

## 2024 Akita University Faculty of Medicine Syllabus

<b>Category</b>	: 臨床医学アドバンストコース
<b>Course Title</b>	: Recent Progress in Clinical Oncology - 臨床腫瘍学特論 最近の話題 -
<b>Eligible Students</b>	: grade 4 Elective Course
<b>Code</b>	: 71594010
<b>Schedule</b>	: week 13
<b>Credits</b>	: 0.5

### 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)

Tomonori Habuchi (Professor, Urology)

Junichi Arita (Professor, Pharmacy)

Masafumi Kikuchi (Professor, Surgery of digestive organs)

Wataru Sato (Project Lecturer, Gastroenterology)

Koji Fukuda (Lecturer, Clinical Oncology)

Daiki Taguchi ()

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

#### 1. Outlines

The importance of medical research should be understood for future development of clinical medicine. (5-1 ~ 5-5 )

Classes are given by reading of epoch-making papers. (6-1,6-2)

To understand the evidence-based medicine. (5-3,5-4 )

#### 2. Aims

Understanding the care givers' behavior, ethical issues, preservation of safety of patients, clinical evidence and medical & social systems, (1-1,3-5 ~ 3-7) it is necessary to understand the importance of clinical research. (5-1 ~ 5-5 )

Medical doctors should be educated all through of their lives. (6-1,6-2 )

1. To understand clinical research. (5-1 ~ 5-5 )

2. To understand standard therapies. (5-1 ~ 5-5 )

3. To understand how to develop a new treatment or a new drug. (5-1 ~ 5-5 )

4. To know the limitations of the present treatment and to think how to overcome them. (5-1 ~ 5-5 )

5. To consider precision medicine in cancer chemotherapy. (5-1 ~ 5-5 )

### 4. Textbook/Reference Books

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

### 5. Assessment

Attendance and the attitude in debate.

Report and mini-test

### 6. Out of Class Study/Message

Read some papers regarding oncology fields including standard therapies, personalized treatments, new therapeutic agents, cancer genome diagnosis, and biomarkers, to consider a future cancer treatment.

Topics and Contents of class, Course Objectives						
	Class Date	Period	Class Format	Topics and Contents of class, Course Objectives	Instructors	Class Room
1	7 / 1 (Mon)	1-2	Lecture	<p>Theme: read research papers Epoch-making papers leading to an evidence-based medicine</p> <p>1.To understand the goal of study. It contributes to progress in medicine and beneficial to human health. 2.To understand the disease phenotypes based on the knowledges obtained from basic science. 3.To think about the disease deeply from the information obtained by research papers. 4.To cultivate a research mind by deep thinking of research processes.</p>	Hiroyuki Shibata	基礎棟 2 階 第 2 会議室
2	7 / 1 (Mon)	3-4	Lecture	<p>Theme: Urological oncology</p> <p>1.To understand urological oncology deeply including symptoms, pathology, diagnosis and treatment of urological tumors such as prostatic cancer, tumors in testis, renal cell carcinoma, bladder cancer, and urothelial cancer. 2.To understand recent update in the treatment of these tumors.</p>	Tomonori Habuchi	基礎棟 2 階 第 2 会議室
3	7 / 1 (Mon)	5-6	Lecture	<p>Theme: Recent advances in clinical oncology A hot news about cancer treatment will be discussed.</p> <p>1.To explain ethical issues in clinical study. 2.To explain the differences among clinical study, clinical trial, and post-marketing surveillance. 3.To explain the importance of declaration of Helsinki, phase studies, GCP (good clinical practice), and institutional review board (IRB). 4.To explain the regulatory law of drugs and appropriate use of them. 5.To explain the duty of report of adverse events</p>	Hiroyuki Shibata	基礎棟 2 階 第 2 会議室
4	7 / 1 (Mon)	7-8	Lecture	<p>Theme: Lung cancer</p> <p>1.To understand lung cancer deeply including symptoms, pathology, diagnosis and treatment. 2.To understand recent update in the treatment of these tumors.</p>	Hiroyuki Shibata	基礎棟 2 階 第 2 会議室
5	7 / 1 (Mon)	9-10	Lecture	<p>Theme: Cancer genome analysis</p> <p>1. To understand basic aspects of cancer genome analysis. 2. To understand the practice of cancer genome analysis.</p>	Hiroyuki Shibata	基礎棟 2 階 第 2 会議室
6	7 / 2 (Tue)	1-2	Lecture	<p>Theme: Hepatocellular carcinoma</p> <p>1.To understand hepatocellular carcinoma deeply including symptoms, pathology, diagnosis and treatment. 2.To understand recent update in the treatment of these tumors.</p>	Wataru Sato	基礎棟 2 階 第 2 会議室

