

Cancer Genomics and Precision Medicine

(Code: 4826, 1st – 2nd year, 1 unit)
(Course ID: GS-c4826-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor / Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
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2. Classroom/Lab Lecture Location

The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

Organize systematic knowledge on the foundation and medical practice surrounding cancer genomes, the foundation and medical practice surrounding cancer precision medicine, and the field's current status.

[Outline]

Classes will include an overview of cancer genomes and cancer precision medicine from various angles. Lectures will be interactive, including active discussions during the course.

4. Course Objectives

- To understand and be able to explain knowledge of cancer genomes and precision medicine.
- To understand and be able to explain the role of cancer genomes and precision medicine in comprehensive cancer medical care.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

Lectures will be given focused on the following subjects:

- The foundation of genetics and genetic mutation.
- The foundation of next generation sequencing
- Annotation and curation for next-generation sequencing (NGS) analysis data
- Current status and challenges for implementation of genomic treatment

No.	Topics
1	Basics of next generation sequencers (1)
2	Basics of next generation sequencers (2)
3	Basics of genetic/genomic mutations (1)
4	Basics of genetic/genomic mutations (2)
5	Basics of cancer genomic medicine (1)
6	Basics of cancer genomic medicine (2)
7	Data analysis in cancer gene panel tests (1)
8	Data analysis in cancer gene panel tests (2)
9	Clinical implementation of cancer genome profiling tests (1)
10	Clinical implementation of cancer genome profiling tests (2)

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

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Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is expected that anyone who is interested in the field of oncology will participate actively.