

IMSUT Hospital

Department of General Medicine

総合診療科

Head, Professor	Hiroshi Yotsuyanagi, M.D., D.M.Sc.	教授	博士(医学)	四	柳	宏
Project Professor	Kenzaburo Tani, M.D., Ph.D.	特任教授	医学博士	谷		憲三朗
Project Professor	Takayuki Morisaki, M.D., D.M.Sc.	特任教授	博士(医学)	森	崎	隆幸
Associate Professor	Yoshihiro Hirata, M.D., D.M.Sc.	准教授	博士(医学)	平	田	喜裕
Senior Assistant Professor	Yasuo Matsubara, M.D., D.M.Sc.	講師	博士(医学)	松	原	康朗
Project Assistant Professor	Yasuki Hijikata, M.D., D.M.Sc.	特任助教	博士(医学)	土	方	康基
Project Assistant Professor	Koichi Kimura, M.D., D.M.Sc.	特任助教	博士(医学)	木	村	公一

The division of general medicine was founded in 2017 taking over the department of advanced medical science. Our aim is to practice total human medical care at IMSUT hospital conducting exploratory clinical research. The members specialize in gastroenterology, hepatology, oncology, cardiology, endocrinology/metabolism. We have just started our new project in general medicine.

1. Treatment of drug-resistant *Helicobacter pylori* infection

Matsubara Y., Hirata Y.

Some patients fail to respond first- and second-line *Helicobacter pylori* (*H. pylori*) eradication therapy, but third-line eradication is not always done. Meanwhile, penicillin allergy patients do not take routine eradication medicines because insurance coverage regimens in Japan include penicillin. In IMSUT, *H. pylori* out-patient clinic, we give eradication therapy for these patients at their own expense, and high rates of successful eradication have been achieved.

2. Endoscopic examination in IMSUT Hospital (Department of General Medicine)

Matsubara Y., Hirata Y.

About 800 cases of upper gastrointestinal endoscopy and about 300 cases of colonic endoscopy were performed from January 1 to December 31, 2019. We

have diagnosed relatively rare disease (e.g. infectious disease, malignancy, other disease) in patients with immune dysfunction. We also participated in endoscopic health check up in Minato Ward.

3. Abdominal ultrasonography in IMSUT Hospital

Tsutsumi T

About 400 cases of abdominal ultrasonography were performed from April 1 to December 21 in 2019. We detected liver tumors, or pancreas tumors, or abdominal lymphadenopathy in some cases who were subsequently diagnosed as hepatocellular carcinoma, or pancreas cancer, or malignant lymphoma. We also performed Fibroscan® for more than 220 cases with viral hepatitis or HIV infection.

4. Treatment of patients with advanced cancer.

Hijikata Y.

Patients with various types of cancer were treated

by standard therapy including chemotherapy, molecular target drugs, immune checkpoint blockade, surgery and radiation therapy. Some of them were treated using next-generation sequencing to guide cancer therapy. By the help of special patient support team undergirded by conference twice a week, overall survival of our patients was longer than respectively reported overall survival. Importantly, it looked like they enjoyed their stay in our hospital. We actively make use the patient's cancer genome data to introduce the best treatment for patient refractory to standard treatment after the approval of our ethical committee. (Hijikata Y, et al. Successful clinical sequencing by molecular tumor board in an elderly patient with refractory Sézary syndrome. *Journal of Clinical Oncology Precision Oncology*. 2019 in press)

5. Diagnosis and management of patients with genetic vascular diseases.

Takayuki Morisaki

Patients and family members with genetic vascular diseases including connective tissue disorders like Marfan syndrome and related diseases were diagnosed by taking their history, physical examination, imaging including echo-cardiography and genetic examination. These patients were followed-up and managed also by doctors in other medical institu-

tions. Study to identify novel pathogenic genes for genetic vascular diseases was being performed.

6. Clinical studies of echocardiography, animal experiments, and multicenter studies in collaboration with other facilities.

