

Mortality risks of **COPD** from a
prospective cohort study of 390,269
subjects in Taiwan-
Assessing involvement **beyond the lungs**

National Health Research Institutes, Taiwan
Adviser: Dr. Chi-Pang Wen

Presenter: Min-Kuang (Jimmy) Tsai



Search

[Advanced search](#)

Chronic respiratory diseases

Chronic respiratory diseases

[Global Alliance Against Respiratory Diseases \(GARD\)](#)

[Chronic obstructive pulmonary disease \(COPD\)](#)

[Asthma](#)

[Other chronic respiratory diseases](#)

[Publications](#)

World Chronic Obstructive Pulmonary Disease Day



WHO/Marko Kokic

16 November 2011 -- World COPD Day is a global effort to expand understanding of chronic obstructive pulmonary disease (COPD) and advocate for better care for patients. Organized by the Global Initiative for Chronic Obstructive Lung Disease, the Day is marked by activities implemented by health care professionals and patient groups throughout the world.

[More about the event](#)

Highlights

[World Chronic Obstructive Pulmonary Disease Day](#)

[Global status report on noncommunicable diseases](#)

[UN high-level meeting on NCDs](#)

235 million

Some 235 million people currently suffer from asthma.

90%

Almost 90% of COPD deaths occur in low- and middle-income countries.

3 million

More than 3 million people died of COPD in 2005.

65 million people have moderate to severe COPD

COPD

Mortality

- Chronic obstructive pulmonary disease (COPD) is a **life-threatening** disease – it is more than a “smoker’s cough”.
- Those with COPD subjects may die from other causes, and **die beyond COPD.**



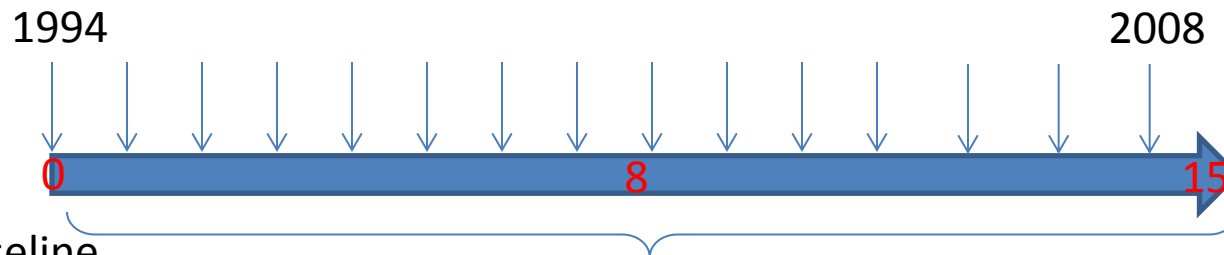
Objectives

To assess the **mortality risks of COPD subjects** among smokers and nonsmokers and to quantify its mortality effect beyond the lungs.

The life shortening effect of COPD
Mortality beyond COPD

The MJ health Screening cohort

- **Number of subjects: 390,269**
- Age 20 or above
- **A self-administered standardized questionnaire**
 - Demographic information
 - Lifestyles: Smoking status, drinking status, physical activity
 - Personal and family history of major chronic diseases
- Blood collected for hematological/biological analyses
- **Lung function tests**

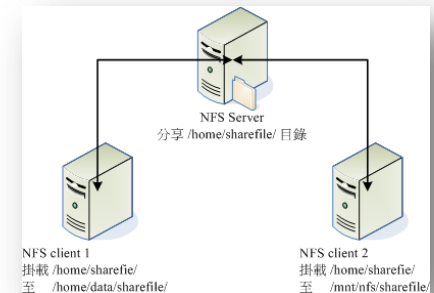


Baseline



15 years follow-up

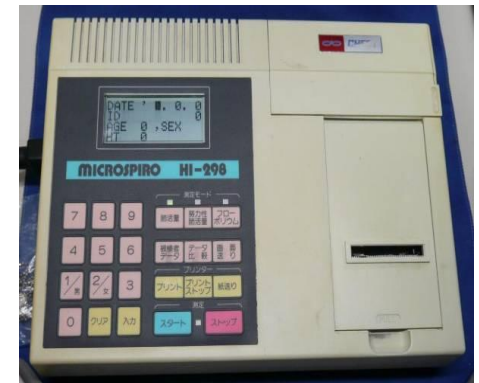
Mean follow-up : 8 yr



National death file
2008.12.31

Spirometry

- Forced expiratory volume in 1 second (**FEV1**)
- Forced vital capacity (**FVC**)
- Determined **without inhalation** of a bronchodilator
- Possible overrepresentation of relatively healthy patients with COPD



Global Initiative for Chronic Obstructive Lung Disease

GOLD COPD Severity 2010

I: Mild COPD	<ul style="list-style-type: none"> • $FEV_1/FVC < 0.7$ • $FEV_1 \geq 80\%$ predicted 	At this stage, the patient may not be aware that their lung function is abnormal.
II: Moderate COPD	<ul style="list-style-type: none"> • $FEV_1/FVC < 0.7$ • $50\% \leq FEV_1 < 80\%$ predicted 	Symptoms usually progress at this stage, with shortness of breath typically developing on exertion.
III: Severe COPD	<ul style="list-style-type: none"> • $FEV_1/FVC < 0.7$ • $30\% \leq FEV_1 < 50\%$ predicted 	Shortness of breath typically worsens at this stage and often limits patients' daily activities. Exacerbations are especially seen beginning at this stage.
IV: Very Severe COPD	<ul style="list-style-type: none"> • $FEV_1/FVC < 0.7$ • $FEV_1 < 30\%$ predicted <i>or</i> $FEV_1 < 50\%$ predicted plus chronic respiratory failure 	At this stage, quality of life is very appreciably impaired and exacerbations may be life-threatening.

