

## 2026 Akita University Faculty of Medicine Syllabus

|                   |                          |
|-------------------|--------------------------|
| Category          | : 臨床医学 IV (CC1)          |
| Course Title      | : Neurology CC1          |
| Eligible Students | : grade 4 Related Course |
| Code              | : 71643002-02            |

### 1. Lead Instructor

Katunori Iijima (Professor, Department of Gastroenterology and Neurology, 6099)

### 2. Instructors

Katunori Iijima (Professor, Department of Gastroenterology and Neurology, 6099)

Akira Hanazono (Assistant Professor, University Hospital Neurology, 6104, Office Hour: 8 : 30-18 : 00)

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

#### 1. ねらい (大まかな全体目標)

チームの一員として病棟や外来患者さんへの診療を通して、将来、どのような分野の医師にも必要な内科領域、特に神経内科を中心とした症候や病態の臨床推論、鑑別診断、検査・治療方針決定等の実戦力を習得する。また、関連する医療行動科学、医療倫理、医療安全、医療法 (医療制度)、EBM について実践的に学ぶ。

#### 2. 概要 (大まかな学修目標 (項目))

- ・神経内科疾患の診療に関する基本的な知識と技能を修得するために、指導医を中心とした医療チームの一員として能動的に実習に取り組む。(4-1~4-7)
- ・臨床実習の中で自ら情報を収集し、患者さんのニーズ・問題点の抽出、整理、解釈を行い (臨床的推論)、解決法 (診断、治療) を立案するための基本的訓練を行う (problem based learning;PBL)。(3-3, 4-4, 5-1~5-5, 6-1~6-2)
- ・神経内科疾患の診察、検査、治療の実際を体験し、ポートフォリオを作成する。ロールプレイ学習と組み合わせることによって疾患を深く理解し、受け持ち患者さんの特異性を抽出しやすくする。
- ・ロールプレイ学習で患者役と医師役を演じることによって、テキスト上の知識を実体化し、神経疾患と神経疾患患者についての理解を深める。
- ・診療チームの日常診療に参加し、神経内科の診察、検査、治療の実際を体験し、ポートフォリオを作成する。
- ・ロールプレイ学習で得た技能を実際の患者診療に適用できる。

#### 1) 病棟診療

各学生は1週間配属され、指導医のもと病棟の担当患者さんを毎日回診して、診療内容をカルテに記載する。指導医の監督のもとに、医療面接、身体診察を行って、問題を抽出し、作業仮説を立ててEBMに基づいた検証を繰り返す(必要に応じて文献を検索する)。臨床推論に基づいて、診断、鑑別に必要な検査を立案し、担当患者さんの重症度、合併症を勘案して治療方針の選択を試みる。他科頼診券、ウイークリーサマリー、紹介状などのカルテへの記載(指導医の確認必須)、総回診時のプレゼンテーション、患者・家族への説明への参加など、チームの一員として基本的な診療を実践的に学び、医師としてのプロフェッショナリズムを身に付けるために必要な知識、学習プロセスを身に付ける。(1-1~1-2, 2-1~2-7, 3-1~3-7, 4-1~4-8, 6-1)

#### 2) 外来診療、各種検査、治療への参加

実習期間が5日と短いため、CC1では半日だけ外来診療への参加機会をつくる。(CC2では外来新患の、医療面接、身体診察を指導医のもとで行い、臨床推論に則った検査、治療立案を行う。)

ロールプレイOSCEを行い、実習最終日に実習の成果を確認する。指導者からのフィードバックの他、動画記録して自己評価、振り返りを行う。

新型コロナウイルス感染症予防のために対面実習が困難な場合は、課題学習とする。質量分析、iPS細胞、オートファジーが病態解明や、治療にどのように応用可能かを検討し、研究立案を試みる。(3-3~3-5, 4-3~4-4, 5-1~5-5, 6-1)

### 3) 各種検査・手術等の治療への参加

診療チームの一員として各種検査、治療に参加しながら、臨床推論・検査・治療の実際を経験し、検査成績の評価を自ら試み、記録する。(3-1～3-3, 4-2～4-5)

### 3. (詳細な)学修目標・項目

上記1の概要・ねらいを中心に実習を進めるが、本診療科で特に経験保証する症候、病態、各種手技等の内容を下記に示す。

#### 1) 症候・病態 臨床推論 (3-5, 4-1～4-6)

(1) けいれん (2) 意識障害・失神 (3) めまい (4) 頭痛 (5) 運動麻痺・筋力低下 (6) 嚥下困難・障害 (7) もの忘れ (8) 歩行障害 (9) 複視 (10) しびれ (11) 失語 (12) 構音障害 (13) 運動失調