Koichi Kimura

Clinical studies in echocardiography were conducted in collaboration with echocardiography laboratory of The University of Tokyo Hospital. Several animal experiments using CRISPR/CAS9 genome-designed rats were proceeded in collaboration with department of veterinary physiology, The University of Tokyo. Other animal experiments using disease model dogs and knockout mice were proceeded in collaboration with National Center of Neurology and Psychiatry (Tokyo). Multicenter studies, drug interventional study and observational cohort study, for patients with muscular dystrophy have been conducted in collaboration with NHO (National Hospital Organization) hospitals; Sendai-nishitaga National Hospital (Miyagi), Niigata National Hospital (Niigata), Matsumoto Medical Center (Nagano), Shimoshizu National Hospital (Chiba), Hakone National Hospital (Kanagawa), Osaka-toneyama Medical Center (Osaka), and Hiroshima-nishi Medical Center (Hiroshima).

Publications

1. Koga M, Lim LA, Ogishi M, Satoh H, Kikuchi T, Adachi E, Sugiyama R, Kiyohara T, Suzuki R, Muramatsu M, Koibuchi T, Tsutsumi T, Yotsuyanagi H. Comparison of clinical features of hepatitis A in people living with HIV between pandemic in 1999-2000 and that in 2017-2018 in a metropolitan area of Japan. *Jpn J Infect Dis*. 2019 in press
2. Enooku K, Tsutsumi T, Kondo M, Fujiwara N, Sasako T, Shibahara J, Kado A, Okushin K, Fujinaga H, Nakagomi R, Minami T, Sato M, Uchino K, Nakagawa H, Kondo Y, Asaoka Y, Tateishi R, Ueki K, Ikeda H, Yoshida H, Moriya K, Yotsuyanagi H, Kadowaki T, Koike K. Hepatic FATP5 expression is associated with histological progression and loss of hepatic fat in NAFLD patients. *J Gastroenterol*. 2019 in press
3. Koibuchi T, Koga M, Kikuchi T, Horikomi T, Kawamura Y, Lim LA, Adachi E, Tsutsumi T, Yotsuyanagi H. Prevalence of hepatitis A immunity and decision-tree analysis among HIV-infected men who have sex with men, in Tokyo. *Clin Infect Dis*. 2019 in press
4. Sato H, Adachi E, Lim LA, Koga M, Koibuchi T, Tsutsumi T, Yotsuyanagi H. CD4/CD8 ratio predicts the cellular immune response to acute hepatitis C in HIV-coinfected adults. *J Infect Chemother*. 2019 Aug; 25(8): 646-648.
5. Kado A, Tsutsumi T, Enooku K, Fujinaga H, Ikeuchi K, Okushin K, Moriya K, Yotsuyanagi H, Koike K. Noninvasive diagnostic criteria for nonalcoholic steatohepatitis based on gene expression levels in peripheral blood mononuclear cells. *J Gastroenterol*. 2019 Aug; 54(8): 730-741.
6. Sasako T, Ohsugi M, Kubota N, Itoh S, Okazaki Y, Terai A, Kubota T, Yamashita S, Nakatsukasa K, Kamura T, Iwayama K, Tokuyama K, Kiyonari H, Furuta Y, Shibahara J, Fukayama M, Enooku K, Okushin K, Tsutsumi T, Tateishi R, Tobe K, Asahara H, Koike K, Kadowaki T, Ueki K. Hepatic Sdf2l1 controls feeding-induced ER stress and regulates metabolism. *Nat Commun*. 2019 Feb 27; 10(1): 947.
7. Yotsuyanagi H, Takano T, Tanaka M, Amano K, Imamura M, Ogawa K, Yasunaka T, Yasui Y, Hayashi K, Tanaka Y, Tajiri H; for Japanese adolescent HBV-HCC study group. Hepatitis B virus-related hepatocellular carcinoma in young adults: Efficacy of nationwide selective vaccination. *Hepatol Res*. 2019 in press
8. Harada S, Aoki K, Okamoto K, Kinoshita O, Nawata K, Ishii Y, Tateda K, Sasaki M, Saga T, Doi Y, Yotsuyanagi H, Moriya K, Ono M. Left ventricular assist device-associated endocarditis involving multiple clones of *Staphylococcus aureus* with distinct antimicrobial susceptibility patterns. *Int J In-*

