Principal Investigator: Kenji Suzuki (Professor)

Clinical and basic research on thoracic malignancy has been conducted at our department. Our research is based on the third largest number of surgical cases on thoracic malignancy and a detailed database. Our division is one of the major institutes presenting data of high quality and quantity, which cannot be achieved without this detailed database. Our interests are as follows.
1) Early-stage lung cancer
2) Advanced-stage lung cancer
3) Thymic malignancy
4) Pleural malignancy
5) Trimodal treatment
6) Molecular biology

Publication:

Group Leaders and Research Topics
1) Shiaki Oh (Associate Professor)

The standard surgical procedure for lung cancer since 1960 has been major pulmonary resection and mediastinal nodal dissection. This strategy was supported by the study conducted by the Lung Cancer Study Group in 1995. This gold standard is going to be revised based on our trial named JCOG0802 (Figure-1). This trial is based on our previous trial on radiological early lung cancer\(^1\), and compares lobectomy and sublobar resection for stage I lung cancer. With regard to sublobar resection, segmental resection should be one of the choices for the operative mode of surgery. In some cases, segmentectomy is technically difficult, so we have developed innovations in segmentectomy supported by the use of indocyanine green dye\(^2\).

Publication:

2) Kazuya Takamochi (Associate Professor)

My group organizes translational research on thoracic malignancies such as lung cancer, thymic tumors, and malignant mesothelioma. Our studies are conducted on specimens stored in a tissue bank, with the approval of the institutional review board of Juntendo University. We actively pursue collaborative research with other departments in Juntendo University and RIKEN. We have recently reported new findings on the etiology of lung carcinoma and a rational diagnostic algorithm for the identification of

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**Figure-1** Randomized trial comparing lobectomy and segmentectomy for T1a lung cancer
ALK rearrangement in lung cancer.

Publications:

3) Takeshi Matsunaga (Associate Professor)
 Generally, chemoradiotherapy is recommended for patients with cN2 stage IIIA non–small cell lung cancer (NSCLC). However, the treatment of stage IIIA NSCLC is still very difficult and controversial because of the high heterogeneity in the pathological status and the wide range of overall 5-year survival rate in these patients. Therefore, stage IIIA NSCLC should be classified into subgroups and we examined the number of clinically involved mediastinal lymph node stations and the relationship between the primary tumor and involved mediastinal nodes. Our study concluded that clinical mediastinal lymph node status based on the location of the primary tumor and involved mediastinal nodes is an important preoperative prognostic factor. Thus, this factor should be considered when planning and evaluating clinical trials. Another important finding was that clinical single–station N2 is not always pathological single–station N2 disease.6


4) Aritoshi Hattori (Assistant Professor)
 Recent developments in imaging technology and the widespread use of thin–section CT have made it possible to detect small–sized lung cancers. The prognostic significance of a radiological solid component has already been addressed in the literature.7–11 Nonetheless, there are still several discrepancies between radiological findings and the degree of pathological behavior in patients with early–stage lung cancer. Owing to the wide pathological diversity despite the small–sized lesions, understanding the characteristics and appropriate surgical strategies for these lesions is crucial in current general thoracic surgery. Hence, we have intensively attempted to identify the clinical features of small–sized lung cancers in Juntendo University.

Publications: