

## 2025 Akita University Faculty of Medicine Syllabus

Category	: 臨床医学 III
Course Title	: Dermatology and Plastic Surgery - 皮膚の特性と病態 Characteristics and pathophysiology of the skin -
Eligible Students	: grade 4 Related Course
Code	: 71633021
Schedule	: week 7 ~ week 10
Credits	: 1

### 1. Lead Instructor

Michihiro	Kono	(Professor, 皮膚科学・形成外科学講座 Department of Dermatology and Plastic Surgery, 6153, Office Hour: 9:00-17:00)
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### 2. Instructors

Michihiro	Kono	(Professor, 皮膚科学・形成外科学講座 Department of Dermatology and Plastic Surgery, 6153, Office Hour: 9:00-17:00)
Nobuyuki Mitsukawa		(Part-time Lecturer, 千葉大学医学部 形成外科 教授 Department of Plastic, Reconstructive and Aesthetic Surgery, Professor, 043-222-7171)
Yoshimichi	Imai	(Part-time Lecturer, 東北大学医学部 形成外科 教授 Department of Plastic and Reconstructive Surgery, Professor, 022-717-7332)
Naohisa	Hashida	(Part-time Lecturer, 元町形成外科 院長 Motomachi Plastic Surgery Clinic, Director, 018-829-3003)
Ayako	Watanabe	(Part-time Lecturer, 秋田赤十字病院形成外科 部長 Japanese Red Cross Akita Hospital, Division of Plastic Surgery, Chief, 018-829-5000)

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

#### 【授業の概要】

この講義では皮膚科および形成外科の基礎を学ぶ。

#### < 皮膚科 >

・以下の皮膚疾患の病因，病理生態，症候，診断と治療を 16 回の講義で解説する。

- 1．湿疹，皮膚炎群
- 2．蕁麻疹，痒疹，皮膚そう痒症
- 3．膠原病と類縁疾患
- 4．紅斑症，薬疹，血管炎，紫斑病
- 5．末梢循環障害，物理化学的障害
- 6．水疱症，膿疱症
- 7．色素異常症
- 8．結合織疾患，肉芽腫症，皮膚萎縮症，代謝異常症，早老症
- 9．遺伝性角化症と炎症性角化症
- 10．感染症と付属器疾患
- 11．母斑と母斑症
- 12．良性および悪性腫瘍

#### < 形成外科 >

・以下の形成外科領域に関わる診断と治療を 4 回の講義で解説する。

- 1．形成外科
- 2．再建外科
- 3．レーザー医学

This course introduces the foundations of dermatology and plastic surgery.

### **Dermatology**

Students will acquire and understanding of etiology, pathophysiology, symptoms, diagnoses and treatments of skin diseases in this course. The course comprises 16 lectures and will cover the following:

1. Dermatitis and Eczema
2. Urticaria, Prurigo and Pruritus
3. Collagen diseases and related diseases
4. Erythema/Erythroderma, Drug eruption, Vasculitis and Purpura
5. Peripheral Circulatory Disorders and Physicochemical injury
6. Blistering and Pustular Diseases
7. Disorders of skin color
8. Connective tissue diseases, Granulomatosis, Atrophia cutis, Metabolic disorders and Progeria
9. Disorders of Abnormal Keratinization
10. Skin Infections and Disorders of the Skin Appendages
11. Nevus and Neurocutaneous Syndrome
12. Benign and Malignant Skin Tumors

### **Plastic Surgery**

Students will acquire an understanding of the diagnoses and treatments in the field of plastic surgery in this course. The course comprises 4 lectures and will cover the following:

1. Plastic Surgery
2. Reconstructive Surgery
3. Laser Medicine

### **【ねらい】**

- (1) 皮膚の構造と機能を理解する。
- (2) 主な皮膚疾患の病因，病態生理，症候，診断と治療を学ぶ。
- (3) 関連するプロフェッショナリズム，医の倫理，evidence-based medicine について学ぶ。

### **AIM**

- (1) Understand the structure and function of the skin.
- (2) Learn the etiology, pathophysiology, symptoms, diagnosis and treatment of major skin diseases.
- (3) Learn about related professionalism, medical ethics, and evidence-based medicine.

### **4. Textbook/Reference Books**

- ・ あたらしい皮膚科学（清水 宏，中山書店）Textbook of Modern Dermatology (Hiroshi Shimizu, Nakayama Shoten)
- ・ Shimizu's Textbook of Dermatology (Hiroshi Shimizu, Wiley-Blackwell) (English version of Atarashii Hifukagaku)
- ・ シンプル皮膚科学（眞鍋 求/梅林芳弘，南江堂）Concise Text of Dermatology (Motomu Manabe/Yoshihiro Umebayashi, Nankodo)

### **5. Assessment**

- ・ 出席状況、試験など

- Grading will be decided comprehensively based on attendance and examinations.

## 6. Out of Class Study/Message

- ・担当教員の予定により、講義日程と担当教官が若干変更する場合がある。
- ・予習復習を適宜行うことが望ましい。

- The content and schedule of lectures are subject to change as necessary.
- Students are expected to prepare and review as appropriate.

Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
1	5 / 19 (Mon)	1-2	Lecture	<p>Theme: 皮膚の構造と機能 Structure and Function of the Skin</p> <ul style="list-style-type: none"> <li>・皮膚の組織構造を図示して説明できる。</li> <li>・皮膚の細胞動態と角化の機構を説明できる。</li> <li>・皮膚の免疫防御能を説明できる。</li> </ul> <p>- Understand and illustrate the structure of the skin.</p> <p>- Understand and explain the cell dynamics of the skin and the mechanism of keratinization.</p> <p>- Understand and explain the immune defense capacity of the skin.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
2	5 / 19 (Mon)	3-4	Lecture	<p>Theme: 皮膚科の診断と検査、治療の基本 Basics of Diagnosis and Treatment of Skin Diseases</p> <ul style="list-style-type: none"> <li>・皮膚検査法（硝子圧法、皮膚描記法（Darier 徴候）、Nikolsky 現象、Tzanck 試験、光線テスト）を説明できる。</li> <li>・皮膚アレルギー検査法（プリックテスト、皮内テスト、パッチテスト）を説明できる。</li> <li>・微生物検査法（検体採取法、苛性カリ KOH 直接検鏡法）を説明できる。</li> <li>・外用療法（軟膏とクリームの違い）について説明できる。</li> </ul> <p>- Understand and illustrate skin examinations (diascopy, demography (Darier's sign), Nikolsky phenomenon, Tzanck test and photo test).</p> <p>- Understand and illustrate skin allergy test (prick test, intracutaneous reactivity test, patch test).</p> <p>- Understand and illustrate bacteriological test (method for specimen collection, fungal examination).</p> <p>- Understand and illustrate topical therapies (the difference between ointment and cream).</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
3	5 / 19 (Mon)	5-6	Lecture	<p>Theme: 湿疹・皮膚炎 Eczema and Dermatitis</p> <ul style="list-style-type: none"> <li>・湿疹の分類について列挙・説明できる。</li> <li>・湿疹三角に示される臨床的な皮疹の多様性を学び、その組織学的特徴を説明できる。</li> </ul> <p>- List and illustrate classification of eczema.</p> <p>- Understand and illustrate the various clinical features and pathological characteristics of skin manifestation and symptoms of eczema.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
4	5 / 19 (Mon)	7-8	Lecture	<p>Theme: 蕁麻疹・痒疹・皮膚そう痒症 Urticaria, Prurigo and Pruritus Cutis</p> <ul style="list-style-type: none"> <li>・蕁麻疹の臨床とその治療法を説明できる。</li> <li>・蕁麻疹の原因とその発症メカニズムを説明できる。</li> </ul> <p>- Understand and illustrate clinical condition and therapies of urticaria.</p> <p>- Understand and illustrate etiology and pathogenic mechanism of urticaria.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室