- fect Dis. 2019 Jul; 84: 44-47.
9. Ogishi M, Yotsuyanagi H. Quantitative Prediction of the Landscape of T Cell Epitope Immunogenicity in Sequence Space. *Front Immunol.* 2019 Apr 16; 10: 827.
 10. Matsuzawa Y, Adachi E, Takahashi A, Sato H, Lim LA, Komatsu T, Koibuchi T, Nagamura-Inoue T, Tojo A, Nagayama H, Yotsuyanagi H. Cytokine Profile in Sweet's Syndrome under the Treatment of Pulmonary Toxoplasmosis Complicated with Myelodysplastic Syndrome. *Intern Med.* 2019 Jul 15; 58(14): 2079-2083.
 11. Hirano M, Ota Y, Koibuchi T, Takei T, Takeda R, Kawamata T, Yokoyama K, Uchimaruru K, Yotsuyanagi H, Imai Y, Tojo A. Nested Polymerase Chain Reaction with Specific Primers for Mucorales in the Serum of Patients with Hematological Malignancies. *Jpn J Infect Dis.* 2019 May 23; 72(3): 196-198.
 12. Hijikata Y, Yokoyama K, Yokoyama N, Matsubara Y, Shimizu E, Nakashima M, Yamagishi M, Ota Y, Lim LA, Yamaguchi R, Ito M, Tanaka Y, Denda T, Tani K, Yotsuyanagi H, Imoto S, Miyano S, Uchimaruru K, Tojo A. Successful clinical sequencing by molecular tumor board in an elderly patient with refractory Sézary syndrome. *Journal of Clinical Oncology Precision Oncology.* 2019 in press
 13. Hijikata Y, Matsubara Y, Ota Y, Lim LA, Tani K, Hirata Y, Yotsuyanagi H. Safe use of nivolumab in a patient with epipharyngeal carcinoma and pre-existing ulcerative colitis: a histologically proven case report. *Internal Medicine.* 2019 in press
 14. Seike Y, Minatoya K, Matsuda H, Ishibashi-Ueda H, Morisaki H, Morisaki T, Kobayashi J. Histologic differences between the ascending and descending aortas in young adults with fibrillin-1 mutations. *J Thorac Cardiovasc Surg.* 2019 Feb 15. pii: S0022-5223(19)30361-7.
 15. Seguchi O, Kuroda K, Fujita T, Kumai Y, Nakajima S, Watanabe T, Yanase M, Matsumoto Y, Fukushima S, Kimura K, Fukushima N. Heart Transplantation Ameliorates Ambulation Capacity in Patients With Muscular Dystrophy - An Analysis of 9 Cases. *Circ J.* 2019; 83: 684-686.
 16. Sawada N, Kawata T, Daimon M, Nakao T, Hatanano M, Maki H, Kimura K, Hirokawa M, Ishiwata J, Xu B, Yatomi Y, Komuro I. Detection of Pulmonary Hypertension with Systolic Pressure Estimated by Doppler Echocardiography: Comparison with invasive mean pulmonary artery pressure. *Int Heart J.* 2019; 60: 836-844.
 17. Sawada N, Daimon M, Kawata T, Nakao T, Kimura K, Nakanishi K, Kurano M, Hirokawa M, Xu B, Yamanaka Y, Kato TS, Watanabe M, Yatomi Y, Komuro I. The Significance of the effect of Visceral Adiposity on Left Ventricular Diastolic Function in the General Population. *Sci Rep.* 2019; 9: 4435
 18. Hirata Y. Endoscopy opens the door to a new era of autoimmune gastritis research. *Dig Endosc.* 2019 Sep 23. doi: 10.1111/den.13539.
 19. Niikura R, Hayakawa Y, Hirata Y, Ogura K, Fujishiro M, Yamada A, Ushiku T, Konishi M, Fukayama M, Koike K. The Reduction in Gastric Atrophy after Helicobacter pylori Eradication Is Reduced by Treatment with Inhibitors of Gastric Acid Secretion. *Int J Mol Sci.* 2019 Apr 18; 20(8).
 20. Aoki T, Nagata N, Yamada A, Shimbo T, Matsushita Y, Shimomura A, Kobayashi S, Moriyasu S, Niikura R, Sakurai T, Hirata Y, Akiyama J, Uemura N, Koike K. Next endoscopic approach for acute lower gastrointestinal bleeding without an identified source on colonoscopy: upper or capsule endoscopy? *Endosc Int Open.* 2019 Mar; 7(3): E337-E346.
 21. Aoki T, Hirata Y, Yamada A, Koike K. Initial management for acute lower gastrointestinal bleeding. *World J Gastroenterol.* 2019 Jan 7; 25(1): 69-84.