

## 2024 Akita University Faculty of Medicine Syllabus

**Category** : 臨床医学 VII (CC2)  
**Course Title** : Surgical pathology  
**Eligible Students** : grade 6 Elective Course  
**Code** : 71644006-25

### 1. Lead Instructor

南 條 博 Hiroshi Nanjo (Hospital Professor, 病理部 Division of Clinical Pathology, 6182)

### 2. Instructors

南 條 博 Hiroshi Nanjo (Hospital Professor, 病理部 Division of Clinical Pathology, 6182)  
廣 嶋 優 子 Yuko Hiroshima (Assistant Professor, 病理部 Division of Clinical Pathology, 6200)  
畠 山 遥 Haruka Hatakeyama (Medical Doctor, 病理部 Division of Clinical Pathology, 6061)  
三 浦 将 仁 Masahito Miura (Medical Doctor, 病理部 Division of Clinical Pathology, 6061)

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

#### 1. 授業の概要及びねらい

直接患者の治療方針に関わる外科病理学の実践について取得し、医療における病理診断科の役割と意義を理解する。加えて、種々の臓器病変の病理組織学的診断について修練する。また、関連するプロフェッショナリズム、医の倫理、医療安全、EBM、医療法（医療制度）について説明できる。

#### 2. 講義内容・具体的到達目標・学修目標

外科病理の医療に果たす役割を理解する。(3-1～3-4, 4-1～4-7)

臨床医との連携の重要性を理解する。(3-1～3-4, 4-1～4-7)

代表的な病変の肉眼的所見を的確に表現できる。(3-1～3-3, 4-1～4-7)

典型的な組織病変を理解できる。(3-1～3-4, 4-1～4-7)

病理組織標本の作成過程を理解できる。(3-1～3-3)

病理組織検査、細胞診検査、フローサイトメトリーの意義を説明できる。(3-1～3-3)

病理診、細胞診の適切な検体の取扱い、標本作製および診断過程が説明できる。(3-1～3-3)

外科手術材料症例の標本から肉眼所見を採り、的確に標本切り出しを行える。(3-1～3-3, 4-1～4-7)

外科手術材料症例の組織標本から疾患の診断ができる。(3-1～3-3, 4-1～4-7)

TNM 分類の観点から腫瘍性疾患の概要を把握できる。(3-1～3-3, 4-1～4-7)

免疫組織化学染色法、in situ hybridization 法、がん遺伝子パネル検査などの分子病理学的アプローチについて理解する。(3-1～3-3)

術中迅速診断の利点、限界を説明できる。(3-1～3-4, 4-1～4-7)

デジタル画像を用いた病理診断（遠隔診断を含む）の利点、限界を説明できる。(3-1～3-4, 4-1～4-7)

病理診断に必要な臨床情報の適切な提供法を説明できる。(3-1～3-4, 4-1～4-7)

患者の入院診療録から病態、臨床病理学的な検討課題を説明できる。(3-1～3-4, 4-1～4-7)

生命科学の講義・実習で得た知識を基に、診療で経験した病態の解析ができる。(4-1～4-7, 5-1～5-5)

患者や疾患の分析を基に、教科書・論文等から最新の情報を検索・整理統合し、疾患の理解・診断・治療の深化につなげることができる。(4-1～4-7, 5-1～5-5)

本科目は実務経験のある教員による授業科目です。

#### 1.Outline and aim of the class

- Receive and understand actual information on surgical pathology directly involved in the patient's course of treatment, and understand the role and significance of surgical pathology in medical care.
- Practice macroscopical and histopathological diagnosis of various organ lesions.

- Learn about the methodology of pathological examinations.
- Explain related professionalism, medical ethics, medical safety, evidence-based medicine (EBM,) medical law (medical system), and handling of specimens related to genomic medicine.

