Thoracic Surgery

Principal Investigator  Yukio Sato
E-mail.address  ysato@mdd.tsukuba.ac.jp

Other Faculty Members
Professor Hideo Ichimura: ichimura@tmch.or.jp
Associate Professor Yukinobu Goto: ygoto@mdd.tsukuba.ac.jp
Associate Professor Shiji Kikuchi: S.kikuchi@md.tsukuba.ac.jp
Associate Professor Naohiro Kobayashi: naohiro.kobayashi@md.tsukuba.ac.jp

Major Scientific Interests of the Group
Lung cancer has become a major cause of death in most of countries. Surgical resection is the most effective for the treatment of lung cancer. Minimal invasive video assisted thoracic surgery (VATS) lobectomy appears to be a safe and effective procedure for treatment of lung cancer. We are making progress not only in reducing surgical stress but also in improving the quality of surgery by developing original devises and techniques. We are focusing also on the multimodal treatment of lung cancer, surgical simulation and estimation of postoperative lung regeneration and function using 3D-CT, development of novel sealant material for surgery, mechanism of invasion of lung cancer, and the mechanism of acute lung injury.

Projects for Regular Students in Doctoral or Master’s Programs
1) Surgical simulation and estimation of postoperative lung regeneration and function using 3D-CT
2) Development of novel sealant material for surgery
3) Mechanism of invasion of lung cancer
4) Mechanism of acute lung injury

Study Programs for Short Stay Students (one week – one trimester)
1) Surgical simulation and estimation of postoperative lung regeneration and function using 3D-CT
2) Mechanism of acute lung injury

Selected Publications


18) Sato Y, Walley KR, Klut ME, English D, Dyachkova Y, Hogg JC, van Eeden SF. Nitric oxide reduces the sequestration of polymorphonuclear leukocytes in lung by changing deformability and CD18 expression. Am J Respir Crit Care Med. 159(5 Pt 1) 1469-76. 1999.05. DOI: 10.1164/ajrccm.159.5.9808063


20) Sato Y, Van Eeden SF, English D, Hogg JC. Pulmonary sequestration of polymorphonuclear leukocytes released
from bone marrow in bacteremic infection. Am J Physiol. 275(2), L255-261
1998.08. DOI: 10.1152/ajplung.1998.275. 2L255