



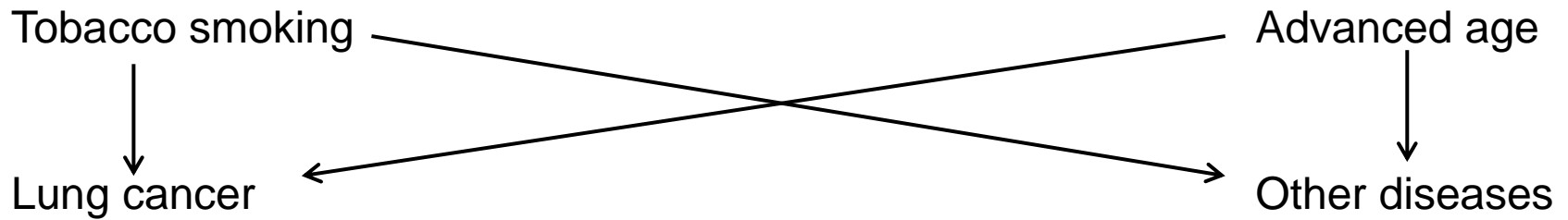
Public Health  
England

# The impact of comorbidity on lung cancer surgery and survival in England

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# Background



COMORBIDITY



Public Health  
England

## Aim

Investigate the impact of comorbidity on NSCLC patients undergoing surgical resection and the association between comorbidity and survival separately for resected NSCLC patients and all other lung cancer patients.



# Methods

| <b>NCDR 2008-2009</b>   | <b>HES</b>         | <b>NLCA</b>        |
|---|--------------------|--------------------|
| 64,653 patients with a first primary lung cancer (ICD10 C33-34) |                    |                    |
| Sex   | Comorbidity        | Stage              |
| Age   | Surgical resection | Performance status |
| Socioeconomic deprivation                                       |                    |                    |
| Histology   |                    |                    |



# Comorbidity

|        |     | Charlson comorbidity score |     |     |     |
|--------|-----|----------------------------|-----|-----|-----|
|        |     | 0                          | 1   | 2   | 3+  |
| Male   | 56% | 56%                        | 57% | 61% | 65% |
| Female | 44% | 44%                        | 43% | 39% | 35% |

- Advanced age
- More socioeconomically deprived
- Worse performance status
- Less advanced stage

