

# Juntendo University Hospital Introduction of Departments

Department of International Healthcare 2024

## **Overview of Clinical Departments**

### Internal Medicine Departments

- General Medicine
- Cardiovascular Medicine
- Gastroenterology
- Respiratory Medicine
- Nephrology and Hypertension
- Rheumatology
- Hematology
- Diabetes, Endocrinology and Metabolism
- Neurology
- Pediatrics and Adolescent Medicine
- Medical Oncology

Surgery Departments

- Esophageal and Gastroenterological Surgery
- Colorectal and Proctological Surgery
- Hepatobiliary-Pancreatic
   Surgery
- Breast Oncology
- Cardiovascular Surgery
- General Thoracic Surgery
- Pediatric General and Urogenital Surgery
- Neurosurgery
- Orthopedic Surgery and Sports Medicine
- Plastic and Reconstructive
   Surgery

Other Clinical Departments

#### Dermatology

- Urology
- Ophthalmology
- Otorhinolaryngology, Head and Neck Surgery
- Radiology and Radiation
   Oncology
- Obstetrics
- ♦ Gynecology
- Emergency Medicine
- Anesthesiology and Pain Medicine
- Psychiatry
- Rehabilitation Medicine
- Oral and Maxillofacial Surgery

## **General Medicine**

### **Target Conditions**

- Conditions such as fever of unknown origin, weight loss, and fatigue
- Infectious diseases such as pneumonia, urinary tract infection, HIV, syphilis and more
- Inpatient care for patients with undiagnosed multiple organ disorders
- After-hours outpatient services at the Primary Care Center
- Lifestyle-related diseases (e.g., abnormal cholesterol and uric acid levels)
- Comprehensive health checkup (outpatient, inpatient, and PET-CT) and more

### Features

- Covers a broad range of practice areas, from primary care to infectious diseases and preventive medicine
- Dedicated to providing holistic and comprehensive medical care
- Specializes in outpatient services such as vaccinations, constipation and more
- Performs preventive medicine per EBM guidelines to enhance health literacy via consultation with trusted doctor-patient relationships
- Produces infectious diseases manual for Juntendo University Hospital and provides antimicrobial consultations to all departments



Inpatient medical checkup

- Infectious diseases (other than COVID and HIV)
   Others
- Respiratory
- Gastroenterology
- Nephrology/Urology
- Neurology
- Connective tissue disease
- Fever of unknown origin
- Cardiology
- Orthopedic
- Hematology
- Dermatology
- HIV

- Endocrine

- COVID

Inpatient Cases by Diseases (FY2023)

## **Cardiovascular Medicine**

### **Target Conditions**

- Coronary artery disease, arteriosclerosis obliterans (ASO)
- Valvular disease, congenital heart disease
- Arrhythmia
- Cardiomyopathy, cardiac insufficiency
- Pulmonary hypertension
- Sleep apnea syndrome
- Dyslipidemia

### Features

- Performs more than 400 percutaneous coronary interventions (PCIs) and 150 transcatheter aortic valve implantations (TAVI) annually
- Performs more than 300 catheter ablation procedures annually for arrhythmias
- Juntendo University Hospital's Heart Center provides one of the most advanced cardiac rehabilitation programs in Tokyo (over 16,000 cases in 2023), accredited by the Japanese Association of Cardiac Rehabilitation (JACR)
- Actively utilizes the most advanced diagnostic imaging technology for diagnosis and treatment



#### Treatments and Examinations (2023)

Catheterization Treatment	PCI cases (patient unit)	372
	PTA cases (patient unit)	122
	TAVI cases	179
	MitraClip (percutaneous edge-to- edge mitral valve repair) cases	16
	Percutaneous closure procedures (ASD, PDA, PFO)	35
Arrhythmia Treatment	Pacemaker implantations	137
	Implantable Cardioverter Defibrillator (ICD) implantations	21
	Catheter ablations	346
	Cardiac resynchronization therapy (CRT) ※Including implantable defibrillators	20
Cardiac Rehabilitation	Cardiac rehabilitation cases	16,284
Echocardiogram Examination	Transthoracic, transesophageal, and stress echocardiograms	17,397

## Gastroenterology

### **Target Conditions**

- Esophageal, gastric, colorectal, liver, pancreatic, and biliary tract cancers
- Helicobacter pylori infection, functional gastrointestinal disorders, inflammatory bowel disease
- Acute hepatitis, chronic hepatitis (viral, fatty, and autoimmune)
- Liver failure, portal hypertension (endoscopic IVR)
- Cholelithiasis, cholangitis, acute pancreatitis, chronic pancreatitis

#### Features

- World #1 in gastric basal adenocarcinoma cases
- Most capsule endoscopy procedures in Japan
- World leader in high-level treatment technologies for bile duct, duodenal, and colon stents
- Cutting-edge therapies in interventional EUS
- Remains Japan's largest number of radiofrequency ablation (RFA) and new-generation microwave ablation (MWA) for treating liver cancer
- Development of an AI-supported endoscopic diagnosis system for gastric cancer
- Fecal transplantation therapeutic research for ulcerative colitis



### Total Inpatients (35,617) in 2023

	Disease Name	No. of patients
	Malignant esophageal cancer	129
	Malignant stomach cancer	165
Gastrointestina I tract	Benign tumor of the colon	366
	Inflammatory bowel disease	39
	Malignant colon cancer	103
Liver	Acute and chronic hepatitis, liver failure	160
	Malignant liver cancer	837
	Benign biliary tract disease	327
	Benign disease of the pancreas	177
Biliopancreatic	Malignant pancreas cancer	341
	Malignant biliary tract cancer	84

## **Respiratory Medicine**

### **Target Conditions**

- Lung cancer/thoracic malignancies
- Bronchial asthma
- Chronic obstructive pulmonary disease(COPD)
- Interstitial lung disease
- Respiratory tract infection
- Rare lung diseases (lymphangioleiomyomatosis, pulmonary arterial hypertension, etc.)
- Sleep apnea syndrome (SAS) and more