## 2.Contents of the lecture/specific goals/learning goals

- Understand the role of surgical pathology in medicine.(3-1 ~ 3-4 , 4-1 ~ 4-7)
- Understand the importance of working with clinicians including intraoperative rapid consultation and clinicopathological conference.(3-1 ~ 3-4 , 4-1 ~ 4-7)
- Understand typical macroscopic findings of surgical specimens.(3-1 ~ 3-3 , 4-1 ~ 4-7)
- Understand typical histopathological lesions of surgical specimens.(3-1 ~ 3-4 , 4-1 ~ 4-7)
- Understand the process of preparing histopathological specimens.(3-1 ~ 3-3)
- Explain the significance of histopathological examination, cytological examination, and flow cytometry.(3-1 ~ 3-3)
- Explain proper handling of specimens for cytology and diagnosis.(3-1 ~ 3-3)
- Observe macroscopic findings from a specimen of a surgical material case, and cut out the specimens accurately.(3-1 ~ 3-3 , 4-1 ~ 4-7)
- Diagnose a disease from tissue specimens of a surgical material case.(3-1 ~ 3-3 , 4-1 ~ 4-7)
- Understand an overview of neoplastic disease in terms of TNM classification.(3-1 ~ 3-3 , 4-1 ~ 4-7)
- Understand molecular pathological approaches such as immunohistochemical staining, in situ hybridization, and cancer genome sequencing.(3-1 ~ 3-3)
- Explain the advantages and limitations of intraoperative rapid consultation.(3-1 ~ 3-4 , 4-1 ~ 4-7)
- Explain the advantages and limitations of pathological diagnosis (including remote diagnosis) using digital images.(3-1 ~ 3-4 , 4-1 ~ 4-7)
- Explain the appropriate method of providing clinical information necessary for diagnosis.(3-1 ~ 3-4 , 4-1 ~ 4-7)
- List clinical problems from patient medical records.(3-1 ~ 3-4 , 4-1 ~ 4-7)
- Analyze pathological conditions experienced in clinical practice, based knowledge gained from life science lectures and practical training.(4-1 ~ 4-7 , 5-1 ~ 5-5)
- Search, organize and integrate latest information from textbooks and papers based on analysis of patients and diseases, to develop understanding of diagnoses and treatment of diseases.(4-1 ~ 4-7 , 5-1 ~ 5-5)

This subject is a lesson subject by a teacher with practical experience.

## 4. Textbook/Reference Books

## 5. Assessment

出席率、実習態度学習意欲（積極性）レポート

Attendance rate, attitude in practical training, positivity, reports

## 6. Out of Class Study/Message

集合場所：病理診断科

集合時間：8：30（初日）

Division of clinical pathology, AM 8:30 at the meeting room (ext. 6182)

病理部 臨床実習

| Schedule |                                                                                             | Contents of Class                                                                                                                                              |
|----------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Mon [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 2        | Tue [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 畠山 遥<br>Haruka Hatakeyama | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 3        | Wed [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎、臨床病理カンファレンス<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology, clinicopathological conference |
| 4        | Thu [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 5        | Fri [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 三浦 将<br>仁 Masahito Miura  | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 6        | Mon [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 7        | Tue [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 畠山 遥<br>Haruka Hatakeyama | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 8        | Wed [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎、臨床病理カンファレンス<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology, clinicopathological conference |
| 9        | Thu [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎、臨床病理カンファレンス<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology, clinicopathological conference |
| 10       | Fri [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 三浦 将<br>仁 Masahito Miura  | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 11       | Mon [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 12       | Tue [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 畠山 遥<br>Haruka Hatakeyama | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |
| 13       | Wed [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎、臨床病理カンファレンス<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology, clinicopathological conference |
| 14       | Thu [ 9:00-17:00 ]<br>Subtitle<br>Instructor 南條 博 Hiroshi Nanjo , 廣嶋 優<br>子 Yuko Hiroshima  | 迅速診断、切り出し、組織診断と細胞診の基礎<br>Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                             |

病理部 臨床実習

| Schedule   |                                             | Contents of Class                                                                                                         |
|------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 15         | Fri [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 三浦 将仁 Masahito Miura   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |
| 16         | Mon [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 廣嶋 優子 Yuko Hiroshima   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |
| 17         | Tue [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 畠山 遥 Haruka Hatakeyama | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |
| 18         | Wed [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎、臨床病理カンファレンス                                                                                         |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 廣嶋 優子 Yuko Hiroshima   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology, clinicopathological conference |
| 19         | Thu [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎、臨床病理カンファレンス                                                                                         |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 廣嶋 優子 Yuko Hiroshima   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology, clinicopathological conference |
| 20         | Fri [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 三浦 将仁 Masahito Miura   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |
| 21         | Mon [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 廣嶋 優子 Yuko Hiroshima   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |
| 22         | Tue [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 畠山 遥 Haruka Hatakeyama | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |
| 23         | Wed [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎、臨床病理カンファレンス                                                                                         |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 廣嶋 優子 Yuko Hiroshima   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology, clinicopathological conference |
| 24         | Thu [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 廣嶋 優子 Yuko Hiroshima   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |
| 25         | Fri [ 9:00-17:00 ]                          | 迅速診断、切り出し、組織診断と細胞診の基礎                                                                                                     |
| Subtitle   |                                             |                                                                                                                           |
| Instructor | 南條 博 Hiroshi Nanjo , 三浦 将仁 Masahito Miura   | Intraoperative rapid consultation, cutting, basic learning of histopathology and cytology                                 |