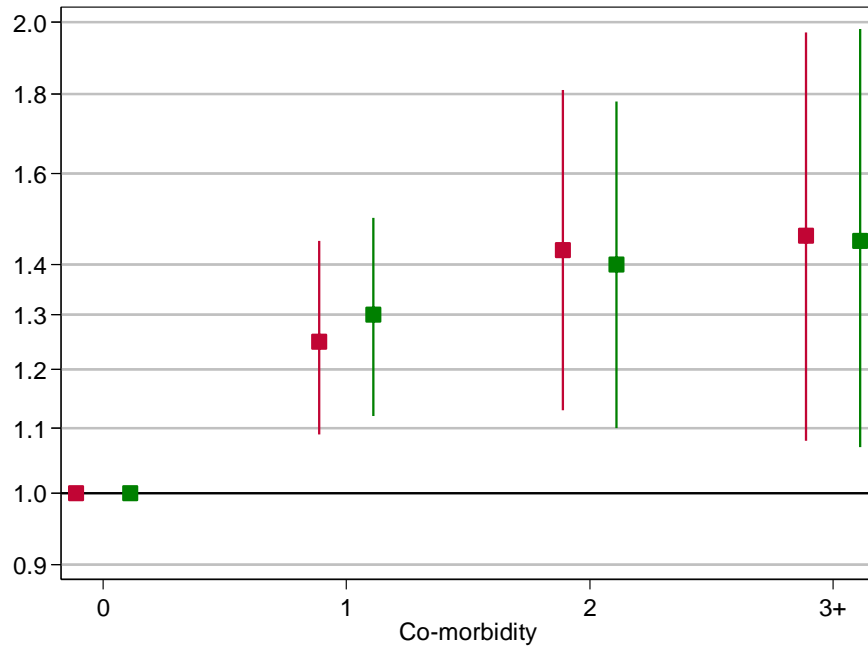


# Surgical resection

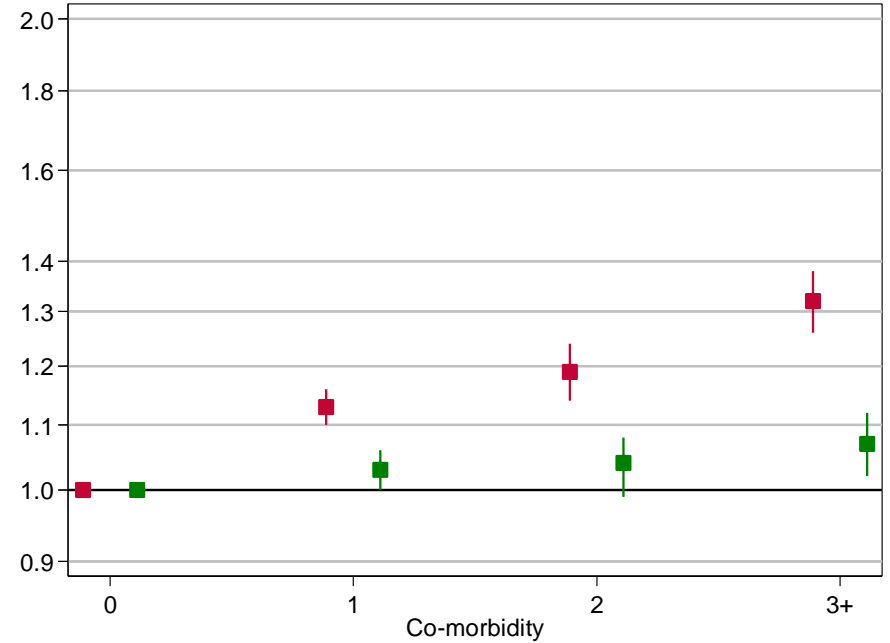
| CCS | Surgical resection | Odds ratio | 95% CI    |
|-----|--------------------|------------|-----------|
| 0   | 12%                | 1.00       |           |
| 1   | 10%                | 0.87       | 0.79-0.97 |
| 2   | 7%                 | 0.74       | 0.62-0.89 |
| 3+  | 6%                 | 0.58       | 0.46-0.74 |



## Resected NSCLC patients



## All patients (excluding resected NSCLC)

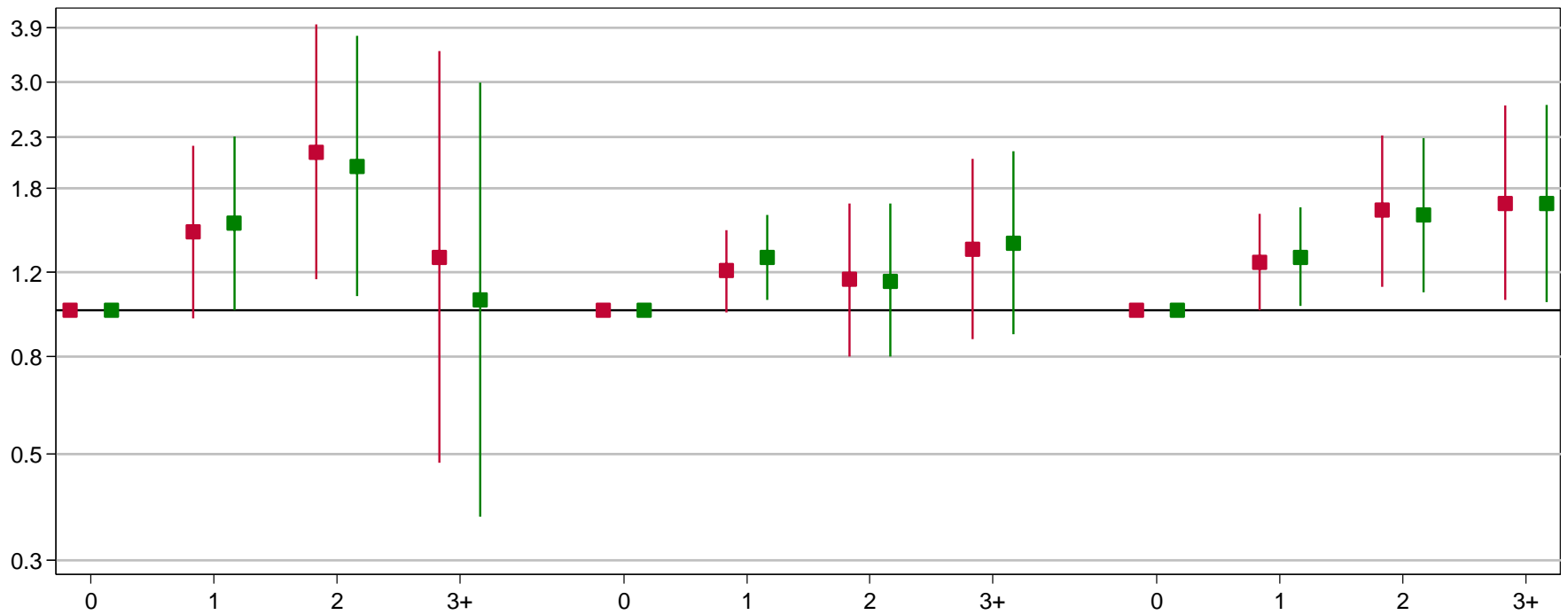


■ Unadjusted HR

■ Adjusted HR (sex, five-year age group, socioeconomic deprivation, histology, performance status and clinical stage)



## Resected NSCLC patients



<30 days post-surgery

30-365 days post-surgery

>365 days post-surgery





# Conclusion

Among resected NSCLC patients comorbidity is an independent prognostic factor for longer term survival. Among all other lung cancer patients not undergoing surgical resection, the effect of comorbidity is largely explained by performance status.