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7	7 / 2 (Tue)	3-4	Lecture	<p>Theme: Pharmacokinetics and pharmacodynamics of cancer drugs</p> <p>Therapeutic drug monitoring (TDM) is a very important method to conduct precision medicine of cancer drugs. Combined with pharmacogenomic analysis, TDM will be tuned up in near future.</p> <p>1.To understand the dose-response curve of drugs or toxins.</p> <p>2.To understand the correlation between receptor binding ability and pharmacodynamics of agonists or inhibitors.</p> <p>3.To understand the effective doses, toxic doses and lethal doses.</p> <p>4.To understand the ADME (absorption, distribution, metabolism, excretion) and profiles of drugs.</p> <p>5.To understand pharmacokinetics and pharmacodynamics of the aged or patients with organ dysfunction.</p>	Masafumi Kikuchi	基礎棟 2 階 第 2 会議室
8	7 / 2 (Tue)	5-6	Lecture	<p>Theme: Cancer genome diagnosis</p> <p>Cancer genome diagnosis has been already approved in Japan. The aim of this lecture is to understand the background and practice of cancer genome diagnosis.</p> <p>1.To understand Mendelian law, mitochondria genetics, genomic imprinting, and multifactorial inheritance.</p> <p>2.To understand the relationship between genotype and phenotype.</p> <p>3.To explain the structure of chromosome, the structure of gene and its regulation. To understand mitosis and meiosis together with chromosomal segregation.</p> <p>4.To explain DNA replication and repair.</p> <p>5.To explain central dogma, the route from DNA to protein.</p> <p>6.To know the methods to analyze chromosome and DNA.</p>	Hiroyuki Shibata	基礎棟 2 階 第 2 会議室
9	7 / 2 (Tue)	7-8	Lecture	<p>Theme: Bile duct cancer</p> <p>1.To understand bile duct carcinoma deeply including symptoms, pathology, diagnosis and treatment.</p> <p>2.To understand recent update in the treatment of these tumors.</p>	Koji Fukuda	基礎棟 2 階 第 2 会議室
10	7 / 2 (Tue)	9-10	Lecture	<p>Theme: Recent advances in surgery of digestive organs</p> <p>1.To understand surgical treatments of digestive organs.</p> <p>2.To understand recent update in this field.</p>	Junichi Arita	基礎棟 2 階 第 2 会議室

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11	7 / 3 (Wed)	1-2	Lecture	<p>Theme: Treatment of bone metastasis</p> <p>1.To understand bone metastasis</p> <p>1-1.Pathology, symptoms, diagnosis and treatment of bone metastasis</p> <p>2.To renew the growing knowledge of medical science from the viewing points of evidence.</p> <p>3.To know how to develop clinical guidelines</p> <p>3-1.To explain 5 steps to build evidence</p> <p>3-2.To propose clinical questions in PICO (patient, intervention, comparison, outcome) style.</p> <p>3-3.To explain research designs (observational studies and interventional studies,) systemic review, and meta-analysis.</p> <p>3-4.To know how to search the evidence from data base.</p> <p>3-5.To know the way how to criticize and confirm.</p> <p>3-6.To explain the types of guidelines and the limitations of them.</p> <p>3-7.To explain the differences of strength of recommendations.</p>	Daiki Taguchi	基礎棟 2 階 第 2 会議室
12	7 / 3 (Wed)	3-4	Lecture	<p>Theme: Recent medical researches to develop drugs (translational study)</p> <p>Introduce our research products to develop anti-cancer agents.</p> <p>Aims</p> <p>1.To understand the importance of clinical research to progress medical oncology.</p> <p>2.To nourish the research mind.</p>	Hiroyuki Shibata	基礎棟 2 階 第 2 会議室