

2026 Akita University Faculty of Medicine Syllabus

Category	: 臨床医学アドバンスコース
Course Title	: pediatric surgery
Eligible Students	: grade 4 Elective Course
Code	: 71604011
Schedule	: week 13 ~ week 13
Credits	: 0.5

1. Lead Instructor

Masaru Mizuno (Hospital Professor, 小児外科学講座, 3447, Office Hour: 水曜日 15 時 ~ 16 時)

2. Instructors

Masaru Mizuno (Hospital Professor, 小児外科学講座, 3447, Office Hour: 水曜日 15 時 ~ 16 時)

Mayako Morii (Lecturer, 小児外科学講座, 6141, Office Hour: 火曜日 15 時 ~ 16 時)

Ryo Watanabe (Assistant Professor, 小児外科学講座, 6142, Office Hour: 火曜日 15 時 ~ 16 時)

3. Course Description Outline(Course Objectives)

Aim of course

Basic medicine for pediatric respiratory surgery, gastrointestinal surgery, hepatobiliary tract disease, and malignant solid tumors through case conferences, in order to learn the pathology of pediatric surgical diseases that are necessary in clinical practice and to practice diagnosis. Understand the developmental process of diseases, as well as the diagnosis and treatment methods for these diseases, while relating them to human embryology and anatomy learned in the course. Students will also learn about related professionalism, ethics, medical behavioral science, medical safety, medical law (system), and EBM. (1-1 ~ 1-2, 2-3 ~ 2-7, 3-1 ~ 3-7, 4-1 ~ 4-4, 6-1 ~ 6-2)

Overview

1. Be fully aware of the responsibilities of a doctor
2. To be able to understand one's own role, build a friendly relationship with team members, and cooperate with each other to proceed with practical training.
3. To be able to listen carefully to what the other person has to say and grasp the problems in dialogues and oral examinations with group members.
4. To be able to explain the content to the person you are speaking to in an easy-to-understand manner in conversations with group members and oral examinations.
5. Explain the formation process of each organ of the digestive and respiratory system
6. List and explain major diseases caused by chromosomal abnormalities.
7. Explain organ failure.
8. Explain the cause of cancer and genetic changes.
9. Explain cancer diagnosis and treatment.
10. Explain the difference between pulmonary circulation and systemic circulation.
11. Explain the pathophysiology, signs and symptoms, and diagnosis of gastroesophageal reflux disease and reflux esophagitis.
12. Explain hypertrophic pyloric stenosis.
13. Explain the symptoms, diagnosis, and treatment of acute appendicitis.
14. Explain major congenital diseases of the large intestine.
15. Explain intussusception.
16. Explain congenital biliary dilatation and pancreaticobiliary maljunction.
17. Explain the concept, pathophysiology and common sites of hernia.
18. Explain the hospital, pathology, diagnosis and treatment of inguinal hernia.
19. Explain the volume, composition, and osmotic pressure of body fluids by distinguishing between children and adults.

20. Explain neuroblastoma and explain its differential diagnosis from pediatric abdominal solid tumor.
21. Explain multidisciplinary treatment of tumors.
22. Explain the physiological characteristics of fetal circulation/respiration and changes at birth.
23. List major congenital diseases.
24. Explain the physiological characteristics of newborns.
25. Explain the differentiation and treatment of neonatal jaundice.
26. List the etiology of respiratory disorders in newborns.
27. Explain the diseases specific to low birth weight infants.
28. Explain the physiological development of infants.
29. Explain the characteristics of pediatric diagnostic and therapeutic methods.
30. To be able to explain and practice professionalism, medical ethics, medical safety, medical law (system), and EBM related to this field.

4. Textbook/Reference Books

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）

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

Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
1	6 / 29 (Mon)	1-2	Discussion	Theme: the patient presentation in conference 1 We will discuss the diagnosis, surgical procedure, and pre- and post-operative care of the case. Focus on the neonatal thoracic disease (respiratory disease, esophageal atresia and, diaphragmatic hernia).	Masaru Mizuno	臨床研究棟 3階 外科 カンファレンスルーム
2	6 / 29 (Mon)	3-4	Discussion	Theme: the patient presentation in conference 2 We will discuss the diagnosis, surgical procedure, and pre- and post-operative care of the case. Focus on the neonatal gastrointestinal disease (hypertrophic pyloric stenosis, intestinal atresia).	Mayako Morii	臨床研究棟 3階 外科 カンファレンスルーム
3	6 / 29 (Mon)	5-6	Discussion	Theme: the patient presentation in conference 3 We will discuss the diagnosis, surgical procedure, and pre- and post-operative care of the case. Focus on the neonatal gastrointestinal disease (Hirschsprung's disease, anorectal malformation).	Masaru Mizuno	臨床研究棟 3階 外科 カンファレンスルーム
4	6 / 29 (Mon)	7-8	Discussion	Theme: the patient presentation in conference 4 We will discuss the diagnosis, surgical procedure, and pre- and post-operative care of the case. Focus on the neonatal gastrointestinal disease (gastroschisis, malrotation).	Ryo Watanabe	臨床研究棟 3階 外科 カンファレンスルーム
5	6 / 30 (Tue)	1-2	Discussion	Theme: the patient presentation in conference 5 We will discuss the diagnosis, surgical procedure, and pre- and post-operative care of the case. Focus on the pediatric common disease (inguinal hernia, Umbilical hernia, etc.).	Masaru Mizuno	臨床研究棟 3階 外科 カンファレンスルーム
6	6 / 30 (Tue)	3-4	Discussion	Theme: the patient presentation in conference 6 We will discuss the diagnosis, surgical procedure, and pre- and post-operative care of the case. Focus on the pediatric tumors (neuroblastoma, hepatoblastoma, Wilms' tumor and, teratoma).	Ryo Watanabe	臨床研究棟 3階 外科 カンファレンスルーム
7	6 / 30 (Tue)	5-6	Discussion	Theme: the patient presentation in conference 7 We will discuss the diagnosis, surgical procedure, and pre- and post-operative care of the case. Focus on the pediatric hepatobiliary disease (biliary atresia and congenital biliary dilatation).	Mayako Morii	臨床研究棟 3階 外科 カンファレンスルーム