

# Research

## Medical Course—Basic Medicine

Departments of Medicine		Fields of Interest
Anatomy	Functional Anatomy and Neuroscience	Neuroanatomy, Neuropathology
	Microscopic Anatomy and Cell Biology	Cell Biology, Experimental Endocrinology, Molecular and Cellular Mechanisms of Secretory Granule Formation
Physiology	Autonomous Function	Cardiac Mechanics, Mechanobiology
	Sensory Physiology	Neuroscience
Biochemistry	Cellular Signal Transduction	Regulation of Cellular Function and Vascular Contraction by Protein Phosphorylation
	Integrated Life Science	Angiogenesis, Neurogenesis, Regene Native Medicine, Calcium Homeostasis
Pharmacology		Inflammation and Immunity, Cardiovascular Pharmacology, Gastrointestinal Pharmacology
Pathology	Tumor Pathology	Hepatology, Molecular Pathology, Tumor Pathology
	Immunopathology	Tumor Immunology, Allergology, Immunology
Microbiology and Immunochemistry		Host Defense Mechanisms, Immunochemistry, Molecular Microbiology
Social Medicine	Hygiene and Health Science	Hygiene, Environmental Health, Occupational Health, Molecular Preventive Medicine, International health
	Public Health and Epidemiology	Public Health, Epidemiology, Clinical Epidemiology, Environmental Epidemiology, Mental Health
Parasitology		Immunobiology, Molecular Biology, and Epidemiology of Echinococcosis and Cysticercosis and Their Immunological and Molecular Diagnosis
Legal Medicine		Forensic Toxicology, Forensic DNA typing and DNA Polymorphism
Advanced Medical Science		Neuroscience, Molecular Biology, Genome Editing, Regenerative Medicine, Translational Research

## Medical Course—Clinical Medicine

Departments of Medicine		Fields of Interest
Internal Medicine	Division of Cardiology, Nephrology, Pulmonology and Neurology	Internal Medicine, Cardiology, Pulmonology, Hypertension, Nephrology, Neurology, Geriatrics and Gerontology
	Division of Metabolism and Biosystemic Science	Internal Medicine, Diabetes and Metabolism, Endocrinology, Rheumatology, Hepatology, Biliary and Pancreatic Disease
	Division of Gastroenterology and Hematology/Oncology	Internal Medicine, Gastroenterology, Gastrointestinal Endoscopy, Hematology, Medical Oncology
Psychiatry		Biological Psychiatry, Sleep Medicine, Epileptology, Geriatric Psychiatry, Clinical Electroencephalography
Pediatrics		Pediatric Infectious Diseases and Immunology, Pediatric Endocrinology and Metabolism, Pediatric Neurology, Pediatric Hematology and Oncology, Pediatric Cardiology, Perinatology, Pediatric Nephrology
Surgery	Division of Vascular, Respiratory and Surgical Oncology	Vascular Surgery, Endovascular Surgery, General Thoracic Surgery, Breast Surgery, Pediatric Surgery
	Division of Cardiovascular Surgery	Cardiac Surgery, Thoracic Aortic Surgery
	Division of Hepato-Biliary-Pancreatic and Transplant Surgery	Gastroenterological Surgery [Hepato-Biliary-Pancreatic Surgery], Endoscopic Surgery, Transplant Surgery, General surgery
	Division of Gastrointestinal Surgery	Gastrointestinal Tract [Esophagus, Stomach, Small Intestine, Colon, Rectum], Endoscopic Surgery, Robotic surgery, General surgery
Orthopaedic Surgery		Joint Surgery, Prosthetic Replacement, Musculoskeletal Tumors, Spinal Surgery, Sports Orthopaedics, Rheumatoid Arthritis, Hand Surgery, Osteoporosis, Regenerative medicine
Dermatology		Dermatology, Psoriasis, Abnormal Keratinization Disorders, Atopic Dermatitis, Medical Mycology, Dermatological Oncology, Allergology, Dermatological Collagen Diseases, Cosmetic Dermatology, Blistering Disorders
Renal and Urologic Surgery		Urological Oncology, Cancer Chemotherapy, Pediatric Urology, Female Urology, Benign Prostatic Hyperplasia, Neurogenic Bladder, Urolithiasis, Adrenal Surgery, Endoscopic Surgery, Robotic Surgery