### Features

- Established in 1969, with the longest history of respiratory medicine in Japan
- Largest number of outpatients and inpatients among university hospitals in Japan
- Specializes in chemotherapy and provides bestavailable treatments, including conducting clinical trials for lung cancer patients
- Actively adapting advanced treatment methods for asthma, COPD, and interstitial pneumonia
- Providing experts in treating rare lung diseases and SAS
- Providing ultrasound-guided thoracic puncture technique, an outstanding biopsy technique unavailable in other Japanese facilities





## Nephrology and Hypertension

### **Target Conditions**

- Chronic kidney disease (CKD), hypertension, hematuria, proteinuria, etc.
- Glomerulonephritis (IgA nephropathy, membranous nephropathy, etc.)
- Diabetes-related kidney disease (DKD)
- Nephrotic syndrome; Acute kidney injury (AKI)
- Complications of hemodialysis and peritoneal dialysis
- Rare diseases (hereditary angioedema (HAE), Fabry's disease, polycystic kidney disease, etc.).

### Features

- Provides comprehensive treatment for progression control and complication prevention at all CKD stages
- Conducts renal biopsy to identify causes of renal impairment (proteinuria, hematuria, elevated serum creatinine)
- Offers hemodialysis and peritoneal dialysis for endstage renal failure
- Opened specialized experts' outpatient clinics for dialysis complications and diabetes-related kidney disease
- Accepts consultations from various departments for conditions requiring continuous hemodiafiltration (CHDF) dialysis, contributing to improved overall health conditions



#### **Outpatient Clinical Achievements**

	Total outpatients	First-visit patients (with referral letter)
FY 2014	39,820	740 (426)
FY 2015	41,859	606 (434)
FY 2016	45,146	576 (401)
FY 2017	46,252	568 (424)
FY 2018	46,346	617 (488)
FY 2019	45,995	584 (460)
FY 2021	36,410	534 (413)
FY 2022	35,827	557 (456)
FY 2023	34,664	549 (466)

## Rheumatology

### **Target Conditions**

- Broad spectrum of treatments for all types of connective tissue diseases
- Specialized outpatient clinics for rheumatoid arthritis, systemic lupus erythematosus, inflammatory myopathy, vasculitis, systemic sclerosis, pulmonary hypertension, and spondylarthritis

### Features

- First established department specializing in connective tissue diseases in Japan
- Abundant experience in treating large number and wide variety of rheumatic diseases
- Actively incorporates the most advanced treatments and provides appropriate outpatient and inpatient medical care based on the latest findings
- One of the facilities treating the largest number of systemic lupus erythematosus patients in Japan. By using new therapeutic agents, minimizing steroid use, while providing care with attention to complications
- Backed by extensive accomplishments, committed to the diagnosis and treatment of vasculitis including ANCA-associated vasculitis, Takayasu arteritis, and giant cell arteritis
- Ensuring proper management of intractable clinical conditions, complications of pregnancy, and other conditions.



#### Number of Inpatients by Disease (2023)

Disease Name	No. of patients	Disease Name	No. of patients
Rheumatoid arthritis	119	Vasculitis syndrome	113
Systemic lupus erythematosus	127	Antiphospholipid antibody syndrome	25
Systemic sclerosis	54	Adult-onset Still's disease	8
Inflammatory myopathy	64	Polymyalgia rheumatica syndrome	33
Sjogren's syndrome	63	IgG4-related disease	15
Mixed connective- tissue disease	21	Others	69
Behcet' s disease	14		

## Hematology

### **Target Conditions**

- Acute and chronic leukemia (myelocytic/lymphatic)
- Malignant lymphoma, multiple myeloma, AL amyloidosis
- Polycythemia vera, essential thrombocythemia
- Myelofibrosis
- Idiopathic thrombocytopenic purpura, etc.

### Features

- Used findings from the following research and clinical specimen analysis to enhance treatments:
  - Research on novel CAR-T therapy for refractory hematological malignancies
  - Development of genetic diagnostic techniques for hematological diseases and their clinical application
  - Elucidation of the pathogenesis of viral lymphoma and development of new therapies
  - Analysis of immune reconstruction in transplantation cases
  - Exploratory research on complications of multiple myeloma
  - Establishment of early diagnosis methods for chronic myeloid leukemia and exploration of therapeutic targets
  - Development of new treatments for AL amyloidosis
- Accredited facility to provide CAR-T therapy for relapsed/refractory acute lymphocytic leukemia, malignant lymphoma, and multiple myeloma (all commercially available CAR-T agents can be administered)





- Malignant lymphoma (includes suspected cases)
- Abnormal blood cell count (excludes anemia and low platelet)
- Anemia
- Plasma cell tumor (includes multiple myeloma)
- Myeloproliferative disorder
- Thrombocytopenia (includes ITP)
- Acute leukemia
- Myelodysplastic syndrome
- Coagulation defect, thrombotic disease
- Histiocytic diseases, lymphatic diseases
- Others (including donors)

Number of First-visit Outpatients (2023)

## Diabetes, Endocrinology and Metabolism

### **Target Conditions**

- Diabetes mellitus
- Dyslipidemia, hypertension, hyperuricemia
- Metabolic diseases such as glycogen storage diseases
- Thyroid diseases (Graves' disease, etc.), parathyroid diseases
- Pituitary disorders (Cushing 's disease), adrenal disorders (primary aldosteronism, etc.)

