

# EGFR and PD-L1 in Mood Disorders among Metastatic Non-Small Cell Lung Cancer

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# Introduction

Although cancer patients with mood disorders shows higher incidence of suicide and worse survival, the underlying mechanisms of this association remains unclear. Little is known whether or not expressed product of tumor cells are associated with mood disorders in metastatic non-small cell lung cancer (NSCLC).

# Objectives

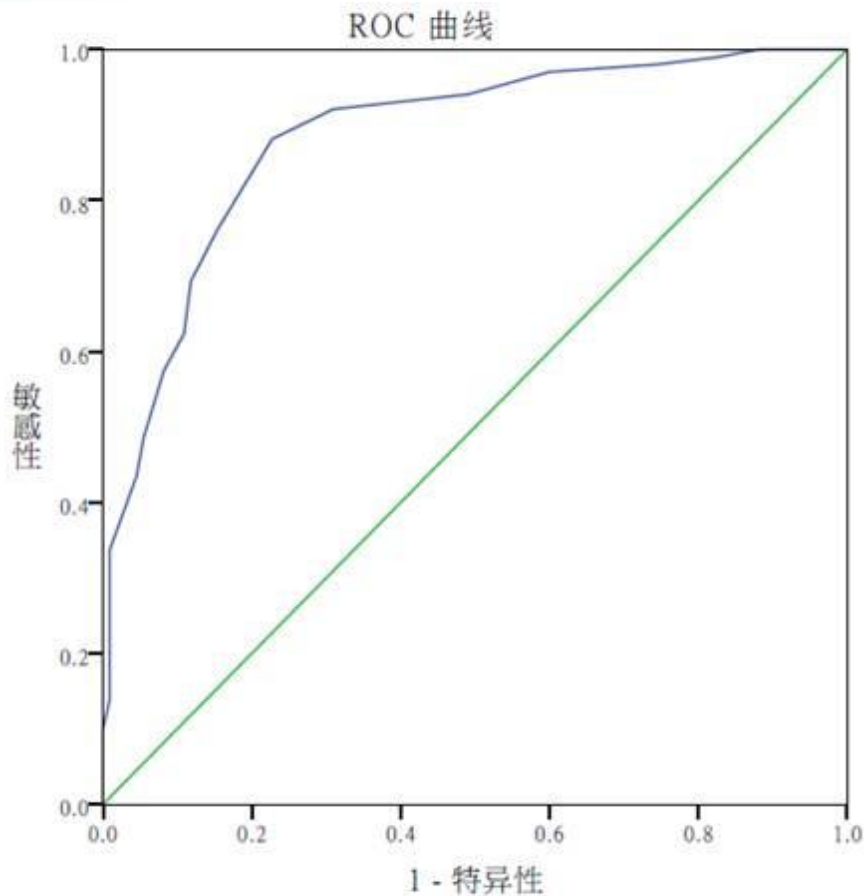
The aim of the present study was to explore the association between expressed product of tumor cells and anxiety and depression among newly diagnosed patients with Metastatic NSCLC.

Of 687 consecutive newly diagnosed NSCLC patients admitted to the West China Hospital of thoracic oncology department inpatient service between June 1, 2015 and December 31, 2016, 508 (73.9%) were recruited into our study. We obtained demographics, and clinical data, including tumor stage, performance status, anxiety and depression severity, and expressed product of tumor cells from the electronic medical records. Stage IV and performance status 0-1 NSCLC patients were chose to analyze. Huaxi Emotional Index (HEI) is used in routine to assess cancer patients' anxiety and depression severity in our hospital.

# Huaxi Emotional Index (HEI)



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四川大学华西医院临床心理评估与治疗中心  
心理健康报告

测试量表：华西心理指数问卷（HEI）（月评）

条形码： 姓名： 年龄： 71 性别： 男  
护理单元：第 护理单元 床号： 诊断描述：肺癌化疗后；恶性肿瘤

评估结果

总分：12

题目	选项
1. 情绪低落时无论怎样都无法开心?	完全没有
2. 对什么事情都没有兴趣?	完全没有
3. 过于紧张?	完全没有
4. 控制不住地担忧或担心?	偶尔
5. 不安以致难以平静下来?	完全没有
6. 害怕再次突然出现严重恐惧或恐慌感?	完全没有
7. 责怪自己?	偶尔
8. 没有希望?	完全没有
9. 想要逃避?	完全没有

评语

总分：测评结果显示，您可能没有或仅有轻微的负面情绪（抑郁和/或焦虑）及相关心理健康问题。

建议

此结果仅在被评估者以自己的真实想法和感受回答问卷的情况下，反应其在相应评估期限内的心理状态。具体情况请结合临床综合判断。

四川大学华西医院临床心理评估与治疗中心

医编： 审阅人：

# Results

127 patients (31.1%) tested positive for EGFR mutations, and 27 patients (52.9%) tested positive for PD-L1 expression. No EGFR mutation–positive cases were diagnosed with anxiety or depression, in comparison with 3.6% of patients with wild-type EGFR ( $p=0.035$ ). The multiple linear regression analyses found that mutations of EGFR and PD-L1 positive expression were associated with lower HEI scores than with wild-type EGFR and PD-L1 negative expression respectively, independent of age, gender, marital status, education, performance status, chronic diseases ( $F=2.89$ ,  $p=0.006$ ; and  $F=2.70$ ,  $p=0.021$ , respectively).

# Conclusions

This study indicates that EGFR mutations and PD-L1 positive expression are protective factors of mood disorders in patients with stage IV and performance status 0-1 NSCLC. Our findings suggest to explore the association between mood disorders and cytokines which associated with expressed product of tumor cells.