

## 2022 Akita University Faculty of Medicine Syllabus

<b>Category</b>	: 臨床医学 VII (CC2)
<b>Course Title</b>	: Clinical Oncology -principles & practice-, face to face - がん薬物療法の実際 -
<b>Eligible Students</b>	: grade 6 Elective Course
<b>Code</b>	: 71644006-27

### 1. Lead Instructor

Hiroyuki Shibata (Professor, Clinical Oncology, 6262, Office Hour: 17 : 00)

### 2. Instructors

Hiroyuki Shibata (Professor, Clinical Oncology, 6262, Office Hour: 17 : 00)

Koji Fukuda (Assistant Professor, Clinical Oncology, 6263, Office Hour: 17 : 00)

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

#### 1. Aims and Outlines

Understand caregiving behavior, ethical issues, preservation of patient safety, clinical evidence, and medical & social systems necessary to practice administering chemotherapy and other techniques to cancer patients.

Students will understand carcinogenesis, cancer phenotypes, methods to treat cancer depending on histology and stages, and develop knowledges and skills needed to treat advanced cancer patients.

1-1. Reach a diagnosis from patient information.

1-2. Understand clinical features of disease and etiology.

1-3. Participate in treatment-planning meetings.

1-4. Understand viewing points to solve tumor-agnostic problems.

1-5. Acquire basic medical examination skills

1-6. Understand comprehensive treatment options with medical personnel

#### 2. Competencies to be learned

Plan and practice treatment(standard therapy and others)

2-1.Understand purpose, indication, contraindication, complication of basic clinical skills, and practice them under supervision.

Learn methods of treating adverse events and how to palliate symptoms.

2-1-1. Provide chemotherapy to outpatients (registration of protocols, how to control of adverse events)

2-1-2. Learn team approaches of cancer chemotherapy together with pharmacists and nurses.

#### 2-2. Clinical reasoning

Obtain medical history and conduct a physical examination, and conduct differential diagnosis based on each symptom or clinical phenotype considering the incidence and severity.

2-3. Learn practical approaches of palliative care.

2-4. Conduct medical processes in a team.

2-5. Communicate effectively with advanced cancer patients, with specific regard to the followings:

2-5-1. Obtaining informed consent from patients.

2-5-2. Communicating with advanced cancer patients.

2-5-3. Delivering bad news using the SPIKES method.

2-6. Always consider attitude and competency required for medical professionals.

2-7. Develop and nurture a desire to research and learn.

A research mind is very important to develop medical science and clinical medicine.

2-7-1. Know the potential benefits of research to patients.

2-7-2. Consider the phenotypes of patients depending on the basic sciences.

2-7-3. Analyze the phenotypes of patients according to reserch and literature.

2-7-4. Hypothesize with data obtained from search.

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

**4. Textbook/Reference Books**

Cancer: Principles & Practice of Oncology, 9th edition (Wolters Kluwer/ Lippincott Williams & Wilkins)

**5. Assessment**

Students are evaluated through attendance and a mini-test.

Students provide care to patients, including reporting on the condition of the patients each day.

Consult a new outpatient, and report the findings in the following morning session.

CC2 students will evaluate CC1 students.

Students are required to summarize their experience on the course through a report written in the style of the Japanese Society of Internal Medicine. Outstanding examples may be published in English.

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

Gather in front of the nurse station of the 6th floor of the 2nd building in the hospital at 8:00 a.m. on the first day.

From week 2, training will be delivered in the same way. Outstanding reports may be presented at the annual meeting of congress of the Japanese Society of Internal Medicine, Japanese Cancer Research, and the Japanese Society of Clinical Oncology.

