



# Depressive disorders in patients with lung cancer survivors

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## Introduction

Background & Aims: Cancer has been linked to an increased risk of depression. But the long-term risk of depressive disorders among lung cancer survivors remain unclear. This population-based study is aimed to assess the incidence and risk of depressive disorders following lung cancer.

## Methods

Methods: From January 2002 to December 2007, **49,564** newly-diagnosed lung cancer patients (age of 20 to 99 years) were enrolled from the National Health Insurance Research Database (NHIRD) in Taiwan. Patients who had depressive disorders before enrollment were excluded. Patients were observed for a maximum of 6 years to determine the incidence of newly onset depressive disorders. Kaplan Meier and Cox regression analyses were used to evaluate the risk of depressive disorders in lung cancer survivors.

Figure 1. Selection of study patients.

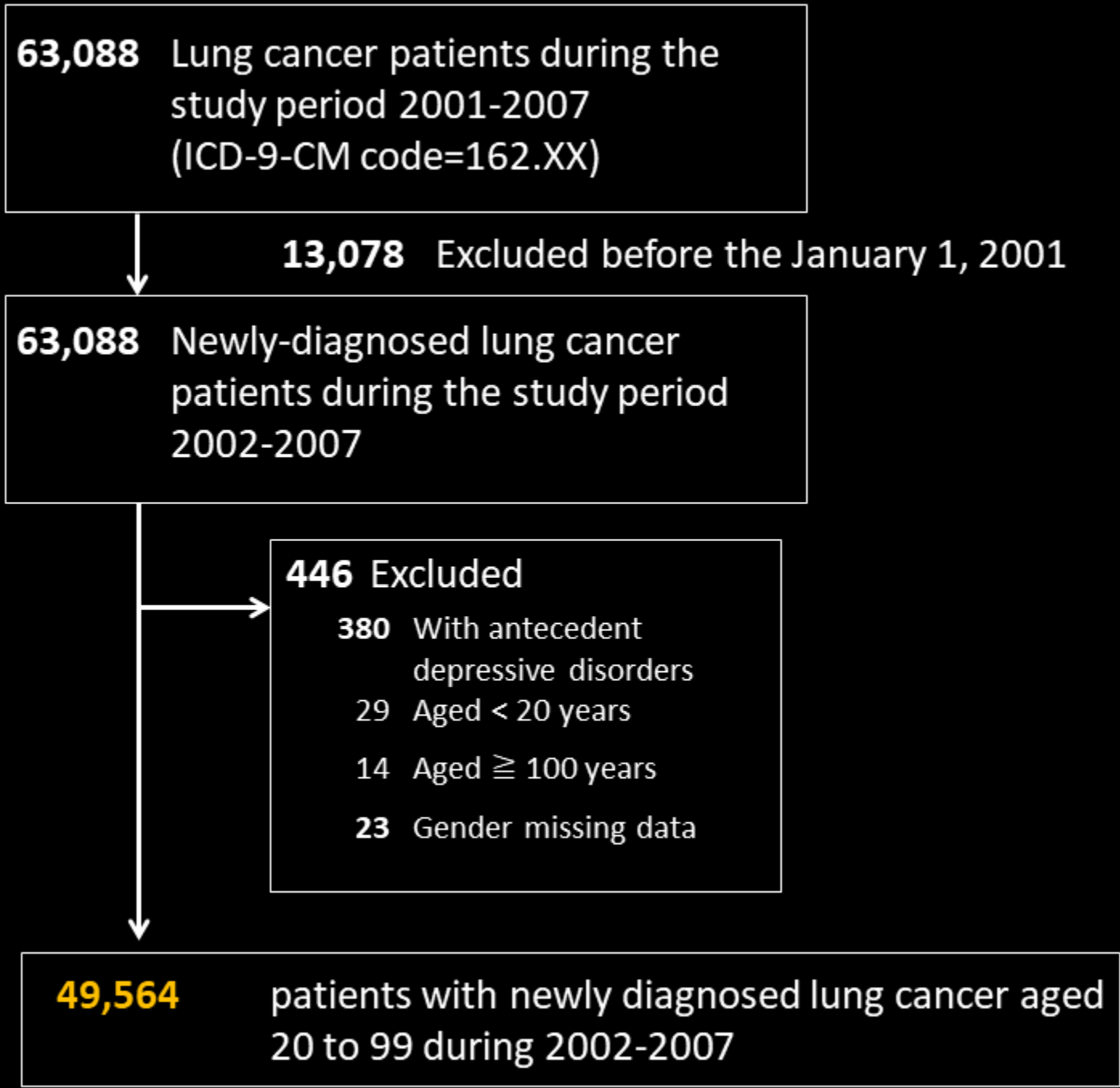
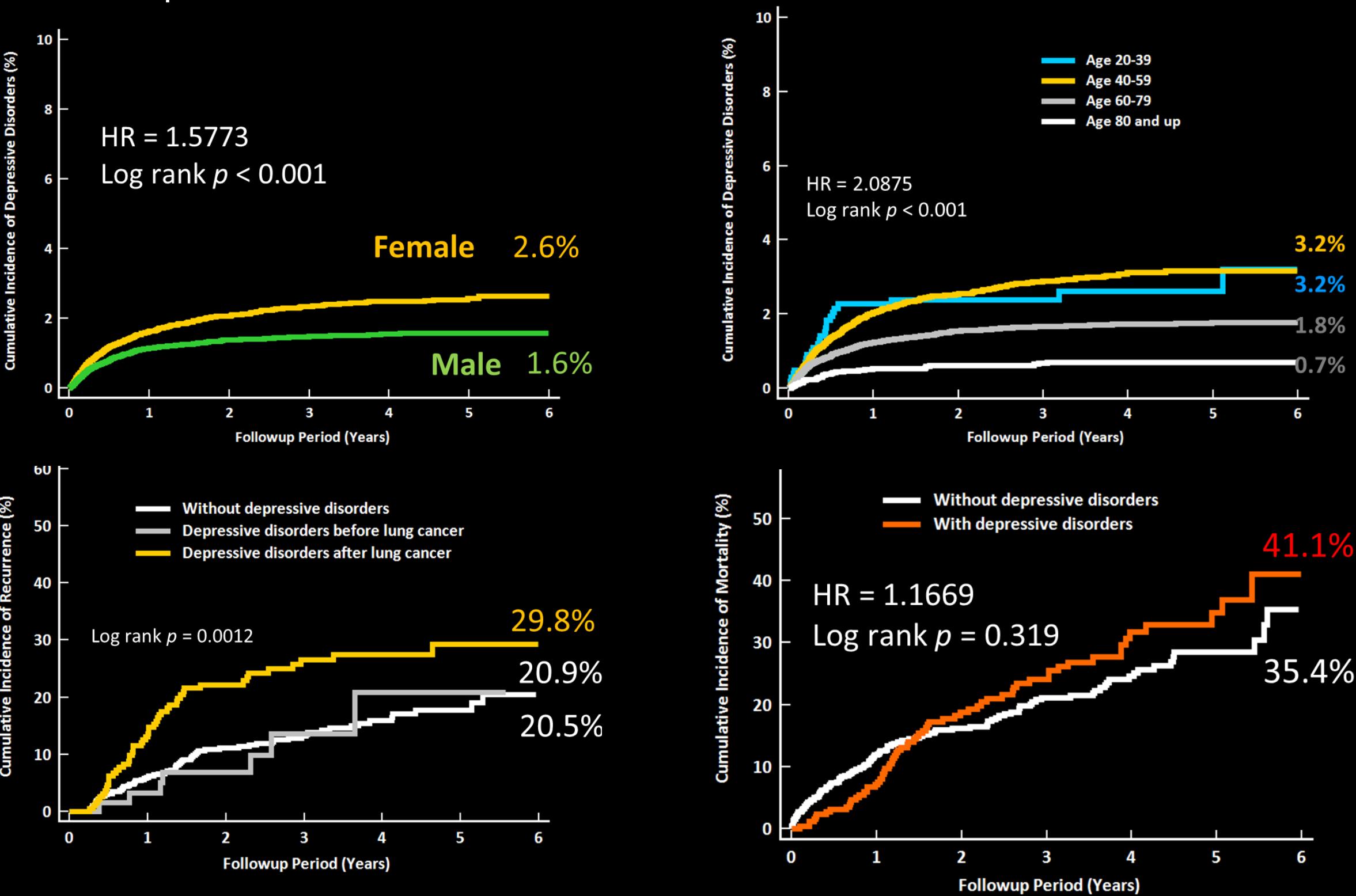


