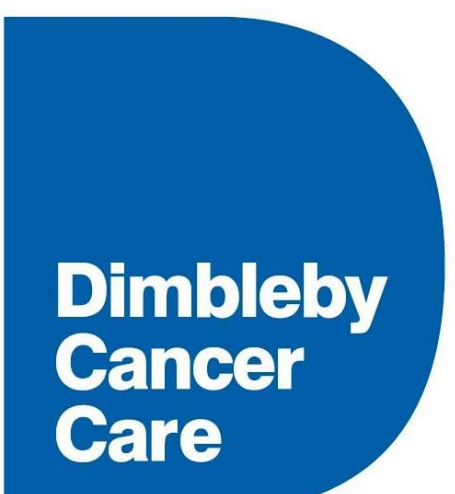




# Can nurse specialist working practices reduce the burdens of lung cancer?



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## INTRODUCTION

People with lung cancer experience physical and emotional hardships, often heightened by low survival rates and side effects of treatments. People may be admitted for unplanned hospital care due to reasons related to their lung cancer diagnosis, presenting an economic burden on healthcare resources. For individuals, unplanned admissions present a burden on their life that may be avoided through alternative care management initiatives.

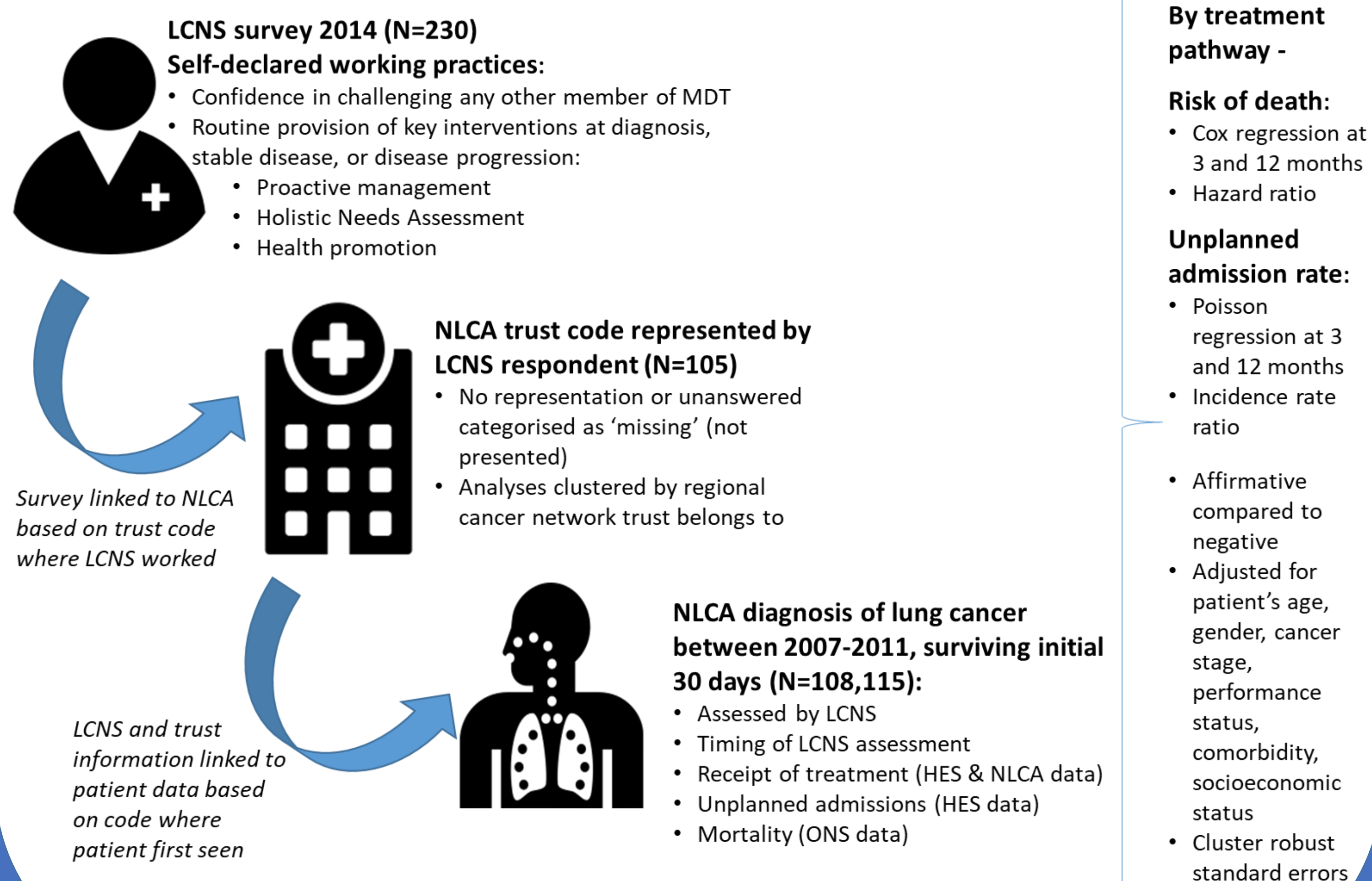
Lung cancer nurse specialists (LCNS) are advanced practitioners providing continuity of care across the lung cancer pathway, offering unique expertise within multidisciplinary settings and meeting complex patient needs. Small studies support the role of the LCNS in advocating treatment and suggest productivity gains through reduced emergency admissions<sup>A</sup>.