#### 2) 基本的臨床手技 (3-1～3-3, 3-5, 4-1～4-7)

(1) 体位交換、移送ができる (2) 皮膚消毒ができる (3) 静脈採血を実施できる (4) 末梢静脈の血管確保を実施できる (5) 腰椎穿刺を見学し、介助する (6) 注射 (皮内、皮下、筋肉、静脈内) を実施できる (7) 診療録 (カルテ) を作成する (8) 各種診断書・検案書・証明書の作成を見学し、介助する。

#### 3) 検査・治療手技 (3-1～3-3, 4-1～4-3)

(1) 視力、視野、聴力、平衡機能検査を実施できる。

(2) 経皮的酸素飽和度を測定できる。

(3) エックス線撮影、コンピュータ断層撮影 (CT)、磁気共鳴画像法 (MRI)、核医学検査、内視鏡検査を見学し、介助する。

#### 4) シミュレーション教育 (ロールプレイ・OSCE など)

(1) 自分が作成したシナリオに従って患者を演じ、ペアになった学生が医師役として、医療面接、身体・神経診察を行って、疑わしい疾患、診断に必要な検査、治療選択について患者さんにわかりやすい言葉で説明する。実習のアウトカム評価が可能になる。(1-1～1-2, 2-1～2-4, 3-1～3-4, 4-1～4-3)

(2) 他の実習メンバーは演技に矛盾がないか、医師役の診察手技が正確か、評価しながら参加する。

(3) 動画による振り返りによって自己省察能力を高める。(6-1)

(4) 3年次のロールプレイ OSCEに加えて、CC1でロールプレイ OSCEを行い、臨床実習終了時 OSCEに備える。(6-1～6-2)

#### 5) プロフェッショナリズム、医学行動科学、医療倫理、医療安全、医療法 (制度) EBM について

(1) 各種検査・治療のインフォームドコンセント (見学、ロールプレイ OSCE)。(2-1～2-4, 2-7, 3-5)

(2) 困難な患者 急変患者・家族への説明 (見学)。(2-7)

(3) 患者さんの生活環境 (家庭、職場) に配慮した、診療計画を検討できる。(1-2, 3-7)

(4) インペアメント、ディスアビリティ、ハンディキャップを説明できる (4-3)

(5) 生活習慣に潜むリスクを列挙して、患者指導の在り方を考えられる。(1-2, 3-2～3-4)

(6) 遺伝カウンセリングに必要な情報提供ができる。(3-4～3-6)

(7) 治癒を見込むことが困難な進行性の疾患を持つ患者さんの意思決定支援、事前指示のタイミング、苦痛の緩和について理解する。(1-1～1-2, 2-1～2-3, 2-7, 3-5)

(8) 各種侵襲的な検査・治療時の安全性への配慮ができる。(3-5)

(9) 難病法、介護保険制度、障害者自立支援法、障害者差別解消法、身体障害者福祉法、認知症基本法を概説できる。(3-7, 4-7～4-8)

(10) 各種診療ガイドラインを適宜参照し、活用できる。(3-3～3-4, 4-3～4-4, 6-1)

(11) 文献から得られた情報の批判的吟味ができる。(3-3, 4-4, 5-2)

本科目は実務経験のある教員による授業科目です。

#### Aim (general overall goal)

Through treatment of patients in wards and outpatients as a member of a team, acquire practical skills in clinical reasoning, differential diagnosis, and decision-making on examination and treatment of symptoms and pathological conditions in the field of internal medicine, especially neurology, which are necessary for future physicians in any field. Students will also learn about related medical behavioral sciences, medical ethics, medical safety, medical law (medical care system), and EBM in a practical manner.

## 2. outline (general learning objectives (items))

To acquire basic knowledge and skills in the treatment of neurological diseases, the trainees will actively engage in practical training as a member of the medical team led by the supervising physician. (4-1 to 4-7)

The trainees are trained to collect information, identify, organize, and interpret patients' needs and problems (clinical reasoning), and formulate solutions (diagnosis and treatment) (problem based learning; PBL). (3-3, 4-4, 5-1 to 5-5, 6-1 to 6-2)

The students will experience the actual examination, examination, and treatment of neurological diseases and create a portfolio of their experiences. (3-3-4-4, 1-1-5, 1-1-2) Students will experience the actual examination, examination, and treatment of neurological diseases, and create a portfolio of their work.

