# Systematic Validation of Using HSP90α as a Lung Cancer Diagnostic Biomarker for Enhanced Clinical Screening

Backgrounds and Current goals

- Lung cancer is responsible for over 2 million deaths annually

- HSP90α is a known lung cancer indicator but lacks a unified a accuracy profile.

HSP90α

- The goal is to conduct a systematic analysis to validate its clinical utility as a biomarker.
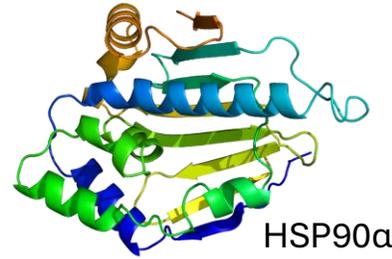
Analysis & Results

- The overall sensitivity is 71% and the specificity is 92%.

- HSP90α scored an excellent AUROC = 0.84 for discriminatory power with a diagnostic odds ratio of 30.

- HSP90α is proven biologically stable despite varying lab "cut-off" points (49.8 to 114.8 ng/mL).

AUROC Curve
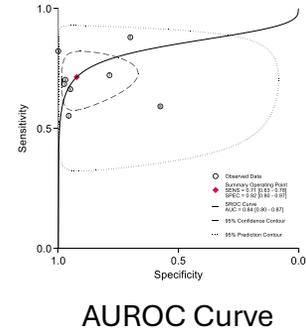
Methods

- 634 papers are screened and 8 high-quality studies were selected.

- 3,624 total patients (2,080 cancer cases, 1,544 controls) were analyzed

- Statistical software, STATA, was used to analyze the data.

Interpretations & Conclusions

- HSP90α is a stable and robust biomarker for lung cancer.

- It is a consistent and steady biomarker.

- It is 30 times more likely to be found in cancer patients than healthy ones.

Fagan's Nomogram