Results

息切れがする

以前と比べ、階段の上り下りや坂道がづらくなっていませんか？



咳や痰が続く

かぜが治っても、咳や痰が長く続いていませんか？



動くときどきする時がある

運動の後になかなか動悸が治まらない、ちょっと動いただけでもドキドキする。

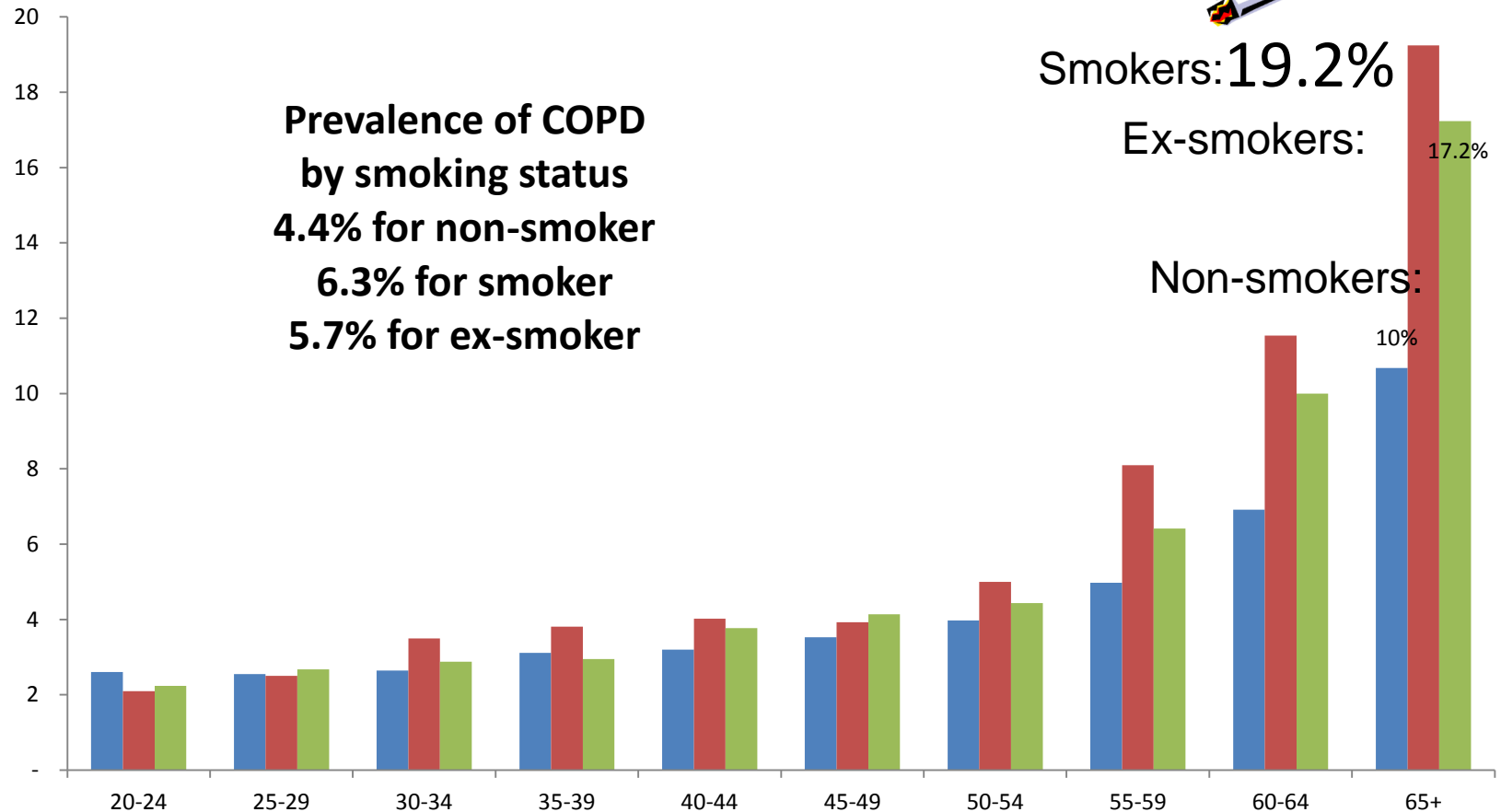


かぜをひきやすい

最近、どうもかぜをひきやすくなったようだ。



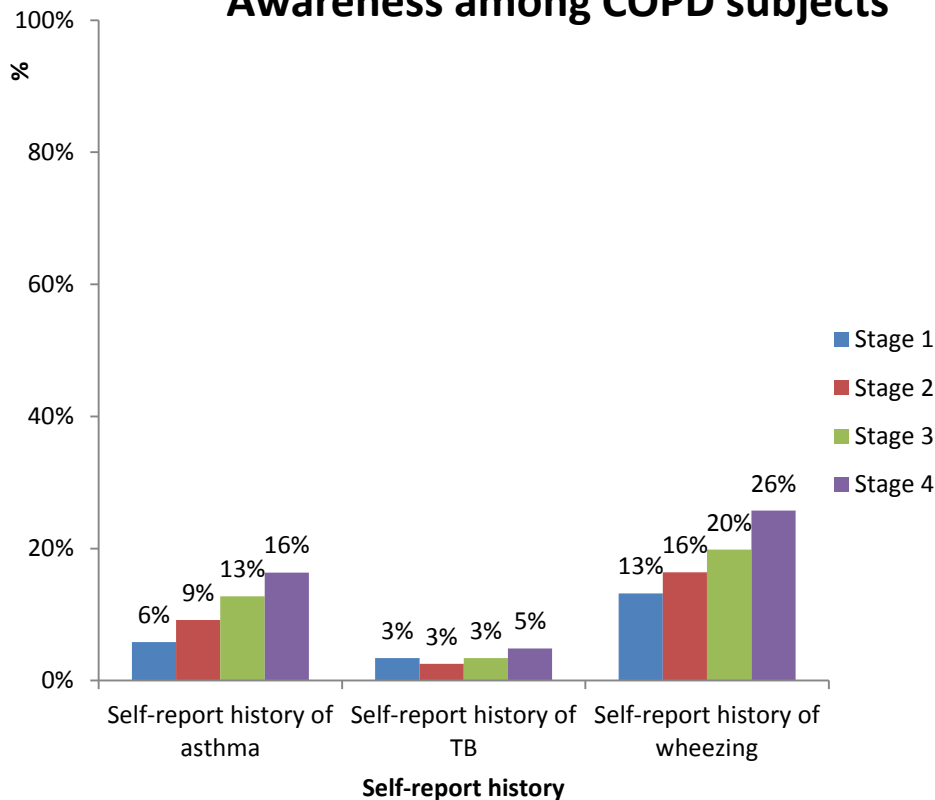
1 in 5 smokers for age 65 or more was COPD subjects