Role-playing will help students to deepen their understanding of neurological diseases and patients with neurological diseases by allowing them to take on the roles of both patient and physician.

Participate in the daily practice of the team to experience the actual examination, testing, and treatment of neurologic conditions and to create a portfolio of work.

The trainees will be able to apply the skills acquired through role-playing to actual patient care.

### 1) Ward care

Each student will be assigned to a ward for one week, where they will make daily rounds to the patients in the ward under the supervision of their supervising physician, and record the details of their treatment in the medical record. Under the supervision of the supervising physician, medical interviews and physical examinations are conducted to identify problems, formulate working hypotheses, and repeat verification based on EBM (search the literature as necessary). Based on clinical reasoning, formulate the necessary tests for diagnosis and differentiation, and attempt to select a treatment plan, taking into account the severity and complications of the patient in charge. Practically learn basic medical practices as a member of a team, such as writing in medical records such as other departments' references, weekly summaries, and referral letters (must be confirmed by the supervising physician), making presentations during general rounds, and participating in explanations to patients and their families, in order to develop professionalism as a physician, and learn the knowledge and learning Acquire the knowledge and learning process necessary to acquire professionalism as a physician. (1-1-1-2, 2-1-2-7, 3-1-3-7, 4-1-4-8, 6-1)

### 2) Participation in outpatient care, various examinations, and treatment

Since the training period is short (5 days), CC1 will have an opportunity to participate in outpatient care for half a day. (In CC2, new outpatients will undergo a medical interview and physical examination under the supervision of a supervising physician, and undergo examination and treatment planning in accordance with clinical reasoning.)

Role-play OSCEs will be conducted and the results of the practical training will be checked on the last day of the practical training. In addition to feedback from the instructor, video recordings will be made for self-assessment and reflection.

If face-to-face practical training is difficult due to the prevention of novel coronavirus infection, it will be conducted as an assigned study. Students will examine how mass spectrometry, iPS cells, and autophagy can be applied to elucidate pathological conditions and to treatment, and attempt to formulate a research plan. (3-3-3-5, 4-3-4-4, 5-1-5-5, 6-1)

### 3) Participation in various examinations, surgeries and other treatments

While participating in various examinations and treatments as a member of the treatment team, the trainees will experience the actual clinical reasoning, examinations, and treatments, and attempt to evaluate the results of examinations by themselves and record the results. (3-1-3-3, 4-2-4-5) 3.

## 3. (Detailed) learning objectives and items

While the practical training will proceed with a focus on the outline and aims of 1 above, the following are the contents of the symptoms, pathological conditions, and various procedures, etc. that are particularly guaranteed to be experienced in this department.

1) Symptoms and pathological conditions Clinical reasoning (3-5, 4-1 to 4-6)

(1) Convulsions (2) Consciousness disorder and syncope (3) Dizziness (4) Headache (5) Motor paralysis and muscle weakness (6)

Difficulty/impairment of swallowing (7) Forgetfulness (8) Gait disturbance (9) Double vision (10) Numbness (11) Aphasia (12) Dysarthria (13) Ataxia

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

(3) Perform venous blood sampling (4) Secure peripheral veins (5) Observe and assist lumbar puncture (6) Perform injections (intradermal, subcutaneous, intramuscular, intravenous) (7) Prepare medical records (charts) (8) Observe and assist in preparing various medical certificates, medical reports and medical examinations (8) Observe and assist in the preparation of various diagnostic, medical examinations, and certificates.

3) Examination and treatment procedures (3-1 to 3-3, 4-1 to 4-3)

(1) Conduct visual acuity, visual field, hearing, and balance function tests.

(2) To measure transcutaneous oxygen saturation.

(3) Observe and assist in radiography, computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine, and endoscopy.

4) Simulation education (role play, OSCE, etc.)

(1) Students play the role of a patient according to a scenario they have created, and paired students play the role of doctors, conducting medical interviews, physical and neurological examinations, and explaining to patients in simple language about suspected diseases, tests necessary for diagnosis, and treatment options. Outcome evaluation of the practice will be possible. (1-1-1-2, 2-1-2-4, 3-1-3-4, 4-1-4-3)

(2) Other members of the practice participate while evaluating whether there are any inconsistencies in the performance and whether the examination procedures of the physician role are accurate.