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5	5 / 19 (Mon)	9-10	Lecture	<p>Theme: 膠原病と類縁疾患 Collagen Diseases and Relative Diseases</p> <ul style="list-style-type: none"> <li>・膠原病と類縁疾患の疾患を列挙して概説できる。</li> <li>・それぞれの膠原病に特徴的な皮疹を説明できる。</li> </ul> <p>- List and illustrate entities in collagen diseases and relative diseases.</p> <p>- Understand and illustrate characteristic skin manifestations in collagen diseases.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
6	5 / 26 (Mon)	1-2	Lecture	<p>Theme: 形成外科 1 Plastic Surgery 1</p> <ul style="list-style-type: none"> <li>・レーザー治療の対象疾患、治療内容について説明できる。</li> <li>・血管腫のレーザー治療の開始時期、レーザー治療施設への紹介のタイミングを説明できる。</li> <li>・レーザー治療の原理、性質、限界を説明できる。</li> </ul> <p>- Understand and explain the target diseases and treatment contents of laser therapy.</p> <p>- Understand and explain timeframes of laser therapy for hemangiomas and timing in referrals to specialists.</p> <p>- Understand and explain the principles, properties, and limitations of laser therapy.</p>	Naohisa Hashida	附属病院第二病棟 2 階 多目的室
7	5 / 26 (Mon)	3-4	Lecture	<p>Theme: 形成外科 2 Plastic Surgery 2</p> <ul style="list-style-type: none"> <li>・局所皮弁の対象となる疾患とその治療内容について説明できる。</li> <li>・顔面の局所皮弁の種類を列挙し、その選択を説明できる。</li> <li>・局所皮弁の原理、限界を説明できる。</li> </ul> <p>- Understand and explain target diseases and the treatment details of local flaps.</p> <p>- List the types of local flaps on the face and explain their choices.</p> <p>- Understand and explain the principle and limits of local flaps.</p>	Ayako Watanabe	附属病院第二病棟 2 階 多目的室
8	5 / 26 (Mon)	5-6	Lecture	<p>Theme: 紅斑症・薬疹・血管炎・紫斑病 Erythema, Drug Eruption, Vasculitis and Purpura</p> <ul style="list-style-type: none"> <li>・多形滲出性紅斑、環状紅斑と紅皮症の病因と病態を説明できる。</li> <li>・血管炎の病因、症候と病態を説明できる。</li> <li>・薬疹の発生機序、症候と治療を説明できる。</li> </ul> <p>- Understand and illustrate etiology and pathogenic mechanism of erythema multiforme, erythema annulare and erythroderma.</p> <p>- Understand and illustrate etiology and pathogenic mechanism of vasculitis.</p> <p>- Understand and illustrate pathogenesis, symptoms and therapies of drug eruption.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室

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9	5 / 26 (Mon)	7-8	Lecture	<p>Theme: 末梢循環障害・物理化学的障害・付属器疾患 Peripheral Circulation Insufficiency, Physicochemical Injury and Disorders of Skin Appendages</p> <ul style="list-style-type: none"> <li>・末梢循環障害の病因、症候と病態を説明できる。</li> <li>・物理化学的障害の病因、症候と病態を説明できる。</li> <li>・毛の疾患の病態、症状と治療を説明できる。</li> <li>・爪の疾患の病態、症状と治療を説明できる。</li> </ul> <p>- Understand and illustrate pathogenesis, symptoms and therapies of peripheral circulation insufficiency.</p> <p>- Understand and illustrate pathogenesis, symptoms and therapies of physicochemical injury.</p> <p>- Understand and illustrate pathogenesis, symptoms and therapies of disorders of hairs.</p> <p>- Understand and illustrate pathogenesis, symptoms and therapies of disorders of nails.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
10	5 / 26 (Mon)	9-10	Lecture	<p>Theme: 水疱症・膿疱症 Blistering and Pustular Diseases</p> <ul style="list-style-type: none"> <li>・自己免疫性水疱症の病因、病態と分類を説明できる。</li> <li>・膿疱症の種類と病態を説明できる。</li> <li>・水疱症鑑別のための検査法を説明できる。</li> </ul> <p>- Understand and explain the etiology, pathophysiology and classification of autoimmune bullous disease.</p> <p>- Understand and explain the type and pathophysiology of pustulosis.</p> <p>- Understand and explain the tests for differentiating blistering diseases.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
11	6 / 2 (Mon)	1-2	Lecture	<p>Theme: 結合織疾患・肉芽腫症・皮膚萎縮症・代謝異常症・早老症 Connective Tissue Diseases, Granulomatous Disorders, Cutaneous Atrophy, Metabolic Disorders and Progeria Syndrome</p> <ul style="list-style-type: none"> <li>・結合織疾患の臨床と病態を説明できる。</li> <li>・肉芽腫症の臨床と病態を説明できる。</li> <li>・皮膚萎縮症の臨床と病態を説明できる。</li> <li>・代謝異常症の臨床と病態を説明できる。</li> <li>・早老症の臨床と病態を説明できる。</li> </ul> <p>- Understand and explain the clinical findings and pathophysiology of connective tissue diseases.</p> <p>- Understand and explain the clinical findings and pathophysiology of granulomatous disorders.</p> <p>- Understand and explain the clinical findings and pathophysiology of cutaneous atrophy.</p> <p>- Understand and explain the clinical findings and pathophysiology of metabolic disorders.</p> <p>- Understand and explain the clinical findings and pathophysiology of progeria syndrome.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室

Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
12	6 / 2 (Mon)	3-4	Lecture	<p>Theme: 色素異常症 Disorders of Skin Color</p> <ul style="list-style-type: none"> <li>・ 遺伝性色素異常症の病態と分類について説明できる。</li> <li>・ 後天性色素異常症の病態と分類について説明できる。</li> </ul> <p>- Understand and explain the pathophysiology and classification of hereditary pigmentary disorders.</p> <p>- Understand and explain the pathophysiology and classification of acquired pigmentary disorders.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
13	6 / 2 (Mon)	5-6	Lecture	<p>Theme: 遺伝性角化症・炎症性角化症 Hereditary keratoses and Inflammatory Keratoses</p> <ul style="list-style-type: none"> <li>・ 遺伝性角化症と炎症性角化症の分類について説明できる。</li> <li>・ 乾癬をはじめとした炎症性角化症の臨床・病理・治療法を説明できる。</li> <li>・ 遺伝性角化症の原因遺伝子と角化過程へのかかわりを説明できる。</li> </ul> <p>- Understand and explain the classification of hereditary keratoses and inflammatory keratoses.</p> <p>- Understand and explain the clinical findings, pathological and therapies of inflammatory keratoses including psoriasis.</p> <p>- Understand and explain the causative gene of hereditary keratoses and its involvement in the process of keratinization.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
14	6 / 2 (Mon)	7-8	Lecture	<p>Theme: 再建外科 1 Reconstructive Surgery 1</p> <ul style="list-style-type: none"> <li>・ 再建外科について説明できる。</li> <li>・ 口唇口蓋裂の治療について説明できる。</li> <li>・ 顔面外傷の治療について説明できる。</li> </ul> <p>- Understand and explain reconstructive surgery.</p> <p>- Understand and explain the treatment of cleft lip and palate.</p> <p>- Understand and explain the treatment of facial trauma.</p>	Yoshimichi Imai	附属病院第二病棟 2 階 多目的室
15	6 / 2 (Mon)	9-10	Lecture	<p>Theme: 再建外科 2 Reconstructive Surgery 2</p> <ul style="list-style-type: none"> <li>・ 唇裂口蓋裂と頭蓋骨異常の対象疾患、治療内容について説明できる。</li> <li>・ 唇裂口蓋裂と頭蓋骨異常の治療の開始時期、それによる骨への発育への影響を説明できる。</li> <li>・ 骨延長の原理と手技を説明できる。</li> </ul> <p>- Understand and explain the target diseases and treatments for cleft lip and palate and skull abnormalities.</p> <p>- Understand and explain when to start treatments for cleft lip and palate and skull abnormalities and how such treatments affects bone growth.</p> <p>- Understand and explain the principle and procedure of bone extension.</p>	Nobuyuki Mitsukawa	附属病院第二病棟 2 階 多目的室

Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
16	6/9 (Mon)	1-2	Lecture	<p>Theme: 細菌感染症・抗酸菌感染症・性感染症 Bacterial Infections, Mycobacterial Infections, Sex Transmitted Infections</p> <ul style="list-style-type: none"> <li>・皮膚細菌感染症（伝染性膿痂疹、せつ、癰、毛囊炎、丹毒、ブドウ球菌性熱傷様皮膚症候群）を列挙し、概説できる。</li> <li>・皮膚の結核病および非定型抗酸菌症の症候、病型と病因菌を説明できる。</li> <li>・梅毒の症候、病期と合併症を説明できる。</li> <li>・後天性免疫不全症候群 AIDS に伴う皮膚症状（梅毒、難治性ヘルペス、伝染性軟属腫、カポジ肉腫等）を列挙し、概説できる。</li> </ul> <ul style="list-style-type: none"> <li>- List and outline skin bacterial infections (impetigo contagiosa, furuncle, carbuncle, folliculitis, erysipelas, staphylococcal scalded skin syndrome (SSSS)).</li> <li>- Understand and explain the symptoms and pathogens of tuberculosis and atypical mycobacterium.</li> <li>- Understand and explain the symptoms, stage and complications of syphilis.</li> <li>- List and outline skin symptoms associated with acquired immunodeficiency syndrome (AIDS) (syphilis, refractory herpes, molluscum contagiosum, Kaposi 's sarcoma, etc.).</li> </ul>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
17	6/9 (Mon)	3-4	Lecture	<p>Theme: ウィルス感染症・真菌症・節足動物・寄生虫による疾患 Viral Infections, Fungal Diseases, Skin Diseases Caused by Arthropods and Parasitic Worms</p> <ul style="list-style-type: none"> <li>・皮膚ウイルス感染症（単純ヘルペス、帯状疱疹、伝染性軟属腫、麻疹、風疹、水痘）を列挙し、概説できる。</li> <li>・皮膚真菌症（表在性、深在性）の症候と病型を説明できる。</li> <li>・疥癬、しらみの臨床と治療法について説明できる。</li> </ul> <ul style="list-style-type: none"> <li>- List and outline skin viral infections (herpes simplex, herpes zoster, molluscum contagiosum, measles, rubella and varicella).</li> <li>- Understand dermatomycosis (superficial and deep) and explain symptoms.</li> <li>- Understand and explain the clinical findings and therapeutic methods for scabies and lice.</li> </ul>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
18	6/9 (Mon)	5-6	Lecture	<p>Theme: 母斑・母斑症 nevi and neurocutaneous syndromes</p> <ul style="list-style-type: none"> <li>・母斑・母斑症の種類を列挙できる。</li> <li>・母斑・母斑症の遺伝子異常、病態について説明できる。</li> </ul> <ul style="list-style-type: none"> <li>- List types of nevi and neurocutaneous syndromes, and understand and explain the genetic abnormalities and pathophysiology of nevi and neurocutaneous syndromes.</li> </ul>	Michihiro Kono	附属病院第二病棟 2 階 多目的室



Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
19	6 / 9 (Mon)	7-8	Lecture	<p>Theme: 良性腫瘍 Benign Skin Tumors</p> <p>・皮膚良性腫瘍の種類とそれぞれの前癌状態および悪性腫瘍との鑑別を説明できる。</p> <p>- Understand and explain types of benign skin tumors and their differentiation from premalignant conditions and malignant tumors.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室
20	6 / 9 (Mon)	9-10	Lecture	<p>Theme: 悪性腫瘍 Malignant Skin Tumors</p> <p>・基底細胞上皮腫 (癌) の定義と病態、症候、皮疹とダーモスコピー像の所見、病理所見や診断、治療法を説明できる。</p> <p>・有棘細胞癌の定義と病態、症候、皮疹とダーモスコピー像の所見、病理所見や診断、治療法を説明できる。</p> <p>・悪性黒色腫の定義と病態、症候、皮疹とダーモスコピー像の所見、病理所見や診断、治療法を説明できる。</p> <p>・皮膚悪性リンパ腫、血管肉腫を説明できる。</p> <p>- Understand and explain the definition, pathophysiology, symptoms, clinical, dermoscopic and pathological findings, diagnosis and treatment of basal cell carcinoma.</p> <p>- Understand and explain the definition, pathophysiology, symptoms, clinical, dermoscopic and pathological findings, diagnosis and treatment of squamous cell carcinoma.</p> <p>- Understand and explain the definition, pathophysiology, symptoms, clinical, dermoscopic and pathological findings, diagnosis and treatment of malignant melanoma.</p> <p>- Understand and explain cutaneous malignant lymphoma and angiosarcoma.</p>	Michihiro Kono	附属病院第二病棟 2 階 多目的室