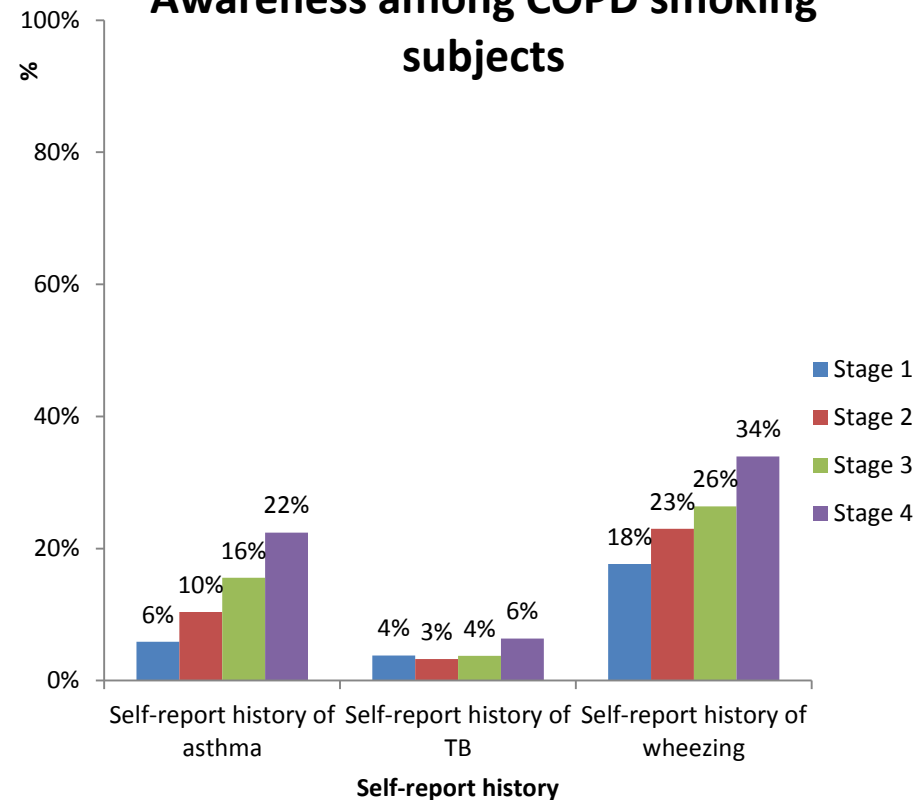
Low awareness among COPD subjects

At least 75% were unaware of their COPD

Awareness among COPD subjects

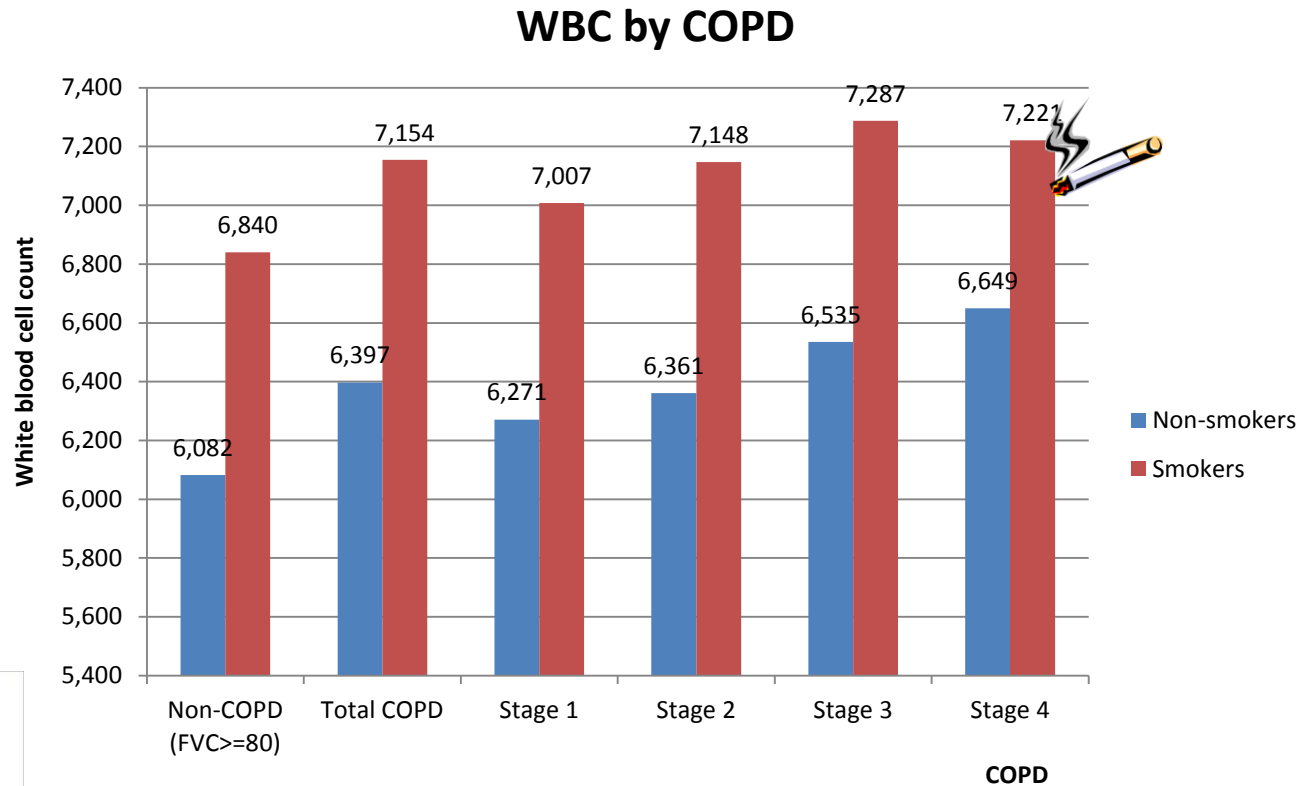


Awareness among COPD smoking subjects