## » Research

Departments of Medicine	Fields of Interest
Ophthalmology	Ophthalmology, Vitreoretinal Disorders, Corneal Transplantation, Ocular Surface Disorders, Keratorefractive Surgery, Neuroprotection in Retina, Ocular Micro-circulation, Glaucoma, Fundus Imaging Analysis, Low Vision, Strabismus
Otorhinolaryngology–Head and Neck Surgery	Otorhinolaryngology, Head and Neck Surgery, Allergology, Bronchoesophagology, Neuro-Otology, Thyroid Surgery, Temporal Bone Surgery, Phono Surgery
Obstetrics and Gynecology	Perinatal Medicine, Gynecologic Oncology, Reproductive Endocrinology and Infertility, Menopause and Women's Health
Radiology	Diagnostic Radiology, Radiation Oncology, Nuclear Medicine, Interventional Radiology
Anesthesiology and Critical Care Medicine	Pharmacokinetics of Intravenous Anesthetics, Mechanism and Treatment of the Neuropathic Pain, Perioperative Blood Coagulation, Cardiovascular Anesthesia, Airway Management, Peripheral Nerve Block
Neurosurgery	Neurosurgery, Neurooncology, Skull Base Surgery, Neurovascular Surgery, Functional Neurosurgery, Neuroendovascular Surgery, Epilepsy Surgery
Laboratory Medicine	Clinical Chemistry, Laboratory Blood Test, Molecular Diagnostics, Genetic Testing, Medical Ultrasonics, Biomarker
Oral and Maxillo-Facial Surgery	Oral Oncology, Disease of Oral Mucosa, Dental Implant, Jaw Deformity, Cleft lip and Palate, Oral Infectious Diseases, Ozostomia (Bad Breath), Temporomandibular Joint Diseases, Oral care, Oral Traumatology, Pediatric Oral and Maxillofacial Surgery, Masticatory Dysfunction, Orofacial Pain
Emergency Medicine	Traumatology, Toxicology, Cardio-pulmonary Support, Cardio-pulmonary Resuscitation, Pediatric Emergency Care, Acute Aortic Dissection, Sepsis
Regional Medicine and Education	Regional Medicine, Specialist and Primary Care
Clinical Oncology for Local Community Cooperation	Clinical Oncology, Regional Cancer Care, Cancer Care Network

## Nursing Course

Departments of Nursing	Fields of Interest
Nursing Science	Human Anatomy and Physiology, Pathology, Laboratory of Public Health and Health Education Fundamental Nursing, Adult Nursing, Gerontological Nursing, Pediatric Nursing, Maternal Nursing and Midwifery, Psychiatric and Mental Health Nursing, Home Health Care Nursing, Public Health Nursing, Nursing Management, Oncology Nursing

## General Education

Departments of General Education	Fields of Interest
Psychology	Experimental Psychology, Cognitive Neuroscience, Clinical Psychology
Sociology	Sociology of Medicine
Mathematics	Applied Mathematics, Dynamical Systems Theory, Computational Science
Mathematical Information Science	Biomedical Engineering, Exercise Physiology, Fractal Physiology, Circulation Physiology, Microcirculation, Cognitive science, Medical Statistics
Physics	Solid State Physics, High Temperature Superconductivity, Low Dimensional Conductors, Quantum Measurement Theory
Chemistry	Physical Chemistry and Nonlinear Dynamics in Nonequilibrium Open System, Soft Matter Science
Biology	Reproductive Biology, Chromosome Science (Gamete and Embryo), Environmental Mutagen Research
Life Science	Molecular and Cellular Biology of Cell Adhesion and Neuronal Degeneration, Study on Preventing Alzheimer's Disease
English	Theoretical Linguistics, Applied Linguistics, Teaching English as a Foreign Language

Facility		Fields of Interest	
Admission Center		Selection Methods, Education of Medical Science	
Education Center		Education for Medical Science and Nursing	
Advanced Medical Engineering Research Center		Medical engineering (Artificial Organs, Regenerative Medicine, Tissue Engineering, Development of Medical Equipment)	
Center for Advanced Research and Education	Translational Research Center	Translational Research, Education for Clinical and Translational Research, Innovative Research in Life Science	
	Intellectual Property Center	Intellectual Property Right	
	Research Center	Animal Laboratory for Medical Research	Experiment, Breeding and Reproduction of Animals, Reproduction Technology
		Central Laboratory for Research and Education	Instrumental Analysis, Biochemistry, Molecular Biology
	Laboratory for Radioactive Isotope Research	Instrumental Analysis, Biochemistry, Research Using Radioisotopes	
Health Administration Center		Health Care, Adolescent Life Style Disease Prevention, Prevention of Infection	
Joint-Use Facilities	Information and Communication Technology Center	Information Network, Computer Science	
	Family Support Center	Work-Life Balance	

