

**Lecture Series “Riron I”: C5 Advances in Oncologic Medicine****Subject Code 20140****(Elective: 2 credits)**

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**【Objectives】**

To understand advances in oncologic medicine, this course serves evidences and recent findings of medical oncology as follows: (1) Overview of tumor biology and genetics; (2) Recent advances in gastroenterological surgery; (3) Recent advances in oral and maxillofacial surgery; (4) Recent advances in thoracic surgery.

**【Content Description】**

- (1) This course overviews landmark findings in mechanism of tumor genesis and recent developments, and serves some of leading-edge research and our data. We focus on following topics: molecular mechanisms of tumor-related genes, cell cycle, cell death, cell differentiation; therapeutic agents based on tumor biology; molecular diagnostic tools, genome, transcriptome and proteomics; cancer stem cell.
- (2) Many people suffer from gastroenterological cancers (esophageal, gastric, colon, pancreas, liver, biliary tract and gastrointestinal stromal tumor). We explain not only standard treatment for gastroenterological cancer but also cutting-edge treatment for refractory or metastatic, or recurrent gastroenterological cancer.
- (3) Prognosis of oral squamous cell carcinoma depends on existence of invasion to surrounding tissues and cervical lymph node metastasis. We explain roles of some of adhesion molecules and protease in invasion and metastasis of the tumors.
- (4) Advances of thoracic surgery depend on traditional techniques of surgery for tuberculosis and development of diagnostic imaging. We explain state of art in diagnosis and treatment for lung cancer.

**【Keywords】** Tumor, cutting-edge medicine, oncogene, tumor suppressor gene, cell cycle, cell death, abnormal cell differentiation, cancer drug, molecular diagnostic technology of cancer, proteomics, cancer stem cell, gastroenterological cancer, refractory cancer, challenging surgery, less invasive surgery, chemotherapy, squamous cell carcinoma, extracellular matrix, adhesion molecule, metastatic potential, invasive potential, Positron emission tomography, Magnetic resonance image, mediastinal tumor, thymoma, myasthenia gravis

**【Class Style】** PowerPoint will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons.

**【Textbooks】** Textbooks are not specified.

**【Recommended Readings】**

- “Natural obsessions: The search for the oncogene” by Angier. N, Houghton Mifflin Co, 1988.
- “Cancer: principles & practice of oncology, 7th ed” by DeVita VT, Lippincott Williams & Wilkins.2004
- “The biology of cancer” by Weinberg RA Garland Science, 2007.
- “Clinical Oncology.” by Abeloff MD, Churchill Livingstone, .
- “ACS surgery: principles and practice” by Wilmore DW, WebMD.
- “Thoracic Surgery, 2nd edition ” by Pearson FG, Churchill Livingstone, 2002

**【Office Hour】** If you have any questions on topics or schedule of the classes, please contact the instructors listed above.

**【Evaluation for Grades and Credits】** Grading will be based on active class participation, paper summaries, and final report.

**【Lecture Schedule】** Please also refer to timetable shown in the Section 5.

Session	Date and time	Instructors	Topics
1 .	Oct 13 (Tue) 4th period	Norie Araki	Tumor Genetics and biology (introduction)
2 .	Oct 14 (Wed) 5th period	Norie Araki	Tumor Genetics and biology 1
3 .	Oct 20 (Tue) 4th period	Norie Araki	Tumor Genetics and biology 2
4 .	Nov 5 (Thu) 6th period	Hideo Baba	Gastroenterological surgery (introduction)
5 .	Nov 10 (Tue) 4th period	Hideo Baba	Gastroenterological surgery 1
6 .	Nov 17 (Tue) 4th period	Hideo Baba	Gastroenterological surgery 2
7 .	Nov 24 (Tue) 4th period	Hideo Baba	Gastroenterological surgery 3
8 .	Dec 1 (Tue) 4th period	Hideo Baba	Gastroenterological surgery 4
9 .	Dec 8 (Tue) 4th period	Hideo Baba	Gastroenterological surgery 5
1 0 .	Dec 15 (Tue) 4th period	Masanori Shinohara	Oral and maxillofacial surgery (introduction)
1 1 .	Dec 22 (Tue) 4th period	Masanori Shinohara	Oral and maxillofacial surgery 1
1 2 .	Jan 5 (Tue) 4th period	Masanori Shinohara	Oral and maxillofacial surgery 2
1 3 .	Jan 12 (Tue) 4th period	Hiroaki Nomori	Thoracic surgery
1 4 .	Jan 19 (Tue) 4th period	Hiroaki Nomori	Lung cancer
1 5 .	Jan 26 (Tue) 4th period	Hiroaki Nomori	Medistinal tumor