Lack of specialist cancer workforce resource is a potential barrier to delivering the Cancer Strategy for the UK<sup>B</sup>. To provide an evidence base for workforce policies, we use linkages to the National Lung Cancer Audit (NLCA) to assess whether LCNS working practices contributed to patient outcomes.

A. Leary and Baxter, 2014. DOI: 10.12968/bjon.2014.23.17.935; B. Macmillan, 2017. Warning Signs: Challenges to delivering the Cancer Strategy for England by 2020

## METHODS

### DATA SOURCES & LINKAGE



### ANALYSES

#### By treatment pathway -

**Risk of death:**

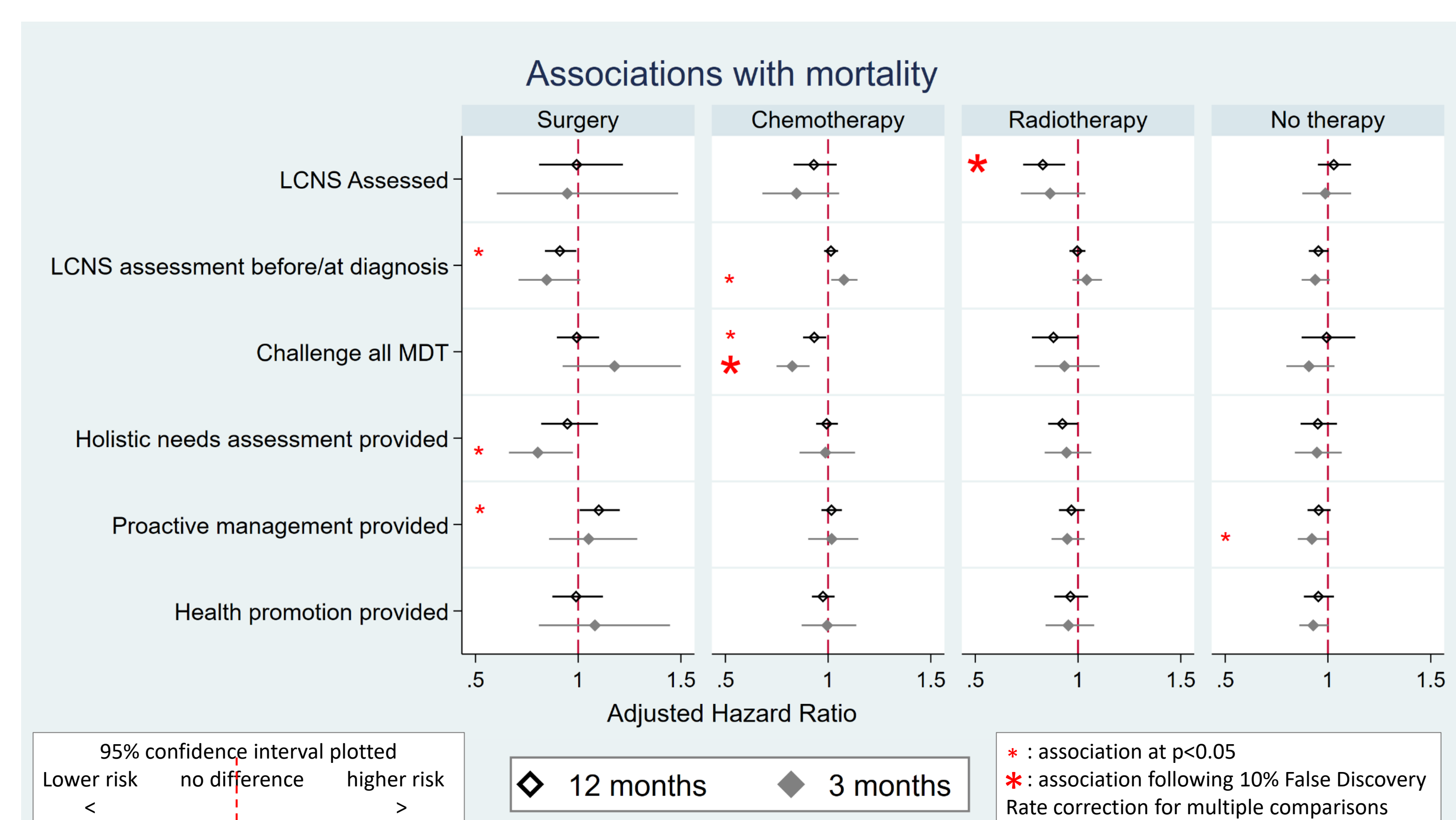
- Cox regression at 3 and 12 months
- Hazard ratio