### Features

- One-week inpatient diabetes education program provides patient education on disease, diet, and exercise methods; examines insulin secretory capacity and complications of diabetes mellitus; and develops treatment plans for patients
- Automated insulin delivery (AID) systems are used for type 1 diabetes mellitus patients, controlling blood glucose levels with continuous glucose monitoring (CGM)
- Ranked among the top in Japan for fine-needle aspiration cytology cases of thyroid tumors
- In collaboration with the Radiology Department, catheter examinations are conducted to determine treatment plans for primary aldosteronism
- Participates in the care of other metabolic diseases such as lipodystrophy
- A member of the 'Bariatric Surgery for Weight Loss and Metabolic Improvement Therapy Team'; involved in the care of morbidly obese patients





## Neurology

### **Target Conditions**

- Neurodegenerative diseases: Parkinson's disease and its related disorders, Alzheimer's dementia, amyotrophic lateral sclerosis, etc.
- Cerebrovascular diseases: atherothrombotic brain infarction, cerebral embolism, etc.
- Neuroimmune diseases: multiple sclerosis, myasthenia gravis, etc.
- Functional diseases: epilepsy, headaches, etc.
- Peripheral nerve disorders: Guillain-Barre syndrome, CIDP, etc.
- Muscular disorders: dermatomyositis, polymyositis, muscular dystrophy, etc.
- Neuroinfectious diseases: meningitis, encephalitis, etc.

### Features

- Consistently ranked among the top Neurology department per Newsweek Magazine's World's Best Hospitals, placing 13<sup>th</sup> in the world (1<sup>st</sup> in Japan) in 2024.
- Recognized for having the most extensive clinical achievements in Parkinson's disease in Japan, with world-leading achievements in both basic and clinical research
- Largest number of patients treated with device-aided therapy (deep brain stimulation, levodopa-carbidopa continuous infusion gel therapy) for Parkinson's disease in Japan
- Extensive experience in Botox injections for blepharospasm, prosopospasm, and cervical dystonia, as well as in the diagnosis and treatment of immune disorders such as multiple sclerosis and myasthenia gravis



#### **Outpatient Clinical Achievements (FY 2023)**

Total number of outpatients	62,262 patients
Number of first-time patients	2,035 patients
Number of follow-up patients	60,227 patients
Number of emergency patients	655 patients

## Pediatrics and Adolescent Medicine (1)

### Target Conditions (Groups)

#### Features

- <u>Gastrointestinal:</u> abdominal pain, diarrhea, and constipation
- <u>Neonatal:</u> prematurity, neonatal diseases



- <u>Cardiovascular</u>: congenital heart diseases, arrhythmia, Kawasaki disease
- <u>Endocrinal:</u> endocrine and metabolic diseases such as diabetes mellitus
- Infection: infectious diseases, respiratory diseases
- <u>Renal:</u> renal/urological diseases
- <u>Hematology and oncology:</u> leukemia and other hematological/malignant tumors
- <u>Neurology:</u> epilepsy and neurological diseases
- Liver and metabolic: liver and metabolic diseases
- <u>Immunology/allergy/rheumatology</u>: asthma, atopic dermatitis, food allergy, connective tissue diseases
- <u>Developmental:</u> developmental disorders, child and adolescent psychiatric diseases

 Pediatric medical center and perinatal center specialize in the treatment of all neonatal and pediatric diseases



- A top-tier medical institution in Japan for treatment of pediatric gastrointestinal diseases such as inflammatory bowel disease, irritable bowel syndrome, peptic ulcer, intractable diarrhea, and pancreatic diseases
- In collaboration with the Department of Cardiovascular Surgery, treating congenital heart diseases, providing catheter treatments, and treatments for arrhythmia (catheter ablation), and coronary artery lesions of Kawasaki disease
- Striving for intact survival focusing on nutritional management of preterm infants, combining enteral and intravenous nutrition from the early postnatal period
- Specialist medical care for endocrine and metabolic diseases including diabetes mellitus, short-forgestational age (SGA) and more
- One of just a few developmental clinics in Japan to offer continuous developmental follow-up

## Pediatrics and Adolescent Medicine (2)



Inpatients by Major Diseases (FY2023)





## Medical Oncology

### **Target Conditions**

Solid tumors

(bone/soft tissue; neuroendocrine; gastrointestinal stromal tumors; gastrointestinal cancers; hepatobiliary and pancreatic cancers; cancers of unknown primary and more)

#### Features

- Collaborating with other departments through the Cancer Board to discuss and implement multidisciplinary treatment strategies and specialized pharmacotherapy
- Conducting cancer gene panel tests for precision medicine in cancer treatment, examining mutation profiles of cancer-related genes in tumor cells of individual patients





Number of New Outpatients by Disease (2023)

#### Pancreatic cancer

- Colorectal cancer
- Ovarian cancer
- Bone and soft tissue sarcoma
- Non-small cell lung cancer
- Prostate cancer
- Unknown primary cancer
- Breast cancer
- High tumor marker levels
- Intrahepatic cholangiocarcinoma
- Extrahepatic cholangiocarcinoma
- Cervical cancer
- Brain tumor
- Salivary cancer
- Esophageal cancer
- Gastric cancer
- Gallbladder cancer
- Mediastinal tumor
- Cardiac tumor
- Ceruminous adenocarcinoma
- Thyroid cancer
- Choroidal malignant melanoma
- Duodenal tumor, small bowel tumor
- Pancreatic neuroendocrine tumor
- Small cell lung cancer
- Pulmonary carcinosarcoma
- Malignant mesothelioma
- STUMP
- Urothelial cancer
- Merkel cell carcinoma
- Malignant lymphoma

Cancer board

### Esophageal and Gastroenterological Surgery

### **Target Conditions**

- Cervical and thoracic esophageal cancer, esophageal submucosal tumor, esophageal hiatus hernia, esophageal achalasia
- Esophagogastric junction cancer
- Gastric cancer, gastric submucosal tumor, malignant gastric lymphoma
- Duodenal tumor
- Obesity