White cell counts increase with COPD stage

Smokers were higher than non-smokers



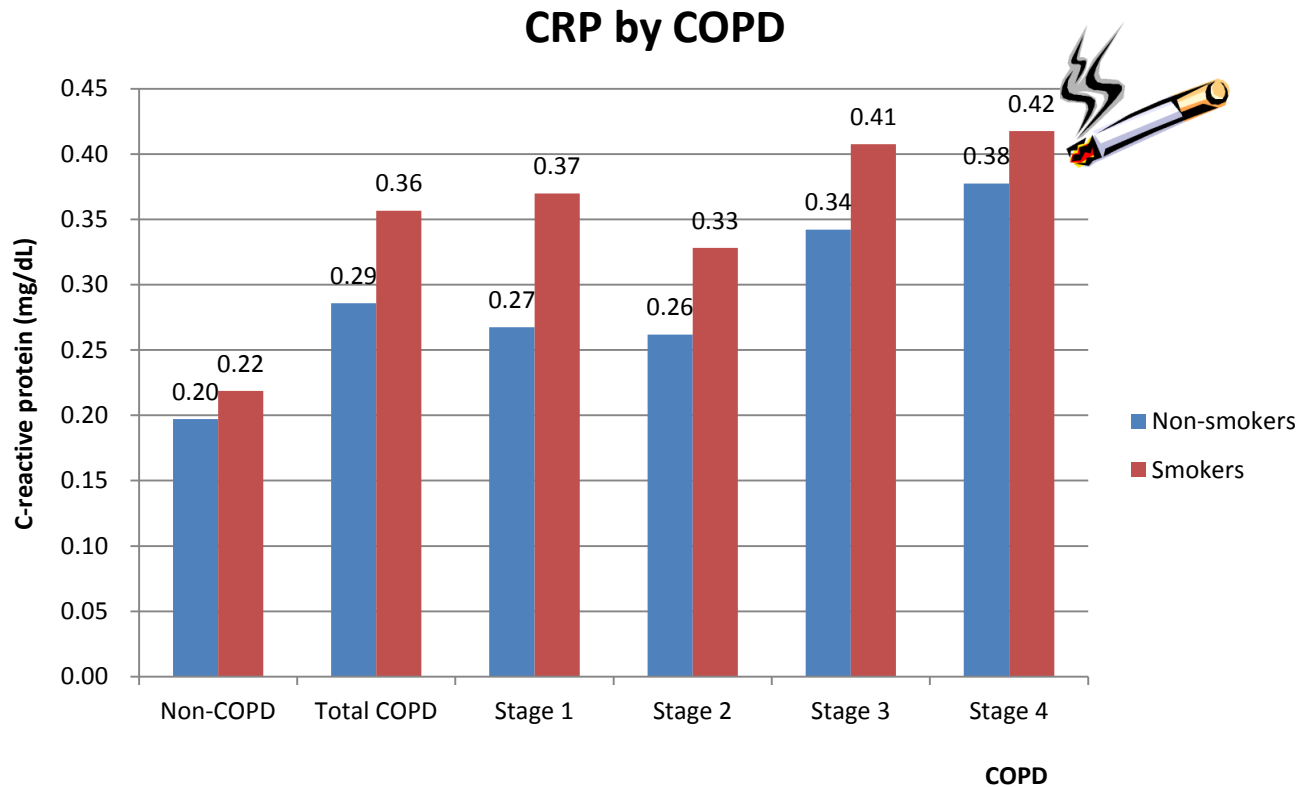
White blood cells



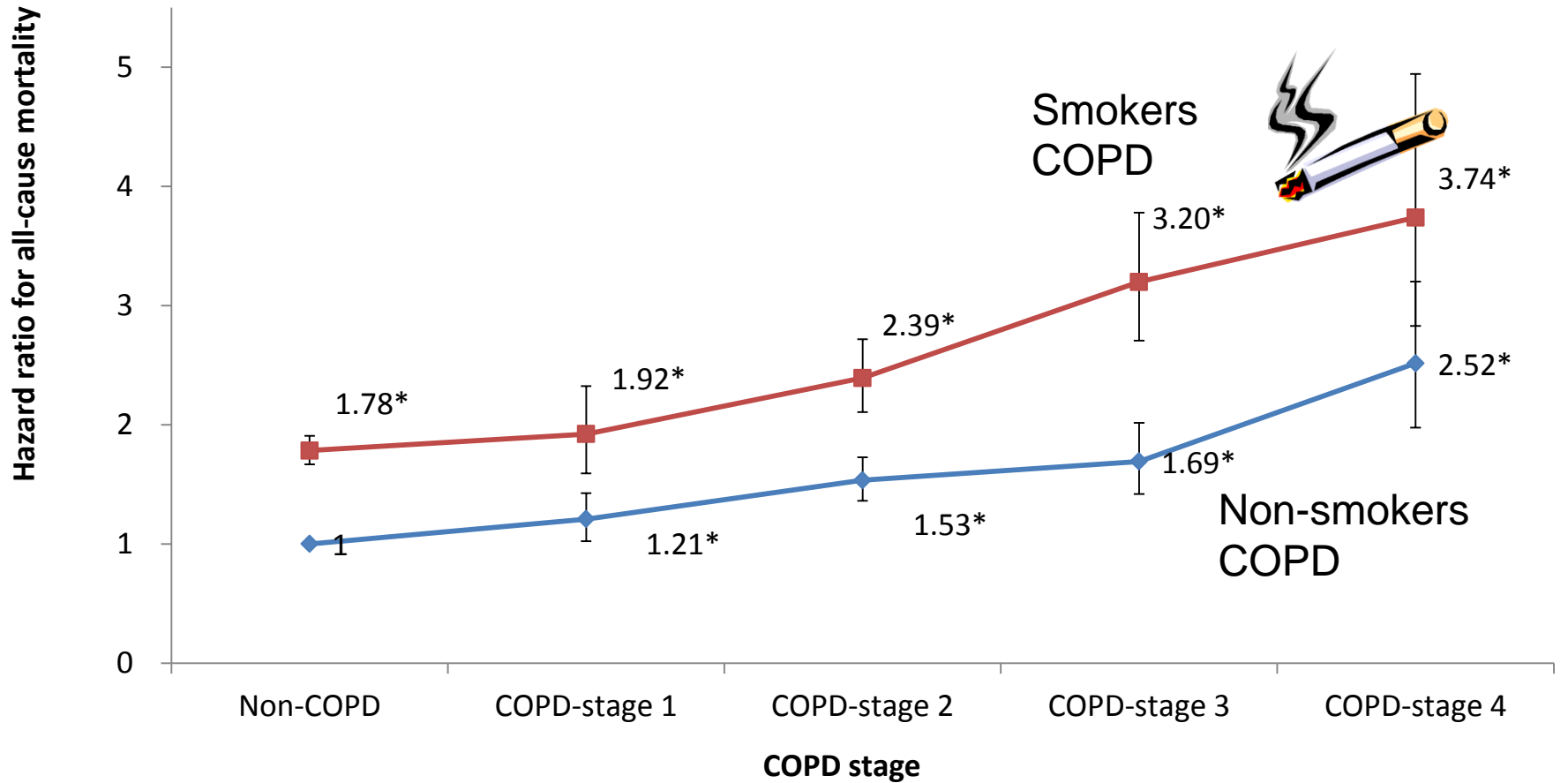
neutrophil eosinophil basophil monocyte lymphocyte

