in addition to its DNA methylation abnormality (ref.20). Professor Fukayama presented the data as a keynote lecture of 8th Asian Pacific IAP (International Academy of Pathology) Congress (September 5-8, Busan, Korea), and as a lecture of 4th JCA-AACR Special Joint Conference (December 16-18, Chiba, Japan). The year 2014 is the 50th anniversary of discovery of Epstein-Barr virus, and Dr. Matsusaka had an honor to present a paper as one of Young Investigators at the memorial congress (March 23-25, 2014, Oxford, UK).

The second major theme is ‘traslational research pathology’. We are engaged in search of target

molecules for cancer therapy by global analysis of expression profiles of various cancers, in collaboration with Research Center for Advanced Science and Technology (RCAST) (Dr. Morikawa).

The third theme is to re-evaluate the disease entities and tumor entities from the standpoint of classical histopathology. Dr. Maeda reconstructed the classification system of mucinous tumors of the ovary with reference to claudin-18 expression (ref. 6). The Ph.D. course student, Morita characterized the unique subgroup of lung cancer. high grade fetal adenocarcinoma in collaboration with Department of Pathology, National Cancer Center Hospital (ref. 19). Dr. Ushiku, together with Prof. Lauwers (department of Pathology, MGH), investigated pathological features of very well differentiated adenocarcinoma of the stomach, and identified a subgroup, showing co-existence of poorly differentiated type. Dr. Abe evaluated the cases of gastric cancer causing pulmonary tumor thrombotic microangiopathy (PTTM), and found significant role of PDGFA expression in the stomach cancer cells (ref. 1).

Dr. Maeda's paper "Ovarian microcystic stromal tumor – a new entity of ovarian tumor characterized by beta catenin abnormalities" was adopted as a honorable paper (category B) at 59th autumn congress of Japanese Society of Pathology (November 21, 22, Kohu).

The research works closely related with pathology practice are described in Diagnostic Pathology Division.

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