PLEUROPSY

PLEURAL BIOPSY MADE SIMPLE

JOHNS HOPKINS BIOMEDICAL ENGINEERING

Clinical Background

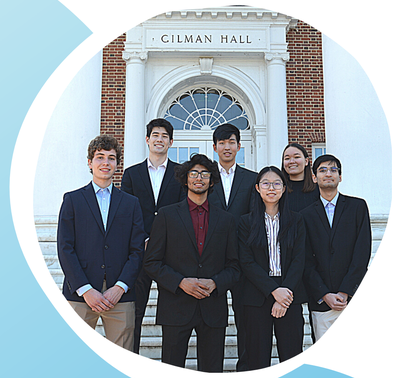
1.5 Million pleural effusions occur annually in the U.S and **32%** die within a year of hospitalization [1]. Accurate **root cause** diagnosis is critical for treatment but current nonsurgical methods are **outdated** and only **50-60%** diagnostic [2].

Patient Impact

Outpatient - The entire integrated procedure can be performed without requiring the patient to stay in the hospital overnight

Quicker - No need to separately come in for thoracentesis procedures and biopsy procedures which expedites diagnosis

Minimally Invasive - Closed needle biopsy avoids surgical interventions and general anesthesia



THE TEAM

Albert Lee, Ashley Koenig, Satya Baliga, Sean Healy, Shubhan Mathur, Amanda Kwok, Iralde Sicilia, Nikhil Choudhary

MENTORS

Dr. Elizabeth Logsdon - JHU Biomedical Engineeering
Dema Shumeyko - JHU Biomedical Engineeering
Dr. Hans Lee - JHMI Department of Interventional Pulmonology

[1] Kookoolis, Anna S., et al. "Mortality of hospitalized patients with pleural effusions." Journal of pulmonary & respiratory medicine 4.3 (2014): 184.
[2] James, Prince, et al. "Evaluation of the diagnostic yield and safety of closed pleural biopsy in the diagnosis of pleural effusion." Indian J Tuberc 57.1 (2010): 19-24.

Product Features

Image: https://www.bbraun.com/en/products/b1/vats-instruments.html

Video-assisted-thoracoscopic-surgery-inspired biopsy mechanism for **improved tissue sampling** yield

Better articulation and control systems for **simpler clinician handling**

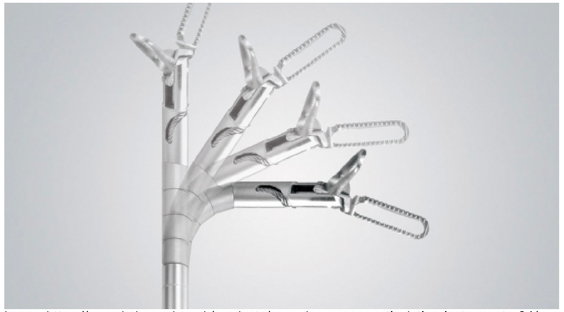


Image: https://www.kebomed.co.uk/products/snowden_pencer_articulating_instruments_34/

Image: https://www.grena.co.uk/our-products/thoracentesis-paracentesis-sets

Integration with fluid drainage allows device to merge with existing workflows