<table>
<thead>
<tr>
<th>Course</th>
<th>Human Pathology and Oncology</th>
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<tbody>
<tr>
<td>Course No.</td>
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<tr>
<td>Credits</td>
<td>2.0 Credits</td>
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<tr>
<td>Grade</td>
<td>1 Year</td>
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<tr>
<td>Timetable</td>
<td>FallAB Fri 4,5 (13:45-15:00, 15:15-16:30)</td>
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<tr>
<td>Instructor</td>
<td>Mitsuyasu Kato</td>
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### Course Overview
Human Pathology and Oncology provides opportunities for the students to learn about the basic disease entities of circulatory disorders (i.e., edema, thrombosis, and infarction), inflammation, and neoplasia, in terms of the causes, pathogenesis, and morphological changes of human diseases. Studying pathological understanding of common diseases, the students should be able to understand various human *in vivo* phenomena.

### Remarks
Lectures are conducted in English.

### Course Type
lectures

### Outline
Human Pathology and Oncology provides lectures by both pathology researchers and medical doctors for the students to learn about the basic disease entities of circulatory disorders (i.e., edema, thrombosis, and infarction), inflammation, and neoplasia. Handout will be distributed at each lectures. Evaluation will be given by short tests after several lectures (50%) and a final report (50%).

### Learning Objective
To understand the histological, biochemical, and functional changes in cells, tissues, and organs that underlie human disease.

### Attainment Target
1. To be able to explain common circulatory disorders (hemorrhage, thrombosis, embolism, infarction, edema and shock),
2. To be able to explain the definition, classification, morphological changes, and time course of inflammation,
3. To be able to explain the process and a variation of cell injury and death,
4. To be able to explain the process of tissue repair and adaptation (atrophy, hypertrophy, hyperplasia and metaplasia),
5. To be able to explain the definition of benign and malignant neoplasm and cancer,
6. To be able to explain the local growth and metastasis of cancer,
7. To be able to explain the clinical staging of cancer,
8. To be able to explain the function of major oncogenes and tumor suppressor genes,
9. To be able to explain the major cancer and related disorders in each tissues and organs,
10. To be able to explain current status of cancer epidemiology, treatment and prevention.
| Course Schedule | 1. 2019/10/11(Fri) Kato M. Introduction to Pathology  
2. 2019/10/11 (Fri) Kato M. Tissue Homeostasis and Regeneration  
3. 2019/10/18 (Fri) Suzuki H. Cell Injury and Death  
4. 2019/10/18 (Fri) Suzuki H. Degeneration, Hyperplasia and Hypertrophy  
5. 2019/10/25 (Fri) Kato M. Circulatory Disturbance I  
6. 2019/10/25 (Fri) Kato M. Circulatory Disturbance II  
7. 2019/11/1 (Fri) Kato M. Inflammation I  
8. 2019/11/1 (Fri) Kato M. Inflammation II  
9. 2019/11/8 (Fri) Suzuki H. Oncogenes  
10. 2019/11/8 (Fri) Suzuki H. Tumor Suppressor Genes  
11. 2019/11/15 (Fri) Watanabe Y. Hallmarks of Cancer  
12. 2019/11/15 (Fri) Okita M. Invasion and Metastasis  
13. 2019/11/22 (Fri) Noguchi M. Diagnostic Pathology  
14. 2019/11/22 (Fri) Noguchi M. Lung Cancer  
15. 2019/11/29 (Fri) Oda T. Gastric Cancer and Colorectal Cancer  
16. 2019/11/29 (Fri) Oda T. Pancreatic Cancer and Hepatocellular carcinoma  
17. 2019/12/6 (Fri) Kawai K. Cancers in Kidneys, Bladder, and Prostate  
18. 2019/12/6 (Fri) Minaguchi T: Cancers in Female Reproductive Organs  
19. 2019/12/13 (Fri) Chiba S: Leukemia and Related Disorders  
20. 2019/12/13 (Fri) Kato M. Cancer Stem Cells |

| Homework | Read textbook.  
Study histopathology by virtual slides. |

| Grading Methods and Criteria | The students are evaluated by the short tests after each lectures (50%) and an end-of-term report (50%). |

| Grading Criteria | A+: Superior (more than 90: top 10%)  
A: Excellent (80-89: upper 20%)  
B: Good (70-79)  
C: Average (60-69)  
D: Failure (less than 60) |

| Assignment |  |


| Room Number | Room 119, 4B Building, Medical Area |

| Notes |  |

| Keywords |  |