#### Features

- Among Japan's top-performing facilities for esophageal cancer surgery, achieving a high-level survival rate via high-quality lymph node dissection
- Minimizing surgical burdens on patients using thoracoscopic and laparoscopic techniques for esophageal cancer, esophagogastric junction cancer, and gastric cancer
- Minimal invasiveness for benign esophageal and gastric diseases (including submucosal tumors) by combining endoscopic and surgical treatments
- Bariatric surgery for weight loss and metabolic improvement for morbidly obese patients resistant to medical therapy

#### Clinical Achievements (2023)

Disease/Treatment	Cases	Disease/Treatment	Cases
Thoracic esophageal cancer resection	60	Laparoscopic cholecystectomy	16
Thoracoscopy/mediastino scopy	35	Inguinal herniorrhaphy	21
Robot-assisted	25	Laparoscopy	19
Thoracotomy	0	Anterior approach	2
Cervical esophageal cancer resection	5	Laparoscopic appendectomy	30
Gastric cancer resection	74	Endoscopic mucosal dissection	69
Laparoscopy	46	Mucosal dissection under general anesthesia (pharynx, cervical esophagus)	23
Robot-assisted	28	Esophagus	22
Laparotomy	0	Gastroduodenal	23
Laparoscopy and endoscopy cooperative surgery	8	Others	1
Bariatric surgery	26		
Laparoscopic sleeve gastrectomy	19		
Robot-assisted sleeve gastrectomy	5		
Laparoscopic sleeve bypass surgery	2		

## **Colorectal and Proctological Surgery**

### **Target Conditions**

- Colorectal cancer
- Colorectal adenomas
- Inflammatory bowel disease
- Anal diseases
- Hernial diseases, etc.



### Features

- Actively using robotic surgery for colorectal cancer, with growing number of cases each year. In 2023, minimally invasive surgery, including laparoscopic surgery, accounted for more than 95% of colorectal cancer surgeries
- Conducting intersphincteric resection (ISR) and ultra-low anterior resection, aiming to maximize the preservation of anal function
- More than 900 cases of highly complex endoscopic submucosal dissection (ESD) for early-stage colorectal cancer have been performed, with no cases of postoperative perforation or other complications requiring emergency surgery
- Providing optimal treatment for all stages of colorectal cancer, from early to advanced stages



#### Malignant Colorectal Cases

## Hepatobiliary-Pancreatic Surgery

### **Target Conditions**

- Liver, bile duct, gallbladder, pancreatic, and metastatic liver cancers
- Cholecystitis, cholelithiasis, choledocholithiasis
- Pancreatic endocrine tumors
- Splenic tumors, splenic cysts
- Portal hypertension, etc.

### Features

- Treating unresectable advanced cancer with multidisciplinary treatments and vascular resection
- Robot-assisted surgeries: Emphasizing minimally invasive surgeries for pancreatic and hepatic resections; among the best facilities in this area in Japan
- Performing hepatopancreatoduodenectomy (HPD) for advanced cholangiocarcinoma
- Strengthening interdisciplinary cooperation with Department of Colorectal and Proctological Surgery and Department of Gastroenterology through weekly conferences
- 1- to 2-year survival rates of 98% for recipients of living donor liver transplantation





%No breakdown prior to 2018

## **Breast Oncology**

### **Target Conditions**

- Malignant mammary diseases (breast cancer, phyllodes tumor, hemangiosarcoma, etc.)
- Benign mammary diseases (fibroadenoma, intraductal papillomatosis, mastitis, etc.)
- Hereditary tumors, including hereditary breast and ovarian cancer syndrome

### Features

- Providing guideline-based local (surgery/radiation therapy) and systemic (pharmacotherapy) treatment considering the individualized needs of patients
- Performed 3,864 chemotherapy cases in FY2023, along with many clinical trials
- Offering a full range of care: genetic counseling, gestational breast cancer, reproductive medicine, breast reconstruction, recurrence treatment, home care, family care, and supportive/palliative care, technicians, ultrasound technicians, and pharmacists
- Achieved high-level outcomes in both autologous tissue reconstruction and artificial breast reconstruction, in collaboration with the Plastic and Reconstructive Surgery Department
- A full range of highly specialized services available, including genetic counseling, AYA-generation breast cancer (gestational/lactational breast cancers, reproductive medicine), breast reconstruction, in-home care, family care, supportive care, palliative care, and more



(Cases)



(%)

## Cardiovascular Surgery

### **Target Conditions**

- Mitral regurgitation, mitral stenosis
- Aortic valve stenosis, aortic valve regurgitation
- Tricuspid valve regurgitation, tricuspid valve stenosis
- Atrial fibrillation, angina pectoris, cardiac tumor
- Thoracic aortic aneurysm, abdominal aortic aneurysm
- Congenital heart disease (from newborns to adults)
- Peripheral arterial disease, lower extremity varicose veins

### Features

- "No refusal" policy even for severe cases, with top surgical results in Japan
- Fast-track cardiac recovery protocols; walking and eating starting the next day
- Achieving pioneering results in coronary artery bypass surgeries using arterial graft off-pump surgery for diffuse lesions and low left ventricular function; trusted with the cardiovascular surgical care of Japan's Imperial family
- Pioneered TAVI and sutureless aortic valve replacement for high-risk cases of aortic valve stenosis
- Introduced the latest surgical techniques for obstructive hypertrophic cardiomyopathy





#### Surgeries By Diseases

## **General Thoracic Surgery**

### **Target Conditions**

- Primary lung cancer, metastatic lung cancer
- Benign lung tumor (pulmonary hamartoma)
- Mediastinal tumor (thymoma, neurogenic tumor, etc.)
- Mesothelioma and more

### Features

- Promising results with over 700 thoracic surgeries per year in Japan
- Performing da Vinci robotic surgery for lung cancer and mediastinal tumors
- Performing extended surgery for advanced cancers (bronchoplasty, etc.)
- Providing treatments for high-risk patients with comorbidities such as emphysema, angina pectoris, and diabetes mellitus







#### Number of Surgeries

## Pediatric General and Urogenital Surgery

### Target Disorders/Diseases (Groups)

### Applicable to all pediatric general and urological surgeries

- Robot-assisted surgeries

   (biliary dilatation, pyeloureteral junction stenosis, mediastinal tumors, etc.)
- Laparoscopic surgeries
   (biliary atresia, Hirschsprung's disease, imperforate anus, etc.)
- Thoracoscopic surgeries (pectus excavatum, congenital pulmonary airway malformation, etc.)
- Neonatal surgeries

   (diaphragmatic hernia, esophageal atresia, congenital intestinal obstruction, etc.)
- Pediatric urological surgeries (hypospadias, vesicoureteral reflux, hydronephrosis, etc.)
- Pediatric solid tumor surgeries (neuroblastoma, Wilms' tumor, sacrococcygeal teratoma, etc.)

Information on our department's Robot-Assisted Surgeries (da Vinci): <u>Department Website</u> / <u>YouTube</u>



### Features

- Established in 1968 as the first Department of Pediatric Surgery in Japan
- Providing the safest and least invasive treatments for our pediatric patients through a highlyspecialized team-based approach
- With many physicians having studied abroad and capability of communicating in English
- Global pioneer in pediatric surgery, consistently welcoming exchange students from overseas
- Annually performing about 1,200 surgeries (with 50 to 70 of those being neonatal surgeries)



Robot-assisted pyeloplasty (da Vinci)

## Neurosurgery

### **Target Conditions**

- Brain tumor (meningioma, glioma, etc.)
- Cerebrovascular diseases (aneurysm, arteriovenous malformation, etc.)
- Functional neurosurgery (epilepsy, involuntary movement, normal-pressure hydrocephalus, etc.)
- Vertebrae/spinal cord surgery (spinal cord tumor, spinal disc herniation, etc.)
- Pediatric neurosurgery (pediatric brain tumor, congenital brain malformation, etc.)

### Features

- One of the most well-established neurosurgery departments in the history of Japanese neurosurgery
- Having the highest number of brain tumor, functional neurosurgery, and endovascular treatment cases in Japan
- Emergency 24/365 response for stroke in collaboration with the Department of Emergency Medicine and the Department of Neurology; providing highly advanced medical technologies such as intraoperative MRI (iMRI)
- Pediatric neurosurgery covers a broad range from tumors to epilepsy and congenital malformations, and has one of the highest volume of cases in Japan
- Provides deep brain stimulation therapy for Parkinson's disease in collaboration with the Department of Neurology



Intraoperative MRI

	FY 2021	FY 2022	FY 2023
Total procedures	1,163	1,213	1,071
Brain tumors	236	288	275
Cerebrovascular disorders (direct surgery)	48	45	25
Trauma	36	38	42
Congenital malformations (excluding hydrocephalus)	8	11	25
Hydrocephalus	113	108	118
Epilepsy	90	82	78
Spine and spinal cord	114	149	138
DBS	108	87	87
Microvascular decompression	13	17	7
Endovascular surgery	360	328	251
Others	37	60	18

## **Orthopedic Surgery and Sports Medicine**

### **Target Conditions**

- Osteoarthritis (knee, hip, shoulder, ankle, hand, etc.)
- Spinal disorders (spinal canal stenosis, intervertebral disc hernia, spinal deformity, etc.)
- Sports-related injuries and disorders (shoulder, knee, ankle, etc.)
- Musculoskeletal tumors
- Hand trauma and deformities
- Metabolic bone diseases (osteoporosis, etc.)
- Rheumatoid arthritis

### Features

- Physicians in our department are specialists in specific areas of orthopedic surgery and sports medicine
- All treatment methods are offered with patientcentered approach to the advantages, disadvantages, and limitations
- Offering the most optimal options for all patients with locomotive organ diseases, providing safe, reliable, and advanced medical care



#### Major Surgical Outcomes (2023)

Surgical procedure	Cases
Knee surgery	448
Spinal surgery	444
Hand and elbow surgeries	394
Hip joint surgery (total hip replacement)	240
Shoulder surgery	211
Foot surgery	186
Bone and soft tissue tumor surgery	135

## Plastic and Reconstructive Surgery

### **Target Conditions**

- Pediatric congenital anomalies (cleft lip palate, polysyndactyly, premature craniosynostosis, laser therapy, etc.)
- Resection of benign and malignant tumors andpostresection reconstruction (head and neck, limb, breast, etc.)
- Intractable ulcers (whole body, mainly in lower limbs)
- Maxillofacial disorders (facial paralysis, etc.)
- Traumatic injuries (facial bone fractures, limb laceration, etc.)
- Anti-aging surgery (blepharoptosis, etc.)

### Features

- Performing breast reconstruction (autologous tissue or fat grafting/implants) in collaboration with the Department of Breast Oncology, which has one of the largest case volumes in Japan
- Performing treatments for patients with congenital anomalies, including cranioplasty for craniosynostosis, in collaboration with other departments (Pediatrics and Neurosurgery)
- Performing reconstruction after malignant tumor resection in collaboration with other departments (ENT, Dermatology, and Orthopedics)
- Developing regenerative medicine options for treatment of leg ulcers.





#### **Annual Outpatient and Inpatient Surgeries**

## Dermatology

### **Target Conditions**

- Psoriasis
- Atopic dermatitis
- Malignant skin tumors
- Alopecia areata
- Autoimmune bullous disease, etc.