Table 1. Basic Profile of Patients with depressive disorder.

Variable	Number	(%)
Age, y	68.6	(12.6)
20-39	1,022	(2.1)
40-59	10,830	(21.9)
<b>60-79</b>	<b>28,908</b>	<b>(58.3)</b>
>= 80	8,804	(17.8)
Sex		
<b>Men</b>	<b>33,072</b>	<b>(66.7)</b>
Women	16,492	(33.3)
Follow-up, y	2.8 (1.7)	
Major coexisting diseases		
<b>Hypertension</b>	11,641	(23.5)
<b>COPD</b>	10,399	(21.0)
<b>Diabetes</b>	6,771	(13.7)
Peptic ulcer diseases	3,665	(7.4)
Acute coronary syndrome	2,776	(5.6)
Cerebral vascular disease	2,320	(4.7)
Chronic kidney disease	2,055	(4.1)
Asthma	1,470	(3.0)
Heart failure	1,294	(2.6)
HBV	621	(1.3)
HCV	494	(1.0)
Charlson score	0.6	(1.2)

## Results

Results: Of the total **49,564** lung cancer, 763 patients (1.54%) developed depressive disorders during a mean (SD) follow-up period of 2.83 (1.73) years. The Cox proportional hazards analysis showed that women (**HR 1.5773**, 95% CI 1.3407 to 1.8863,  $p < 0.001$ ), and younger age (less than 60 years old) (**HR 2.0875**, 95% CI 1.7247 to 2.5265,  $p < 0.001$ ) were independent risk factors for developing depressive disorders. Moreover, The recurrence rate of lung cancer combined with depression is **29.8%**, which is higher than the 20.9% of those without depression. The mortality rate of lung cancer combined with depression is **41.1%**, which is also higher than the 35.4% of those without depression.



## Conclusions

Our study indicated a subsequent risk of depressive disorders in lung cancer survivors, and the risk increased for those with **female gender**, and **younger age**.

## Reference

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