

Category (科目区分)	Cluster of Pathology and Pathology System		
Course Title (授業科目名)	Practice of Molecular Pathology		
Instructors (担当者名)	Yasufumi Omori	Academic Year (配当年次)	1,2
Required Course / Elective Course (必修/選択)	Elective Course	Credits (単位数)	1
Class Format (授業形態)	Experimental Practice		
Schedule (開講期間)	Informed individually by E-mail after registration		
Class Date/Period (開講曜日・時間)	Informed individually by E-mail after registration		
Course Outline/ Course Objectives (授業の概要・到達目標)			
<p>Aims: To learn the methods to detect known driver mutations raised in cancer cells and to practice it. Objectives: To extract DNA and/or RNA from formalin-fixed paraffin-embedded tissue samples and to do DNA sequencing by using PCR/RT-PCR-amplified DNA fragments.</p> <p>Outline: The practice consists of intermittent procedures which need a total of 45 hours within one month. Therefore, the program is arranged individually for each trainee. Days 1 and 2: Design of PCR primers to detect known driver mutations Days 3 and 4: Extraction of nucleic acids from formalin-fixed paraffin-embedded tissue samples Days 5 and 6: PCR and/or RT-PCR Days 7 and 8: Purification of DNA fragments after PCR Days 9 and 10: DNA sequencing</p>			
Course Planning (授業計画)			
	Course Outline/ Course Objectives (授業の概要及び到達目標) (Contents of Class) (授業内容)	Instructor (担当教員名)	Department (講座名) Class Room [実施場所]
1	Design of PCR primers to detect known driver mutations	Professor Yasufumi Omori Assistant Professor Yuko Hiroshima Assistant Professor Maya Suzuki	Department of Molecular Pathology and Tumor Pathology [Reserch Building for Basic Medicine]
2			
3	Extraction of nucleic acids from formalin-fixed paraffin-embedded tissue samples		
4			
5	PCR and/or RT-PCR		
6			
7	Purification of DNA fragments after PCR		
8			
9	DNA sequencing		
10			
Grading Criteria (成績評価の基準と方法)			
A credit is given for 30 hours of practice and 15 hours of self-learning. The grades are determined by the frequency of presence at sessions, oral examination, and the quality of reports.			
Contact Information (問い合わせ先(氏名, メールアドレス等))			
Name: Yasufumi Omori / E-mail: yasu@med.akita-u.ac.jp			
Comment (その他特記事項)			
Remarks: Working students, due to their duties, may not be allowed to be present at our scheduled session. We will thus be pleased to arrange a schedule flexibly in their favor. Textbooks and reference literatures: When necessary, our handouts will be provided. Helpful reference literatures will be suggested. Subjects for self-learning: Students are expected to prepare for each session according to the course outline and objectives.			