

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 4288  
**Publication Number:** P4405

**Abstract Group:** 11.1. Lung Cancer

**Keyword 1:** Lung cancer / Oncology **Keyword 2:** No keyword **Keyword 3:** No keyword

**Title:** How do cytology samples compare with histology specimens when used for EGFR testing in patients with NSCLC?

Dr. Shahul 26296 Leyakathali khan shahul93@gmail.com , Dr. Mohammed 26297 Haris drmharris@googlemail.com , Dr. Sarah 26298 Diver sarah.diver@doctors.org.uk , Dr. Jane 26299 Edwards jane.edwards@lthtr.nhs.uk and Dr. Mohammed 26300 Munavvar mmunavvar@lthtr.nhs.uk . <sup>1</sup> Respiratory Medicine, Royal Preston Hospital, Preston, United Kingdom, PR2 9HT ; <sup>2</sup> Respiratory Medicine, Royal Preston Hospital, Preston, United Kingdom, PR2 9HT ; <sup>3</sup> Medicine, Royal Preston Hospital, Preston, United Kingdom, PR2 9HT ; <sup>4</sup> Pathology, Royal Preston Hospital, Preston, United Kingdom, PR2 9HT and <sup>5</sup> Respiratory Medicine, Royal Preston Hospital, Preston, United Kingdom, PR2 9HT .

**Body:** Background: With the evolution of individualised treatment strategies in non small cell lung cancer (NSCLC), it is becoming increasingly important to obtain adequate tissue for accurate pathologic sub-typing and molecular testing. In most cases diagnosis and staging is done using small biopsies or cytology specimens obtained by minimally invasive techniques. Aim: To compare the adequacy of cytology and histology samples used for epidermal growth factor receptor (EGFR) mutation screening. Methods: Retrospective study of 135 consecutive samples obtained from NSCLC patients between Jan 2010 and Dec 2011. Results: Of the 135 samples sent for EGFR testing, 13 were positive, 115 negative and 7 were considered inadequate or failed molecular testing. 106 had adenocarcinoma, 11 adenosquamous, 13 NSCLC-NOS(not otherwise specified), 4 squamous and 1 small cell. Positive EGFR was noted in 4 cytology and 9 histology samples (p=0.27). Cytology samples include 46 endobronchial ultrasound (EBUS) guided fine needle aspiration (FNA), 8 pleural fluid, 7 ultrasound guided or superficial FNAs from lymph nodes or masses, 1 transbronchial (mini-probe), 2 bronchial washings and 2 brush biopsies. Histology biopsies include 29 endobronchial biopsies, 19 CT guided lung biopsies, 8 thoracoscopic and 1 ultrasound guided pleural biopsies, 1 renal biopsy, and 11 surgical excision samples (bone, brain, lymph node and groin mass).

	Cytology (n=66)	Histology (n=69)	
Insufficiency rate	3 (5)	4 (6)	P=0.902, 95% CI -8.4% to 10.3%

n(%), Chi-square test

**Conclusion:** The overall adequacy rate from both groups was 95% with no difference, suggesting that the cytology samples can be reliably used for molecular testing.