### Features

- Regarding inpatient treatments, providing surgical treatment for skin tumors; chemotherapy for malignant skin tumors; systemic management for bullosis, severe drug eruptions, cellulitis, and various infectious diseases such as herpes zoster; and skin grafting for congenital epidermolysis bullosa and refractory skin ulcers
- Regarding outpatient care, focusing on systemic treatments starting with biological agents for severe psoriasis, atopic dermatitis, and chronic urticaria
- Alopecia areata treatment consists of oral treatment with JAK inhibitors, inpatient steroid pulse therapy, regional immunotherapy, NB-UVB, and excimer light therapy

#### Outpatient Care (FY2023)

	Number of Patients
Average number of daily outpatients	220
Number of first-time patients	2,059
Among those with referral letters	1,491

Outpatient tests include various blood tests, fungal testing, patch tests, dermoscopy, skin biopsy, etc. Depending on symptoms/location, some surgeries, such as small 'mole' excisions and ingrown nail surgeries, are performed on an outpatient basis. Other treatments such as phototherapy (PUVA, NB-UVB, excimer lamp, etc.) and laser therapy (carbon dioxide laser, etc.) are also conducted.

#### Inpatient Care (FY 2023)

	Number of Patients
Number of discharged patients	262

#### **Inpatient Surgeries**

	Number of Cases
Benign skin tumor	45
Malignant skin tumor	62
Others (pyoderma, skin grafting, etc.)	46
Total	153

Apart from surgery, inpatient care is provided for a wide range of diseases including atopic dermatitis, alopecia areata, severe drug eruption, herpes zoster, pemphigus, pemphigoid, skin ulcers, and chemotherapy for skin cancer. Phototherapy, plasma exchange therapy, and short-term steroid pulse therapy may also be performed.

## Urology

### **Target Conditions**

- Kidney, bladder, and prostate cancers
- Prostatic hyperplasia, dysuria
- Urinary incontinence, pelvic organ prolapse
- Polycystic kidney disease, tuberous sclerosis
- Kidney transplants

### Features

- Robot-assisted surgeries for prostate cancer, kidney cancer, and bladder cancer; ranking among the top in Japan for the number of performed surgeries
- Providing treatments for difficult-to-treat advanced cancers
- Newest therapies for dysuria and pelvic organ prolapse; offering the latest, minimally invasive treatment procedures (laser therapy and waterjet therapy) for prostatic hyperplasia
- Pharmacotherapy for intractable diseases such as polycystic kidney diseases and tuberous sclerosis
- Safely performing ABO-incompatible kidney transplantation



#### No. of surgical procedures (2023)

Anatomical Site	Cases
Adrenal glands	17
Kidney	199
Ureter	162
Renal pelvis	1
Bladder	207
Prostate gland	560
Urinary tract	1
Penis	1
Testicles	15
Retroperitoneal space	1
Others	5
Total	1,169

## Ophthalmology

### **Target Conditions**

- Myopia, astigmatism
- Strabismus/blepharoptosis
- Cataract, glaucoma
- Corneal transplants
- Retinal detachment, retinitis pigmentos
- Vitreoretinal diseases
- Inflammatory eye disease, etc.

### Features

- Numerous corneal transplants have been performed since 1963, when Juntendo Eye Bank (Japan's first) was established
- The first to introduce contact lenses in Japan. Currently focusing on providing specialized contact lenses at the outpatient Contact Lens Clinic
- The only outpatient clinic specializing in sports ophthalmology in Japan, located at the university hospital
- Pediatric congenital strabismus is treated in the outpatient pediatric ophthalmology clinic, while adults receive care in the outpatient clinic specialized in strabismus
- Myopia and astigmatism are also treated with refractive surgery such as PRK and LASIK
- Using robot-assisted technology for vitreous surgery





#### Annual surgical procedures (2023)

Inpatient	Cataract	1,522 cases
surgeries (aged 12 and	Glaucoma	303 cases
older)	Corneal transplants (includes femtosecond laser cases)	40 cases (2 cases)
	Retinal detachment	199 cases
	Vitreous surgery (excludes detachments)	401 cases
	Others	132 cases
Outpatient surgeries	Strabismus/blepharoptosis, etc.	96 cases
(aged 12 and older)	Cataract day surgery	120 cases
Pediatric Ophthalmology	Strabismus/blepharoptosis, etc.	146 cases
surgeries (under 12)	Cataract, glaucoma, vitreoretinal diseases, etc.	60 cases
Excimer laser Surgery	РТК	64 cases
Total surgeries		3,083 cases

## Otorhinolaryngology, Head and Neck Surgery

### **Target Conditions**

- Ear diseases (chronic otitis media, cholesteatoma, otosclerosis, etc.)
- Nose diseases (chronic sinusitis, eosinophilic sinusitis, allergic rhinitis, etc.)
- Head and neck diseases (oral cavity/larynx/pharynx cancer, salivary gland cancer, thyroid cancer, paranasal sinus cancer, surgical treatments for Grave's disease, benign head and neck tumors, etc.)
- Others (sleep apnea syndrome, facial palsy, dizziness/vertigo, outpatient speech and language therapy)

#### Annual surgical procedures (FY 2023)

Treatment	Cases
Nasal surgery	656
Ear surgery	259
Head and neck surgery	556
Pharyngolaryngeal surgery	344
Total surgeries	1,815

#### Features

- Facilitating multidisciplinary treatment for head and neck cancer including surgery/functional preservation surgery, radiation, and chemotherapy (anti-PD-1 antibody and intra-arterial injection)
- Performing endoscopic resection and skull base surgery for paranasal sinus tumors
- To preserve function and improve patient QOL, providing low-invasive procedures, such as transoral robotic surgery for mesopharyngeal cancer, superselective intraarterial infusion therapy for nasal and paranasal sinus cancer, and photoimmunotherapy for unresectable recurrent head and neck cancers
- Providing advanced medical treatments: carbon dioxide laser stapedectomy for otosclerosis; genomic sequencing and cochlear/bone-anchored hearing aid implantation for hearing loss
- Endoscopic nasal and paranasal sinus surgery for chronic sinusitis and allergic rhinitis