(3) Self-reflective skills are enhanced through video review. (6-1)

(4) In addition to the role-play OSCE in the third year, a role-play OSCE is conducted in CC1 to prepare for the OSCE at the end of clinical practice. (6-1-6-2)

5) Professionalism, medical behavioral science, medical ethics, medical safety, medical law (system), and EBM

(1) Informed consent for various examinations and treatments (observation, role-play OSCE). (2-1-2-4, 2-7, 3-5)

(2) Difficult patient Explanation to the patient/family in an emergency (observation). (2-7)

(3) Able to consider the patient's living environment (home, workplace) and plan for medical treatment. (1-2, 3-7)

(4) Be able to explain impairments, disabilities, and handicaps (4-3)

(5) Be able to enumerate the risks involved in lifestyle and consider how patient guidance should be provided. (1-2, 3-2-3-4)

(6) Be able to provide information necessary for genetic counseling. (3-4-3-6)

(7) Understand decision support, timing of advance directives, and alleviation of suffering for patients with progressive diseases for which cure is difficult to be expected. (1-1-1-2, 2-1-2-3, 2-7, 3-5)

(8) Be able to consider safety considerations during various invasive examinations and treatments. (3-5)

(9) Be able to outline the Intractable Diseases Act, Long-Term Care Insurance System, Services and Supports for Persons with Disabilities Act, Act on Elimination of Discrimination against Persons with Disabilities, Act on Welfare of Persons with Physical Disabilities, and Basic Act on Dementia. (3-7, 4-7-4-8)

(10) Be able to refer to and utilize various medical guidelines as appropriate. (3-3-3-4, 4-3-4-4, 6-1)

(11) Critically examine information obtained from the literature. (3-3, 4-4, 5-2)

This course is taught by faculty members with practical experience.

#### 4. Textbook/Reference Books

3 年次神経内科講義資料、診察実習時の資料（神経疾患診察法）、OSCE クリニカルクラークシップガイドを常に参照できるようにすること。

必要に応じて、診断・治療ガイドラインを参照、活用すること。

後藤、天野著：臨床のための神経機能解剖学 中外医学社

水野美邦編集：神経内科ハンドブック 医学書院

鈴木則宏、荒木信夫編集：講義録神経内科 MEDICAL VIEW

Louis, Mayer, Rowland: Merritt's Neurology 13th Ed. Wolters Kluwer

Kandel, Schwartz, Jessell, Siegelbaum, Hudspeth: Principles of neural science 5th Ed. MEDSi

## 5. Assessment

態度、口頭試問、ミニ CEX（水曜日のミニプレゼンテーション）、ロールプレイ OSCE、レポート、出席、その他（カルテ記録、ポートフォリオ）で総合評価する。

Attitude, Oral examination, mini-CEX（mini-Clinical Evaluation Exercise）, Role-play OSCE (Objective Structured Clinical Examination), Report, participation, Others (Medical record, portfolio)

## 6. Out of Class Study/Message

オリエンテーションを省略する。WebClass でスケジュール確認、予習をして実習に臨んでください。

クリクラ概要書をよく読んで、WebClass で予習すること。神経診察手技を動画教材で復習しておくこと。また、OSCE クリニカルクラークシップガイドの 実習直前に必ず復習してくる事項【必修（コア）事項】を学習して実習に臨むこと。実習開始前に医師国家試験出題基準に目を通すこと。できれば実習早々に国家試験過去問を解いて、不得手な領域を明らかにして、実習でそれを克服する工夫をすべきです。

毎日診療録を記載し、病棟医と discussion をして、出席簿にサインをもらうこと。診療録のフィードバックを確認して追記・訂正を行って承認を得ること。

経験記録、手帳の記載をポートフォリオとして、充実させること。

金曜のロールプレイ発表後に、1. クリクラ自己評価、2. ロールプレイシナリオ・神経所見・鑑別シート・チェックリスト、3. ポートフォリオ（経験記録）を医局秘書に提出する。ポートフォリオを返却するので、翌週木曜以降に医局秘書まで取りに来てください（代表者でもかまいません）。

講演会、研究会があるときは、告知するので、積極的に参加してください。

キーワード：診療参加型実習、Problem Based Learning; PBL、Problem-Oriented MedicalRecord; 自己評価

Orientation will be omitted; please check the schedule and prepare for the practical in WebClass.

Read the clinic outline carefully and prepare in WebClass. Review the neurological examination techniques with the video materials. Also, study the items *compulsory(core)items* in the OSCE Clinical Clerkship Guide that you must review immediately before the practical training. Before the start of the practical training, the students should read through the National Examination Criteria for Medical Practitioners. If possible, students should solve past national examination questions early in their training to identify areas in which they are not proficient and devise ways to overcome them during training.