C-reactive protein increases with COPD stage

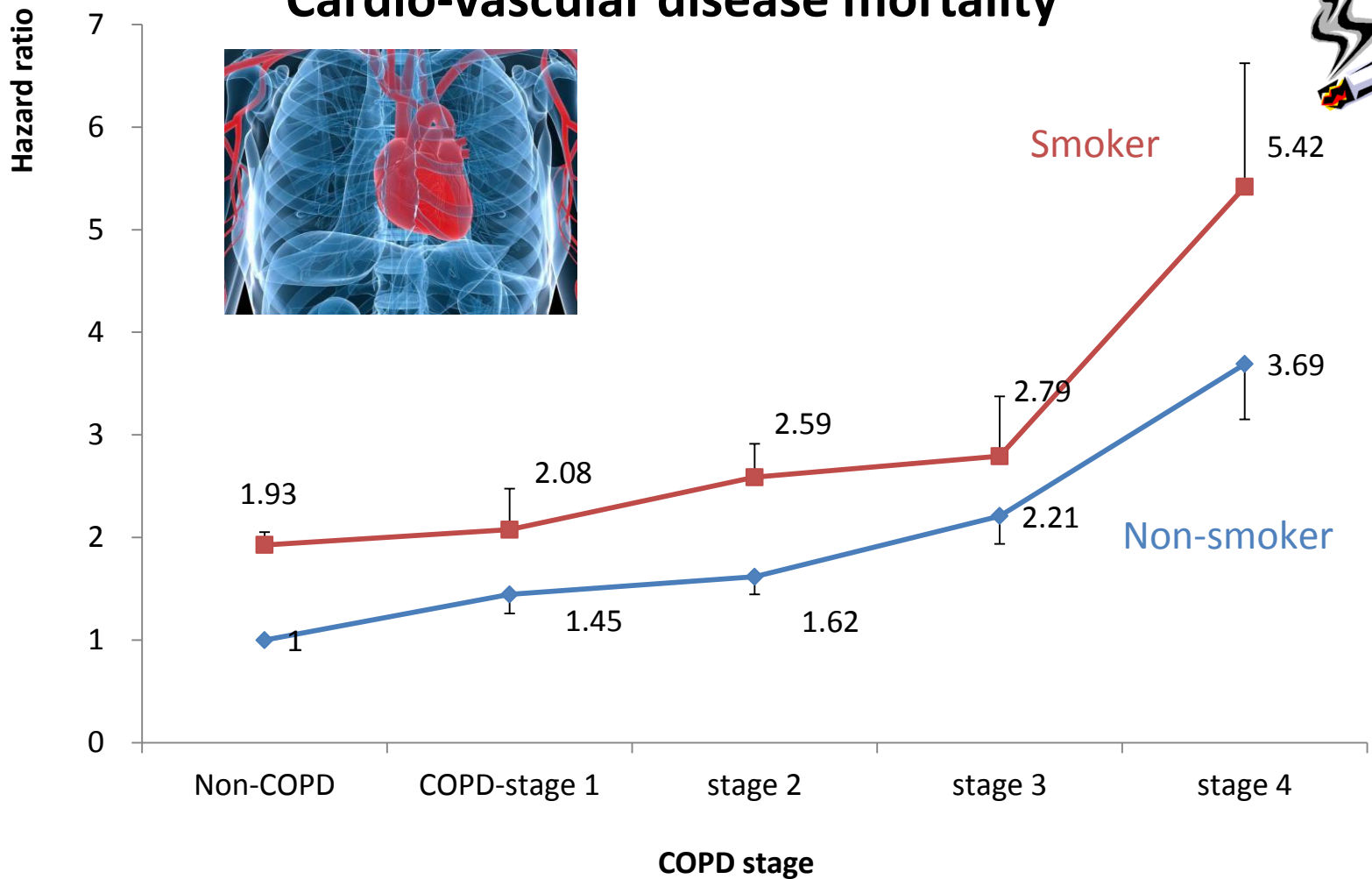
Smokers were higher than non-smokers



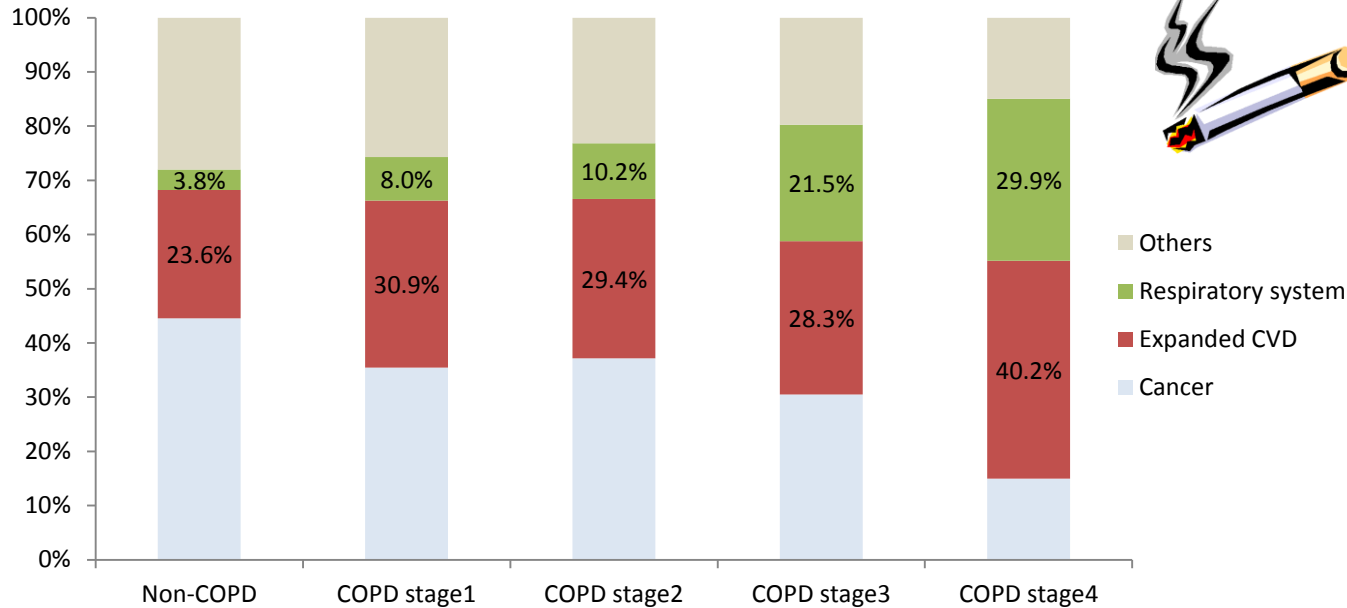
All-cause mortality



Cardio-vascular disease mortality



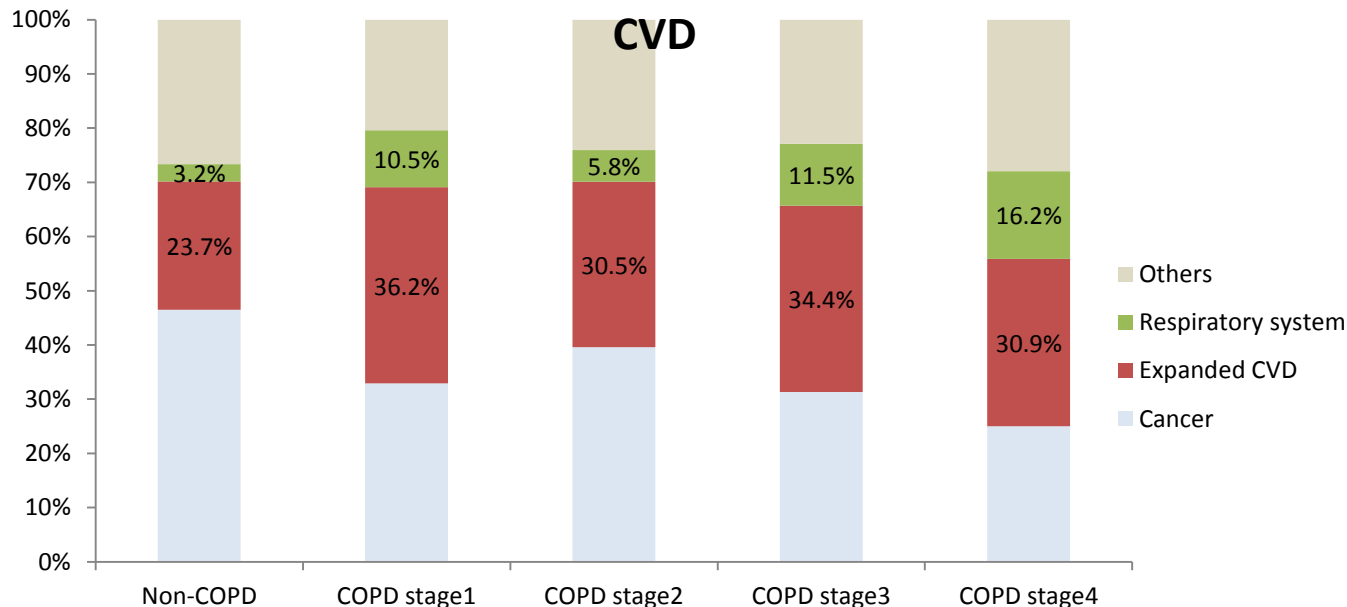
Cause of death among smoker with or without CVD



Excess death from extra pulmonary disease among smoking COPD subjects

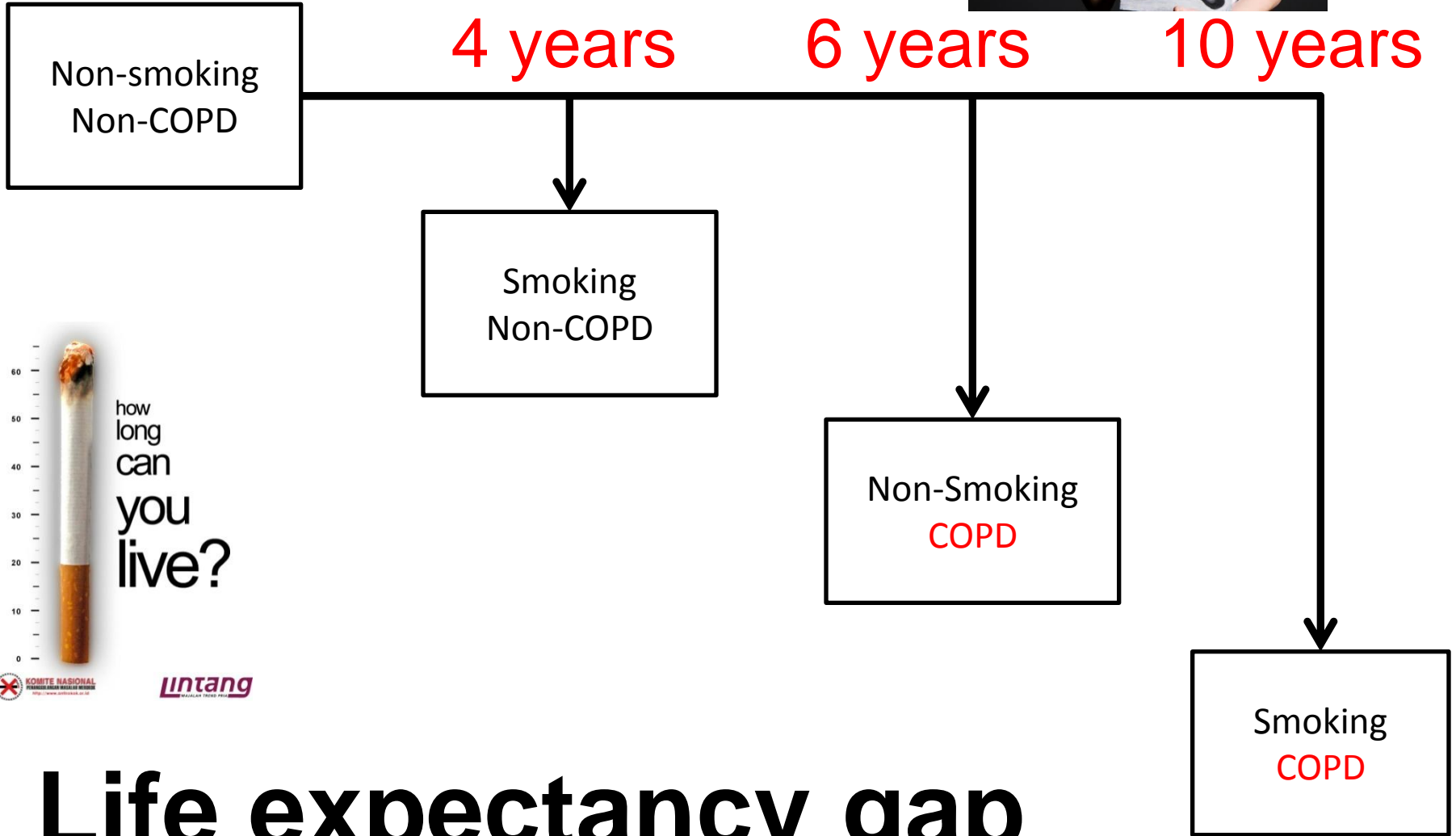
58%

Cause of death among non-smoker with or without CVD



Excess death from extra pulmonary disease among non-smoking COPD subjects

77%



Lintang
HEALTHY THOUGHTS FROM

Life expectancy gap

Conclusion

- COPD died 6-10 years earlier
- Most COPD patients (>75%) are not aware of their condition.
- COPD subjects are more likely to died from CVD deaths. The excess death beyond the lung is 58% for smokers. They had increases in stroke, heart, renal and infectious diseases, in addition to lung cancer.
- These extra-pulmonary risks, unaware of by the patients, are major challenges to overcome.