## Hospital

Facility	Fields of Interest
Physical Medicine and Rehabilitation	Rehabilitation Medicine, Kinesiology, Computational Neuroscience, Electrophysiology, Physical Medicine, Orthotics
Medical Center of Acute Medicine	Emergency Medicine, Cardio-pulmonary Resuscitation, Toxicology, Trauma, Systemic Infection
Intensive Care Unit Department	Intensive Care Medicine, Circulation and Respiration Control, Blood Purification
General Medicine Department	General Medicine
Center for Maternity and Infant Care	Perinatology, Obstetrics, Neonatology, Perinatal Infectious Diseases, Pediatric Surgery
Department of Endoscopy	Digestive Endoscopy, Respiratory Endoscopy, Therapeutic Endoscopy
Oncology Center	Cancer Chemotherapy, Patient Support, Cancer Information, Training for Medical Professionals
Respiratory Center	Respiratory Diseases, Clinical Oncology, Respiratory Surgery, Allergic Diseases, Molecular Biology, Respiratory Physiology, Pulmonary Circulation, Infectious Diseases
Department of Palliative Care	Palliative Medicine, Decision Support, Philosophy of Medicine, Medical Ethics
Breast Diseases Center	Breast Diseases, Clinical Oncology, Hereditary Breast Cancer
Medical Laboratory and Blood Center	Clinical Laboratory Medicine, Transfusion Medicine, Infection Control Support, Biological Information Processing, Physiological Tests, Patient Blood Management, Autologous Transfusion
Surgical Operation Department	Surgical Management, Safety Management
Clinical Radiology Department	Diagnostic Radiology, Radiation Oncology, Radiation Protection, Medical Physics, Radiological Technology
Appliance Management and Supply Center	Washing, Disinfection and Supply of Medical Devices, Quality Control of Medical Material
Surgical Pathology Department	Surgical Pathology, Oncologic Pathology, Tumor Immunology, Molecular Pathology
Management Planning Department	Analysis of Hospital Management, Hospital Information System, Telemedicine, Medical Information Network
Telemedicine Center	Telemedicine, Home Telecare, Transmission System for 3D-HDTV Medical Movies, Health Education by Medical Museum Network System, PHR (Personal Health Record) System, Medical Information Network, Information Security, Cloud-based Medical Practice

Facility	Fields of Interest
Physical Medicine and Rehabilitation Department	Physical Therapy, Occupational Therapy, Speech Language Hearing Therapy, Rehabilitation Medicine, Kinesiology, Biomechanics
Clinical Engineering Office	Clinical Engineering, Medical Engineering
Outpatient Chemotherapy Center	Outpatient Chemotherapy
Nutrition Management Department	Clinical Nutrition, Nutrition Management
Hospital Admission Center	Hospital Admission Management, Patient Support, Bed Control
Dialysis Center	Hemodialysis, Plasma Exchange, Plasma Adsorption
Medical Security and Safety Management Department	Medical Security and Safety, including Incident Report Analysis
Infection Control Department	Infection Control
Pharmacy Department	Clinical Pharmacology, Neuroscience

## Publications

		2017	2018	2019	
Book	Book	6	9	5	
	Book in Japanese	86	88	84	
Grand Total		92	97	89	
Article	Original Article	235	211	210	
	Review	15	14	13	
	Others	26	126	27	
	Total	276	351	250	
Article in Japanese	Japan Medical Abstracts Society	Original Article	76	85	57
		Review	162	152	127
		Others	686	737	699
	Total	924	974	883	
	DB-Spiral	Original Article	56	47	48
		Review	63	19	23
Total	119	66	71		
Grand Total		1,319	1,391	1,204	

\* Articles in press included.

## Conference Presentation

		2017	2018	2019
International Conference	Oral Presentation (Invited/Special)	22	18	18
	Poster, etc.	190	154	143
	Total	212	172	161
Domestic Conference	Oral Presentation (Invited/Special)	137	127	63
	Poster, etc.	1,015	957	709
	Total	1,152	1,084	772
Grand Total		1,364	1,256	933



Medical practicing



Nursing practicing



Christmas illuminations in front of Asahikawa Medical University Hospital