

Department of Pathology and Diagnostic Pathology

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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”.

The University of Tokyo headquarters has redistributed one position of associate professor for

“Promotion Center of CPC Education and General Integrative Medicine”. Dr. Masako Ikemura was promoted as Lecturer for the Office of Promotion Center. Dr. Shigeki Morita moved from Tekikyo University.

Three postgraduate students (Ichimura, Rokutan, Tanaka, Numakura) finished the course and received Ph.D. In the new fiscal year, 2016, three new students will enter the postgraduate course, and there will be 18 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, Elective Clinical Clerkship for the 3rd grade, and Clinical Clerkship for the 4th grade students. Programs for postgraduates and junior residents are also included in our education activities.

To promote the application of development of genomic medicine to clinical practice, we set up Center for Genome Pathology Standardization (Japan Agency for Medical Research and Development). The mission of the Center is to investigate basic technologies for tissue banking, and to hold seminars for doctors and technicians (see the section of Diagnostic Pathology Division).

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 Center (TRD-PC), 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, and skin.

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 (Drs. Shintani and Hayashi), 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 once a year.

A model project for the survey analysis of deaths

related to medical treatment (DRMT) started from September 2005, and finished at the end of 2015 fiscal. A new system for evaluation of deaths related to medical treatment (DRMT) started from October, 2016.

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 Clinical Clerkship 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.

Six students chose the clinical clerkship course for 3rd grade medical students. As for the free quarter program, we received two and three students of M0 and M1, respectively, in this fiscal year.

We also set up the lecture series of “Infection/Immunology/Cancer II” and “Tumor Pathology. We also provided two intensive exercise courses, “Integration of Neuropathology/Radiology/Clinics” and “Histochemistry/Immuno-histochemistry/Clinical Electron Microscopy”.

Research activities

The first major theme is “chronic inflammation and neoplasms”, especially Epstein-Barr virus (EBV) associated gastric carcinoma (GC) (Drs. Kunita, Shinozaki-Ushiku 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. Dr. Shinozaki-Ushiku (ref.26) identified the profile of EBV-derived microRNAs in EBV-associated gastric cancer, and found that miR-BART4-5p represses the apoptosis-promoting molecule Bid, contributing to

development of this type of gastric cancer.

The second major theme is ‘translational research pathology’. We are engaged in search of target molecules for cancer therapy by global analysis of various cancers, in collaboration with Research Center for Advanced Science and Technology (RCAST) (Drs. Ushiku and Morikawa).

The third theme is to re-evaluate the disease entities and tumor entities from the standpoint of classical histopathology. Dr. Sibahara proposed a subgroup of HCC, steatohepatic HCC, which showed histological features of steatohepatitis and investigated its molecular abnormalities (ref.4).

Dr. Miyagawa was a Research Associate of Division of Diagnostic Pathology, primarily engaged in Investigation of Health Hazard by Radiation (ref. 21).

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

References

(including those of Diagnostic Pathology Division)

Case reports are listed in the section of Diagnostic Pathology Division.

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