Thank you!

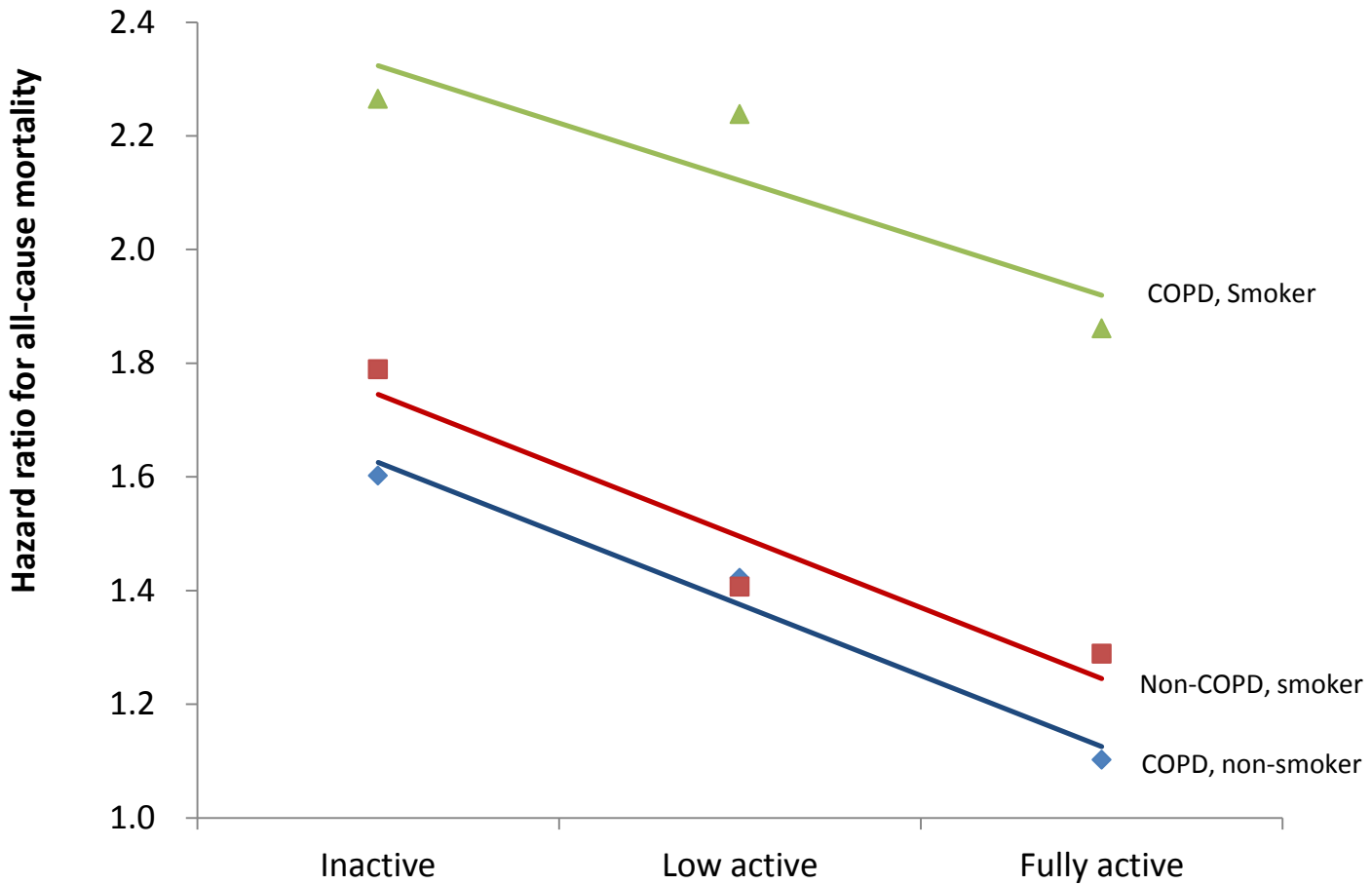


Salford Reds stars from left Adam Neal, Jack Spencer and Rob Parker at the launch of the Chronic Obstructive Pulmonary Disease campaign at The Willows Stadium, Salford.
Photograph taken by the Press Association