Schedule	Contents of Class
<p>1 Mon [ 8:00-17:00 ]                      Subtitle Understanding cancer treatment                      Instructor H Shibata, K Fukuda</p>	<p>1) Practice (communication with patients, examination and treatment of them)                      1. Explain treatment with cancer drugs, and the adverse effects.                      2. Explain action mechanisms of molecular targeted agents, and the adverse events.</p> <p>2) initial examination of cancer patients                      (notification, interview, collection of medical history, informed consent)                      Address the following issues:                      1. Identify each clinical problem, and ascertain the possible approaches to treatment.                      2. Practice three methods (interview, physical examination, laboratory data) of obtaining medical information                      3. Make a clinical hypotheses using knowledges of the basic sciences.                      4. Consider clinical hypotheses collecting the information based on hypothesis.                      5. Conduct diagnostic procedures and treatment simultaneously.                      6. Decide on treatment together with the patient.                      7. Understand the importance of communication with other caregivers.</p> <p>3) Clinical practice for outpatients                      (Chemotherapy for outpatients and oncologic emergency)                      1. Blood cell count, coagulation test, urinalysis, feces test, laboratory examination.                      2. Chromosomal analysis and cancer genome analysis.                      3. Histopathological examination, cytology, flow-cytometer.                      Understand the purpose and results of these tests, and know how to interpret the results for patients.</p> <p>It is also necessary to know the specific treatments for cancer patients with the additional symptoms described below:                      1. Fever, 2. General fatigue, 3. Anorexia, 4. Dehydration, 5. Skin rash, 6. Cough, sputum, 7. Bloody sputum, hemoptysis, 8. Dyspnea, 9. Pleural effusion, 10. Abdominal pain, 11. Nausea, vomiting, 12. Hematemesis, diarrhea, 13. Constipation, diarrhea, 14. Jaundice, 15. Abdominal fullness, ascites, abdominal tumor, 16. Anemia, 17. Lymph-nodes swelling, 18. Oliguria, anuria, 19. Hematuria, proteinuria, 20. Headache, 21. Paralysis, muscle weakness, 22. Back pain,</p> <p>4) Medical knowledges and skills required to treat advanced cancer patients are described below: methods and applications, risks and benefits, and complications should be understood.                      1. Hyperalimentation: intravenous route, gastrostomy, enema nutrition.                      2. Blood products and fractionated plasma products.                      3. Rehabilitation.                      4. Palliative care                      5. Total pain.                      6. Physical pain and psychosocial pain</p> <p>1) Practice                      (communication with patients, examination and treatment)                      2) Initial examination of cancer patients                      (notification, interview, collection of the medical history, informed consent)                      3) Clinical practice to outpatients                      (Chemotherapy for outpatients and oncologic emergency)                      Address the following issues;                      1. Appropriate attitude                      2. Communication skills                      3. Obtaining the history of illness systemically                      (primary compliant, medication or drug usage, history of allergy, past illness, family history, behavior, preference, social and occupational history, lifestyle, travel history, etc.)                      4. Examine a patient with correct positioning.                      5. Collect the information and describe it in POMR (Problem Oriented Medical Record)style, and report these findings to the instructor.                      6. Describe the clinical course SOAP (subjective, objective, assessment, plan) style.                      7. Keep in mind to summarize a clinical course of case in a report and present it in a meeting.                      8. Security-ensure patient privacy is maintained.</p>

臨床腫瘍学 臨床実習

Schedule	Contents of Class
<p>2 Tue [ 8:00-17:00 ]                      Subtitle To experience cancer treatment                      Instructor H Shibata, K Fukuda</p>	<p>1) Practice (communication with patients, examination and treatment)                      2) Initial examination of cancer patients (notification, interview, collection of medical history, informed consent)                      3) Clinical practice to outpatients (Chemotherapy and oncologic emergency)                      1. Appropriate attitude                      2. Communication skills                      3. Obtaining the history of illness systemically (primary complaint, medication or drug usage, history of allergy, past illness, family history, behavior, preferences, social and occupational history, lifestyle, travel history, etc.)                      4. Examine a patient with correct positioning                      5. Collect the information and describe it in POMR (Problem Oriented Medical Record) style, and report these findings to the instructor.                      6. Describe the clinical course SOAP (subjective, objective, assessment, plan) style.                      7. Keep in mind to summarize a clinical course of case in a report and present it in a meeting.                      8. Security ensure patient privacy is maintained.</p>
<p>3 Wed [ 8:00-17:00 ]                      Subtitle To experience cancer treatment                      Instructor H Shibata, K Fukuda</p>	<p>1) Practice (communication with patients, examination and treatment)                      2) First examination of cancer patients (notification, interview, collection of the medical history, informed consent)                      3) Clinical practice to outpatients (Chemotherapy for outpatients and oncologic emergency)                      Address the following issues;                      1. Respect for patients.                      2. Consider patient safety and respond to adverse events.                      3. Consider patient privacy, sense of shame, and the physical and mental anguish of their illness and treatment.                      4. Precautions of infection prevention                      5. Correct manner and attitude.                      6. Consider patient's physical condition good enough to examination.                      7. Estimation of body surface area, body mass index, and nutritional condition of patient.                      8. Palpation of artery of the upper limbs, and measure blood pressure by palpation.                      9. Measure pulse by bilateral radial artery palpation.                      10. Measure respiration, and find respirational disorders.                      11. Measure blood temperature                      12. Palpation of artery of the lower limbs, and measure blood pressure by palpation.                      13. Body examination (shape, nutrition, walking, face, skin, voice, etc.)                      14. Eye examination (field of the vision, pupil, light reflex, movement, protrusion, conjunctiva, etc.).                      15. Examination of the surface lymph nodes in the head and neck region.                      16. Inspection of the thorax (+ palpation and percussion)                      17. Inspection of the abdomen (+ auscultation)                      18. Examine tenderness, peritoneal irritation, muscular guarding.                      19. Detection of ascites                      20. Auscultation of bowel sound, and abdominal bruit</p>
<p>4 Thu [ 8:00-17:00 ]                      Subtitle To experience cancer treatment                      Instructor H Shibata, K Fukuda</p>	<p>1) Knowledge and skills to treat cancer patients                      1. Blood vessel puncture with simulator                      2. Assist in a position change of patient, and help to transfer the patient by wheelchair or stretcher.                      3. Sterilization of skin                      4. Use of ointment                      5. Maintaining peripheral blood access route                      6. Injection (intracutaneous, subcutaneous, intramuscular, intravenous routes)                      7. Introducing central venous catheter</p>

