

## 2025 Akita University Faculty of Medicine Syllabus

**Category** : 臨床医学 VI (CC2)  
**Course Title** : Clinical clerkship in pediatric surgery  
**Eligible Students** : grade 5 Elective Course  
**Code** : 71644006-24

### 1. Lead Instructor

Masaru Mizuno (Hospital Professor, Pediatric Surgery, 3447)

### 2. Instructors

Masaru Mizuno (Hospital Professor, Pediatric Surgery, 3447)  
Mayako Morii ((IGAKUBU) Lecturer, Pediatric Surgery, 6141)  
Ryo Watanabe (Assistant Professor, Pediatric Surgery, 6142)  
Kennki Yamagata (Medical Doctor, Pediatric Surgery, 6143)

### 3. Course Description Outline(Course Objectives)

#### 1. Aim of class (rough overall goal)

As a member of the team, through medical care for wards and outpatients, clinical reasoning, differential diagnosis, examination and treatment policy decision of symptoms and pathology centered on pediatric areas, especially surgical diseases, which will be necessary for doctors in any field in the future Acquire practical skills such as Students will also learn practically about related professionalism, ethics, medical behavioral science, medical safety, medical law (system), and EBM.

#### 2. Overview (rough learning objectives)

In order to acquire the basic knowledge and skills related to the diagnosis and treatment of pediatric surgical diseases, students actively engage in practical training as a member of a medical team led by an instructor. (1-1 1-2, 2-1 2-6, 3-7, 5-1 5-4, 6-1 6-2) Basic training for collecting information on your own during clinical practice, extracting, organizing, and interpreting the needs and problems of patients and parents (clinical reasoning), and planning solutions (diagnosis, treatment). (problem based learning; PBL) (1-1 to 6-2) Participate in the daily medical care of the medical team, experience the actual examination, examination, and treatment of pediatric surgical diseases, and create a portfolio. (1-1 ~ 1-2, 2-1 ~ 2-5, 4-1 ~ 4-7)

1) Ward medical care Each student is assigned for two weeks, and under the supervision of a supervising physician, they make daily rounds to the inpatients in the ward and record the details of their medical care in their charts. Under the supervision of a supervising physician, they conduct medical interviews and physical examinations, observe treatments, extract problems, formulate working hypotheses, and repeat verification based on EBM. Based on clinical reasoning, we plan examinations necessary for diagnosis and differentiation, and try to select a treatment policy in consideration of the patient's condition. Practical learning of basic medical care as a member of the clinical team, such as making referral tickets for other departments and letters of referral, making presentations at case review meetings, and participating in explanations to patients and their families, and developing professionalism as a doctor Acquire the knowledge and learning process necessary to acquire (1-1 1-2, 2-1 2-7, 3-1 3-7, 4-1 4-8)  
2) Outpatient care Opportunities to participate in outpatient care are limited to times when there are no surgeries or tests, but observe medical interviews and physical examinations to understand the peculiarities of children. (2-1 ~ 2-7, 3-1 ~ 3-3, 3-5 ~ 3-6, 4-1 ~ 4-2, 4-6) 3) Participation in treatment such as various examinations and surgeries As a member of the medical team, experience clinical reasoning, testing, and surgery while participating in or observing treatments such as various tests and surgeries. understand about (3-1 ~ 3-3, 3-5 ~ 3-6, 4-1 ~ 4-7)

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3. Detailed learning goals/items Practical training is recommended mainly for the aim and outline of 1 above, but the contents of symptoms, pathologies, and various procedures that can be experienced in this clinical department are shown below.

1) Symptoms/pathology Clinical reasoning (3-5, 4-1 to 4-6) (1) Abdominal pain (2) Dyspnea (3) Fever (4) Nausea/vomiting (5) Anorexia (6) Dysphagia (7) Hematemesis/melena (8) Constipation/diarrhea (9) Abdominal bloating (10) Mass (11) Jaundice (12) Dehydration

2) Basic clinical procedures (3-1 to 3-3, 3-5, 4-1 to 4-7)

- (1) Able to change position and transfer
- (2) Able to disinfect skin
- (3) Observing venous blood collection
- (4) Observing securing peripheral vein blood vessels
- (5) Observing central venous catheter insertion
- (6) Stomach tube
- (7) Observing and assisting with the insertion and removal of a urinary catheter
- (8) Observing and assisting with the insertion and removal of a drain
- (9) Observing general anesthesia, local anesthesia, and blood transfusion
- (10) Create a medical record
- (11) Observe the creation of various medical certificates and certificates

3) Examination/treatment techniques (3-1 to 3-3, 4-1 to 4-7)

- (1) Observe and assist the abdominal ultrasound examination.
- (2) X-ray imaging, computed tomography (CT), nuclear magnetic resonance imaging (MRI), nuclear medicine examination, endoscopy, rectal anal manometry, and provide assistance.
- (3) Ability to perform aseptic procedures.
- (4) Able to wash hands for surgery and principle.
- (5) Be able to perform the gown technique in the operating room.
- (6) Can perform basic stitch removal.
- (7) Able to disinfect wounds and change gauze.
- (8) Observation of surgery, preoperative, intraoperative, and postoperative management.