## Radiology (Diagnosis Division)

- Performing diagnostic imaging tests requested by all departments using a variety of imaging technologies such as CT and MRI
- Providing imaging tests and radiologic interpretations to outpatients referred to us through medical network; having an outpatient clinic for interventional radiology

#### **Diagnostic Testing**

- Consistent efforts from planning tests to transmitting high-quality reports to all departments internally
- Examinations in FY2023 included 99,827 CTs, 72,017 MRIs, 8,430 ultrasounds, 4,850 nuclear medicine tests, 3,147 PET-CTs, and 536 angiographies

### Interventional Radiology (IVR)

- Performing IVR procedures: prophylactic renal arterial embolization for renal angiomyolipoma; uterine artery embolization for uterine fibroids; and hepatic arterial chemoembolization for hepatocellular carcinoma and metastatic liver cancer
- Performing central venous port placement, CTguided needle biopsy, and mammotome breast biopsy; offering cryotherapy for renal tumors since FY2017



IVR procedures (April 2023 to March 2024) (total 536 cases)

Procedures	Cases
Central venous port placement	153
Mammotome biopsy	57
CT-guided biopsy	62
Adrenal vein sampling	16
Transcatheter hepatic arterial Chemoembolization	14
Uterine artery embolization surgery (fibroids, hemostasis)	12
Arterial infusion of anticancer drugs, etc.	35
Others	187

## Radiology (Radiation Oncology Division)

### **Target Conditions**

- All malignant tumors (cancers) including breast cancer, prostate cancer, lung cancer, esophageal cancer, head and neck cancer, brain tumors, malignant lymphomas, bone metastasis, and brain metastasis
- Benign diseases such as keloids and thyroid-related ophthalmopathy

#### Features

- Offering tailored medical care for patients based on standard treatments
- Swift action even on referrals from other hospitals
- Striving to provide "No-Wait Medical Services"
- Performing high-precision radiation therapy (intensity-modulated radiation therapy (IMRT), stereotactic radiotherapy (SRT/SBRT), and imageguided radiotherapy (IGRT), etc.
- Providing sealed brachytherapy (RALS) for uterine cancer under analgesia/sedation, allowing treatments with minimal pain
- Outpatient Nursing: Addressing patients' pain and care



### Radiotherapy procedures by Anatomical Site (2023)

New Treatment Cases by Anatomical Site	Cases
Head (brain tumors, etc.)	33
Head and neck	88
Chest (excludes mammary glands)	131
Mammary glands	235
Abdomen	116
Prostate glands	91
Gynecology	58
Bone/Skin	12
Hematopoietic organ	53
Other sites	17
Benign diseases	8
Total	842

#### Specialized Treatments Cases (2023)

Specialized Treatment Cases	Cases
Intensity- modulated radiation therapy (IMRT)	285
Stereotactic body radiation therapy (SBRT)	52
Brain stereotactic radiotherapy (SRT, SRS)	55
Sealed brachytherapy (RALS)	22
Total body irradiation (TBI)	21
Total	435

## **Obstetrics**

### **Target Conditions**

- Normal pregnancy
- High-risk pregnancies and complicated deliveries
- Diagnosis and management of fetal abnormalities
- Painless delivery, etc.

### Features

- Actively accepting maternal transports as Tokyo Metropolitan Government's designated Regional Perinatal Medical Center
- Painless delivery is available 24/7 in collaboration with anesthesiologists
- Conducting research on painless deliveries, the mechanism of myometrial contractions, rapid diagnosis of GBS infections, investigation on working pregnant women, and genomic analysis for congenital diseases







Delivery Cases by Year



Painless Delivery Cases by Year

## Gynecology

### **Target Conditions**

- Uterine fibroids, uterine adenomyosis
- Endometrial cancer, cervical cancer
- Ovarian tumor (benign and malignant tumors)
- Menopausal syndrome, outpatient clinic for female athletes
- Infertility treatment

### Minimally invasive laparoscopic surgeries (including robot-assisted surgeries)

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Laparoscopic total hysterectomy (including robot- assisted surgeries)	223	221	233	239	248	265
robot-assisted surgeries	4	29	59	81	104	98
Laparoscopic uterine leiomyomectomy	165	147	121	115	113	134
Laparoscopic ovarian cystectomy	179	168	179	208	157	144
Laparoscopic adnexectomy	83	97	82	79	101	64
Laparoscopic salpingectomy	10	24	15	19	13	11
Others	5	12	4	8	16	24
Total	655	669	634	668	648	642

### Features

- Largest number of laparoscopic surgeries in Japan
- Providing minimally invasive treatments for 85% of benign gynecological diseases
- Performing robotic-assisted surgeries for benign and malignant cancers (endometrial cancer, etc.)
- Providing multidisciplinary treatments combining surgery, chemotherapy, and radiation therapy



## **Emergency Medicine**

### **Target Conditions**

#### Critical Care Diseases (Cardiopulmonary arrest, trauma, poisoning, shock,

sepsis, burns, heat stroke, anaphylaxis, etc.)

Acute Care Diseases

 (Altered consciousness, dizziness, headache, fever, palpitations, chest pain, abdominal pain, nausea, diarrhea, etc.)