Schedule	Contents of Class
<p>5 Fri [ 8:00-17:00 ]</p> <p>Subtitle To experience cancer treatment</p> <p>Instructor H Shibata, K Fukuda</p>	<p>1) Practice (communication with patients, examination and treatment)</p> <ol style="list-style-type: none"> <li>1. Explain treatment with cancer drugs, and adverse effects.</li> <li>2. Explain action mechanisms of molecular targeted agents, and adverse events.</li> </ol> <p>2) Initial examination of cancer patients (notification, interview, collection of the medical history, informed consent)</p> <p>Address the following issues;</p> <ol style="list-style-type: none"> <li>1. Identify each clinical problem, and ascertain possible approaches to treatment.</li> <li>2. Practice three methods (interview, physical examination, analysis of laboratory data) of obtaining medical information.</li> <li>3. Make clinical hypotheses using knowledge of basic sciences.</li> <li>4. Consider clinical hypotheses collecting the information based on hypothesis.</li> <li>5. Conduct diagnostic procedures and treatment simultaneously.</li> <li>6. Decide on treatment together with the patient.</li> <li>7. Understand the importance of communication with other caregivers.</li> </ol> <p>3) Clinical practice for outpatients (Chemotherapy for outpatients and oncologic emergency)</p> <ol style="list-style-type: none"> <li>1. Blood cell count, coagulation test, urinalysis, feces test, laboratory examination.</li> <li>2. Chromosomal analysis and cancer genome analysis.</li> <li>3. Histopathological examination, cytology, flow-cytometer.</li> </ol> <p>Understand the purpose and results of these tests, and know how to interpret the results for patients. It is also necessary to know the specific treatments to cancer patients with additional symptoms described below:</p> <ol style="list-style-type: none"> <li>1. Fever, 2. General fatigue, 3. Anorexia, 4. Dehydration, 5. Skin rash, 6. Cough, sputum, 7. Bloody sputum, hemoptysis, 8. Dyspnea, 9. Pleural effusion, 10. Abdominal pain, 11. Nausea, vomiting, 12. Hematemesis, diarrhea, 13. Constipation, 14. Jaundice, 15. Abdominal fullness, ascites, abdominal tumor, 16. Anemia, 17. Lymph-nodes swelling, 18. Oliguria, anuria, 19. Hematuria, proteinuria, 20. Headache, 21. Paralysis, muscle weakness, 22. Back pain,</li> </ol> <p>4) Medical knowledges and skills required to treat advanced cancer patients are described below: The methods and the applications, risks and benefits, and complications should be understood.</p> <ol style="list-style-type: none"> <li>1. Hyperalimentation: intravenous route, gastrostomy, enema nutrition.</li> <li>2. Blood products and fractionated plasma products.</li> <li>3. Rehabilitation.</li> <li>4. Palliative care</li> <li>5. Total pain.</li> <li>6. Physical and psychosocial pain</li> </ol> <p>1) Practice (communication with patients, examination and treatment)</p> <p>2) Initial examination of cancer patients (notification, interview, collection of the medical history, informed consent)</p> <p>3) Clinical practice to outpatients (Chemotherapy and oncologic emergency)</p> <p>Take care of the following issues;</p> <ol style="list-style-type: none"> <li>1. Appropriate attitude</li> <li>2. Communication skills</li> <li>3. Obtaining the history of illness systemically (primary complaint, medication or drug usage, history of allergy, past illness, family history, behavior, preference, social and occupational history, lifestyle, travel history, etc.)</li> <li>4. Examine a patient with correct positioning</li> <li>5. Collect information and describe it in POMR (Problem Oriented Medical Record) style, and report findings to the instructor.</li> <li>6. Describe the clinical course in SOAP (subjective, objective, assessment, plan) style.</li> <li>7. Security ensure patient privacy is maintained.</li> </ol>