4) Professionalism, medical behavioral science, medical ethics, medical safety, medical law (system), EBM (1-1 ~ 1-2, 2-1 ~ 2-7, 3-1 ~ 3-7, 4-1 ~ 4-7, 5-1 ~ 5-5)

- (1) Observe informed consent for various tests and treatments.
- (2) Understand the pathophysiology and epidemiology of diseases.
- (3) Explain impairments, disabilities, and handicaps.
- (4) Be able to comprehensively consider the patient's living environment and examine the treatment plan.
- (5) Explain infection prevention measures.
- (6) Outline the Law for the Welfare of Persons with Physical Disabilities.
- (7) Use ICT to search for necessary information such as various clinical guidelines.
- (8) Be able to critically examine information obtained from literature.

This course is taught by instructors with practical experience.

#### 4. Textbook/Reference Books

3 年次「成長と発達」講義資料

標準小児外科学（医学書院）

スタンダード小児外科手術（メジカルビュー）

スタンダード小児内視鏡外科手術（メジカルビュー）

Swenson 's Pediatric Surgery

Journal of Pediatric Surgery

## **5. Assessment**

Comprehensive evaluation will be made on attitude, oral examination (questions and answers that are held at any time during practical training), CC-EPOC input status, mini CEX, report, and attendance.

## **6. Out of Class Study/Message**

Students electing a pediatric surgery rotation in grade 5 are generally interested in pursuing medical disciplines in which children are treated, such as: neonatal surgery for congenital malformations, pediatric emergency and ambulatory surgery.

小兒外科学 臨床実習

| Schedule |   | Contents of Class   |
|----------|---|---|
| 1        | Mon [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Orientation (9:00 ~ )<br>Morning round (9:10 ~ )<br>Participation in surgery (9:30 ~ )<br>Clinical therapeutic conference ( 15:00 ~ 16:00 )<br>Afternoon round (16:00 ~ )                   |
| 2        | Tue [ 9:00-17:30 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )<br>Clinical therapeutic conference with Pediatric doctor ( 17 : 00 ~ 17:30 ) |
| 3        | Wed [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:15 ~ )<br>Afternoon round (16:00 ~ )   |
| 4        | Thu [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 5        | Fri [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 6        | Mon [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:30 ~ )<br>Clinical therapeutic conference ( 15:00 ~ 16:00 )<br>Afternoon round (16:00 ~ )  |
| 7        | Tue [ 9:00-17:30 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )<br>Clinical therapeutic conference with Pediatric doctor ( 17 : 00 ~ 17:30 ) |
| 8        | Wed [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:15 ~ )<br>Afternoon round (16:00 ~ )   |
| 9        | Thu [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 10       | Fri [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 11       | Mon [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:30 ~ )<br>Clinical therapeutic conference ( 15:00 ~ 16:00 )<br>Afternoon round (16:00 ~ )  |
| 12       | Tue [ 9:00-17:30 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )<br>Clinical therapeutic conference with Pediatric doctor ( 17 : 00 ~ 17:30 ) |
| 13       | Wed [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:15 ~ )<br>Afternoon round (16:00 ~ )   |
| 14       | Thu [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 15       | Fri [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |

小児外科学 臨床実習

| Schedule |   | Contents of Class   |
|----------|---|---|
| 16       | Mon [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:30 ~ )<br>Clinical therapeutic conference ( 15:00 ~ 16:00 )<br>Afternoon round (16:00 ~ )  |
| 17       | Tue [ 9:00-17:30 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )<br>Clinical therapeutic conference with Pediatric doctor ( 17 : 00 ~ 17:30 ) |
| 18       | Wed [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:15 ~ )<br>Afternoon round (16:00 ~ )   |
| 19       | Thu [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 20       | Fri [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 21       | Mon [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:30 ~ )<br>Clinical therapeutic conference ( 15:00 ~ 16:00 )<br>Afternoon round (16:00 ~ )  |
| 22       | Tue [ 9:00-17:30 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )<br>Clinical therapeutic conference with Pediatric doctor ( 17 : 00 ~ 17:30 ) |
| 23       | Wed [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Participation in surgery (9:15 ~ )<br>Afternoon round (16:00 ~ )   |
| 24       | Thu [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |
| 25       | Fri [ 9:00-17:00 ]<br>Subtitle Clinical clerkship of pediatric surgery<br>Instructor Supervising doctor | Morning round (9:00 ~ )<br>Observing Patient examination, Making medical records<br>Afternoon round (16:00 ~ )  |