#### Features

- Actively accepting emergency patients as an Emergency Medical Institution designated by the Tokyo Metropolitan Government while collaborating and sharing roles with local medical institutions
- Operating a DMAT team as a disaster base hospital
- Handling J-STAT calls, an in-house emergency response alert system
- Providing consultation to all clinical departments when their in-hospital patients unexpectedly become severely ill
- Offering 16 beds in the semi-ICU high care unit (HCU) and 11 beds in the general emergency unit
- Conducting pre-hospital operations using our hospital ambulances
- Providing emergency medical care through collaboration between the hospital paramedics and multidisciplinary professionals



### Multi-disciplinary team that provides emergency medical care



#### Number of Ambulance Acceptances

## Anesthesiology (Surgery Division)

### **Target Conditions**

- Preoperative evaluation
- Surgical and anesthetic management
- Postoperative management
- Intensive care management
- Obstetric anesthesia (painless delivery)





#### 12,000 10,998 11,234 11,229 10,943 11,000 10.509 10.509 9,762 10,000 9,000 8,000 7.000 6,000 2017 2018 2019 2020 2021 2022 2023

Patients under Anesthetic Management (Surgery Division)

#### Features

- Ensuring patient safety in all 27 operating rooms from planning and performing anesthesia to general postoperative care
- Providing anesthesiologists-led care in cooperation with other departments, nurses, clinical engineers, and other medical staff for patients requiring comprehensive postoperative care after major surgeries such as cardiac surgeries and for hospitalized inpatients in critical condition
- The obstetric anesthesia team is available 24-h/day to ensure painless delivery and support cesarean sections

## Anesthesiology (Pain Medicine Division)

### **Target Conditions**

- Headaches, trigeminal neuralgias, and various types of postoperative pain
- Herpes zoster pain/post-herpetic neuralgia, diabetic neuropathy, and pain due to obstruction of blood circulation
- Spinal diseases
- Complex regional pain syndrome (RSD)
- Cancer pain, etc.

#### Features

- Providing minimally invasive treatments (nerve block, radiofrequency thermocoagulation, spinal cord stimulation, epidural endoscopy), that can be combined with pharmacotherapy and inpatient care
- Aiming to accurately and quickly relieve pain for diseases by providing minimally invasive treatments, such as trigeminal neuralgia, spinal disorders, herpes zoster pain, and cancer pain, using X-rays and ultrasonography
- Inpatient treatments include Gassel's ganglion thermocoagulation for trigeminal neuralgia; spinal cord stimulation therapy for intractable pain; and epidural endoscopy for lower back pain in patients who have undergone lumbar spine surgery





First Visit Patients in the Pain Clinic (pain treatment)

## Psychiatry

### **Target Conditions**

- Anxiety disorders, stress-related disorders
- Mood disorders, somatoform disorder
- Psychiatric disorders due to other medical illnesses
- Schizophrenia
- Developmental disorders, etc.

### Features

- Six affiliated Juntendo Hospitals, each with specialized mental health clinic functions, collaborate to provide comprehensive psychiatric care
- The first university hospital in the Tokyo metropolitan area to be designated as a hospital responsible for providing medical care to psychiatric patients with physical complications
- Focusing on diagnosis and treatment of mood disorders associated with neurogenerative disorders, such as Parkinson's disease, in collaboration with the Neurology Department.
- The Center for Mood Disorders was established to focus on treatment of mood disorders of diseases such as depression and bipolar disorders. For bipolar disorders, we are conducting molecular biological research using the latest technologies in collaboration with the Department of Molecular Pathology of Mood Disorders.



#### First-time Outpatients by disease (FY2023)

F4 : Anxiety disorder, obsessive-compulsive disorder, stress-related disorder, somatoform disorder, etc.	397
F0 : Organic mental disorders, including symptomatic disorders, dementia, etc.	329
F3 : Depression, bipolar disorder, etc.	247
F5 : Insomnia, eating disorder, etc.	81
F2 : Schizophrenia, schizotypal, and delusional disorders	56
F8 : Psychological developmental disorders	41
F1 : Mental and behavioral disorders resulting from the use of psychoactive substances	14
F6 : Personality and behavioral disorders of adults	13
F9 : Behavioral and emotional disorders with onset usually occurring in childhood and adolescence	10
F7 : Intellectual disabilities	9
Others	84



### **Target Conditions**

- Motor paralysis/spasticity (paralysis of limbs)
- Gait disorders
- Dysphagia/brain dysfunction

#### Features

- Rehabilitation therapy including exercise therapy and physical medicine-based treatment such as electrical stimulation and transcranial magnetic stimulation
- Botulinum therapy for spastic movement disorders
- Aiming to achieve highest-possible quality of life by using a variety of medical rehabilitation devices utilizing the most advanced robotics and latest findings in neuroscience, as compensation for lost functions
- Developing HANDS therapy to improve upper limb function in hemiplegic stroke patients; disseminating the therapy worldwide
- Developing the advanced FAST walk to noninvasively stimulate gait neural circuits in the spinal cord in order to restore function

## **Rehabilitation Medicine**

#### Breakdown of the Number of Patients (FY2023)

Inpatients	
Disease Name	No. of Patients
Cerebrovascular disease rehabilitation	4,788
Locomotor rehabilitation	3,086
Respiratory rehabilitation	1,215
Cardiovascular rehabilitation	1,922
Cancer patient rehabilitation	1,577
Disuse syndrome	48

(New) Outpatients	
Disease Name	No. of Patients
Outpatient botulism treatment	183
Outpatient orthotics	369
Robotic rehabilitation	84

#### Breakdown of Rehabilitation Prescriptions (FY2023)

	No. of Cases
Physiotherapy	9,505
Occupational therapy	1,783
Speech-language-hearing therapy	1,298
Total prescriptions	12,586

## Oral and Maxillofacial Surgery

### **Target Conditions**

- Surgical Dental Treatment
   Tooth extraction, cysts, tumors, etc.
- Temporomandibular disorder, fractured jaw
- Oral mucosal disease, salivary gland disease, inflammation
- Management of perioperative oral function
- ♦ Oral implant
- Sleep apnea syndrome
- Dental treatment of inpatients

### Features

- Performing oral surgeries associated with complicated tooth extractions, cysts, and implants
- Opened specialty outpatient clinics to address implants, temporomandibular disorder, sleep apnea syndrome, and dental regenerative medicine
- In collaboration with the clinical medical departments, we manage perioperative oral function of cancer patients





#### **First-time Patients**

## 順天堂大学医学部附属順天堂医院 Juntendo University Hospital 顺天堂大学医学部附属顺天堂医院