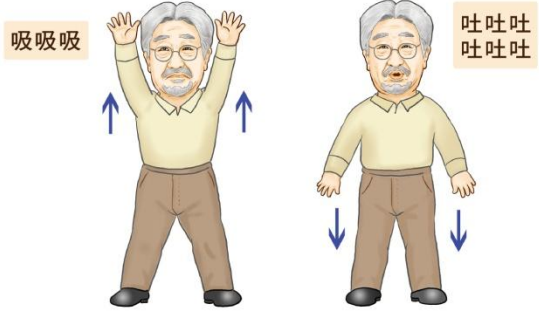
My adviser: Professor Wen



cwengood@nhri.org.tw

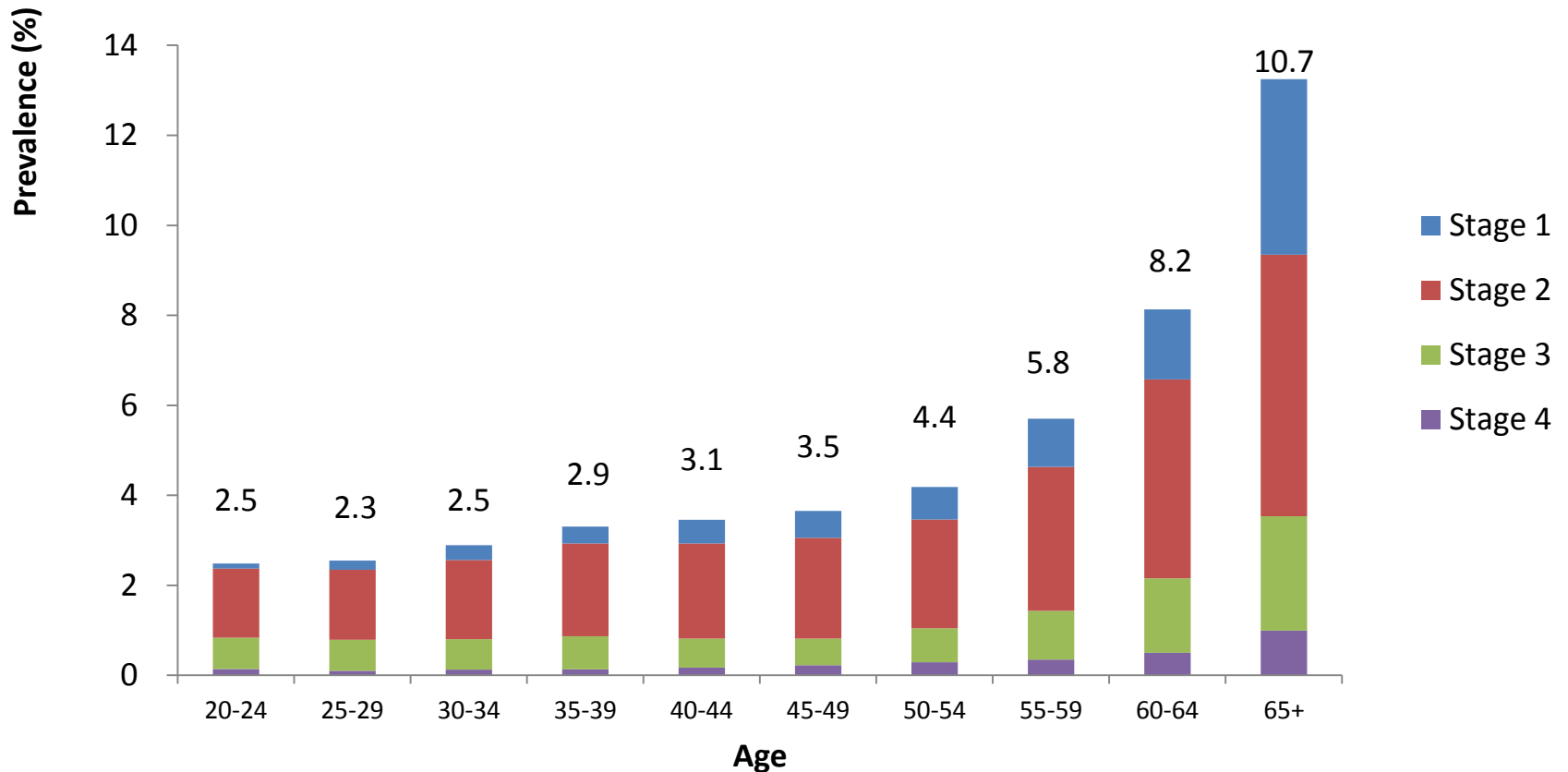


Physical activity

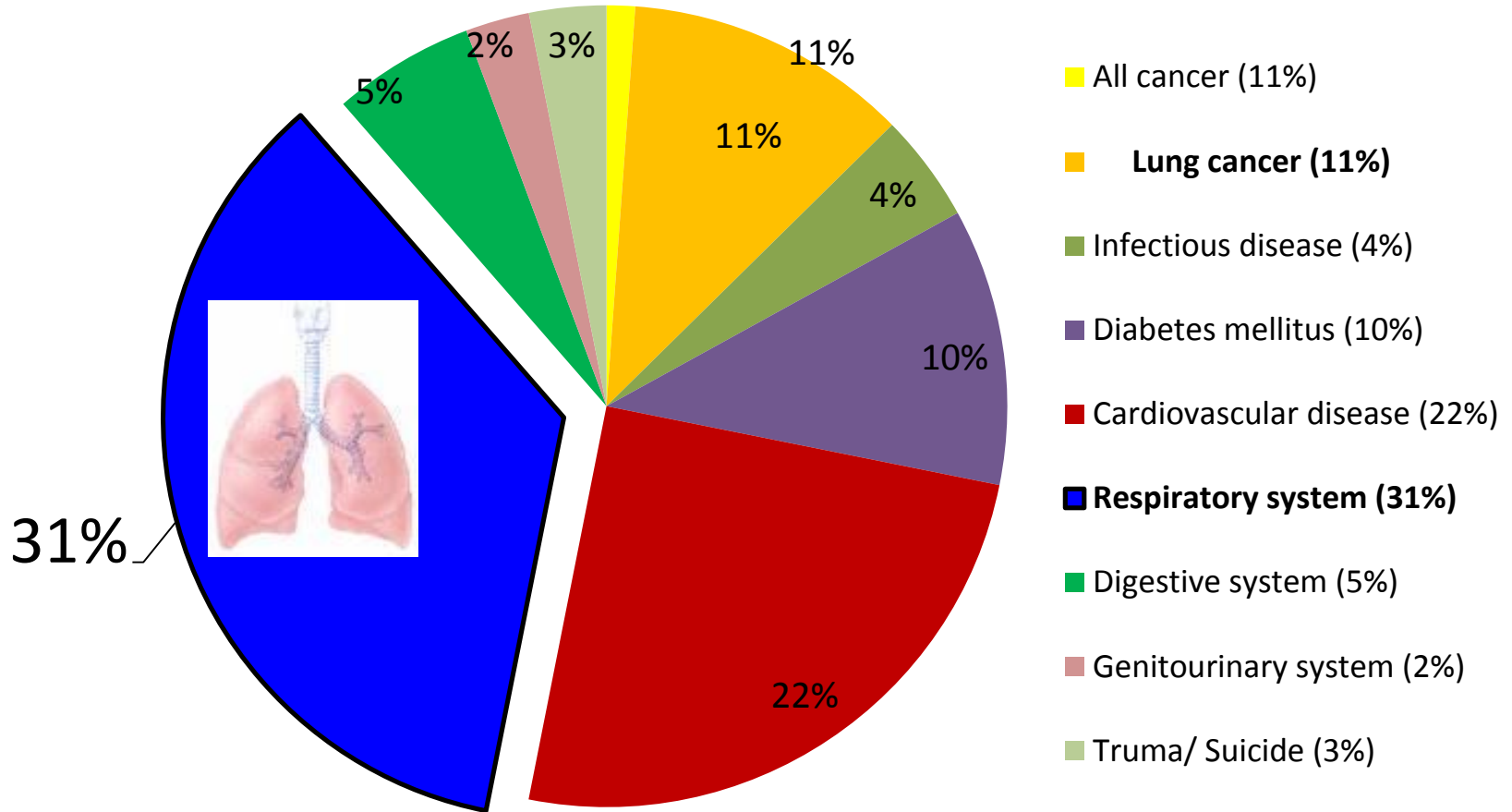


The prevalence increase with age 1 in 9 for age 65 or more

Stages of COPD national prevalence by age



Excess death from extra pulmonary disease among smoking COPD subjects



Excess death from extra pulmonary disease among non-smoking COPD

77%