Take a medical record every day, have a discussion with the ward doctors, and get their signatures on the attendance sheet. Check the feedback on the medical record and make additions and corrections for approval.

The experience record and notebook entries should be used as a portfolio and should be enhanced.

After the role-play presentation on Friday, submit 1. the clerical self-evaluation, 2. the role-play scenario, neurological findings, differential sheet, and checklist, and 3. the portfolio (record of experience) to the medical secretary. The portfolio will be returned to you, so please come to the medical office secretary to pick it up the following Thursday or later (or your representative can do so).

When there are lectures and study groups, we will notify you, so please participate actively.

Keywords: medical participatory practice, role play, portfolio, Problem Based Learning; PBL, Problem-Oriented MedicalRecord; POMR, self-assessment

神経内科学（内科学1）臨床実習

| Schedule  | Contents of Class  |
|---|--|
| <p>1 Mon [ 8:30-17:00 ]<br/>                     Subtitle Neurology clinical clerkship<br/>                     Instructor Hanazono</p> | <p>08 : 30-09 : 10 * オリエンテーション、神経内科外来 5 番<br/>                     09 : 20-10 : 00 受け持ち患者ふりわけ、1-8 病棟<br/>                     10 : 00-17 : 00 担当患者回診、病棟実習</p> <p>08: 30-09: 10 * Orientation, Neurology Outpatient<br/>                     09: 20-10: 00 Distributing patients in charge, 1-8 wards<br/>                     10: 00-17: 00 Rounds of patients in charge, ward training</p>  |
| <p>2 Tue [ 8:30-17:00 ]<br/>                     Subtitle Neurology clinical clerkship<br/>                     Instructor Hanazono</p> | <p>08 : 30-13 : 00 担当患者回診、病棟実習<br/>                     13 : 00-15 : 00 ミニレクチャー、1-8 病棟カンファ室<br/>                     15 : 00-18 : 00 ミニプレゼンテーションの準備</p> <p>08: 30-13: 00 Patient rounds in charge, ward training<br/>                     13: 00-15: 00 Mini Lecture, 1-8 Ward Conference Room<br/>                     15: 00-18: 00 Preparing for a mini presentation</p>  |
| <p>3 Wed [ 8:30-17:00 ]<br/>                     Subtitle Neurology clinical clerkship<br/>                     Instructor Hanazono</p> | <p>08 : 30-09 : 00 担当患者回診<br/>                     09 : 00-10 : 30 神経回診（ミニプレゼンテーション mini-CEX）、1-8 病棟<br/>                     10 : 30-11 : 30 症例カンファレンス、1-8 病棟<br/>                     13 : 00-18 : 00 担当患者回診、病棟実習、ロールプレシナリオ作成</p> <p>08: 30-09: 00 Patient rounds in charge<br/>                     09: 00-10: 30 Nerve rounds (mini-CEX), 1-8 wards<br/>                     10: 30-11: 30 Case Conference, 1-8 Ward<br/>                     13: 00-18: 00 Patient rounds, ward training, role-play scenario creation</p> |
| <p>4 Thu [ 8:30-17:00 ]<br/>                     Subtitle Neurology clinical clerkship<br/>                     Instructor Hanazono</p> | <p>08 : 30-12 : 00 担当患者回診、病棟実習<br/>                     09 : 00-12 : 00 ミニレクチャー、1-8 病棟カンファ室<br/>                     13 : 00-18 : 00 病棟実習、ロールプレイブラッシュアップ</p> <p>08: 30-12: 00 Patient rounds in charge, ward training<br/>                     09: 00-12: 00 Mini Lecture, 1-8 Ward Conference Room<br/>                     13: 00-18: 00 Ward training, role-play brush-up</p>   |
| <p>5 Fri [ 8:30-17:00 ]<br/>                     Subtitle Neurology clinical clerkship<br/>                     Instructor Hanazono</p> | <p>08 : 30-13 : 00 ロールプレイ発表、1-8 病棟 研修室<br/>                     14 : 20-17 : 10 医学医療総合講義（多目的室）<br/>                     14 : 00-18 : 00 担当患者回診、病棟実習</p> <p>08: 30-13: 00 Role-play study, 1-8 ward training room<br/>                     14: 20-17: 10 General Medical Lecture (Multipurpose Room)<br/>                     14: 00-18: 00 Patient rounds in charge, ward training</p>   |