#### Unplanned admission rate:

- Poisson regression at 3 and 12 months
- Incidence rate ratio

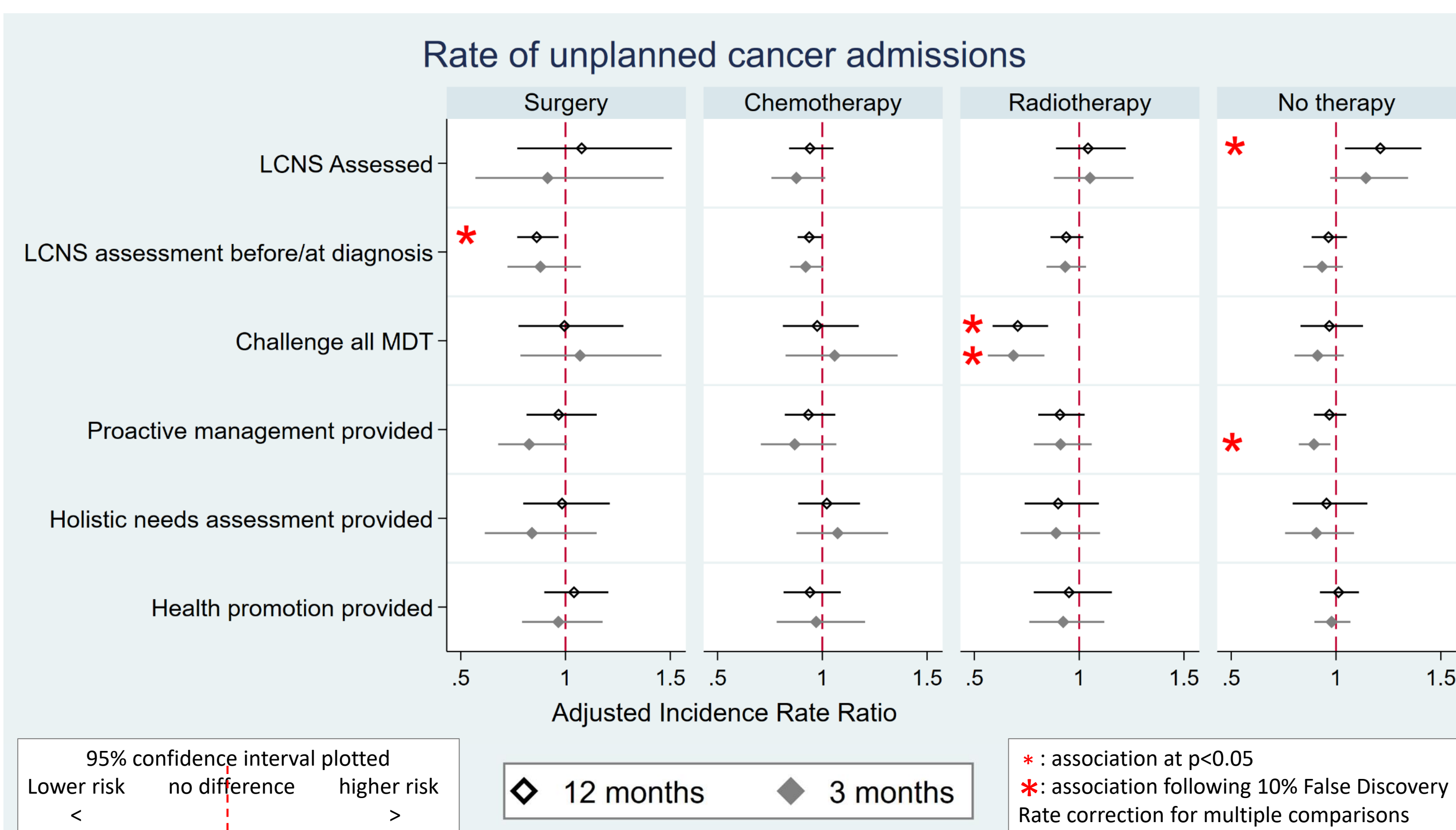
- Affirmative compared to negative
- Adjusted for patient's age, gender, cancer stage, performance status, comorbidity, socioeconomic status
- Cluster robust standard errors

**FIGURE 1:** Chemotherapy and radiotherapy patients had a lower risk of death where particular LCNS practices confirmed.



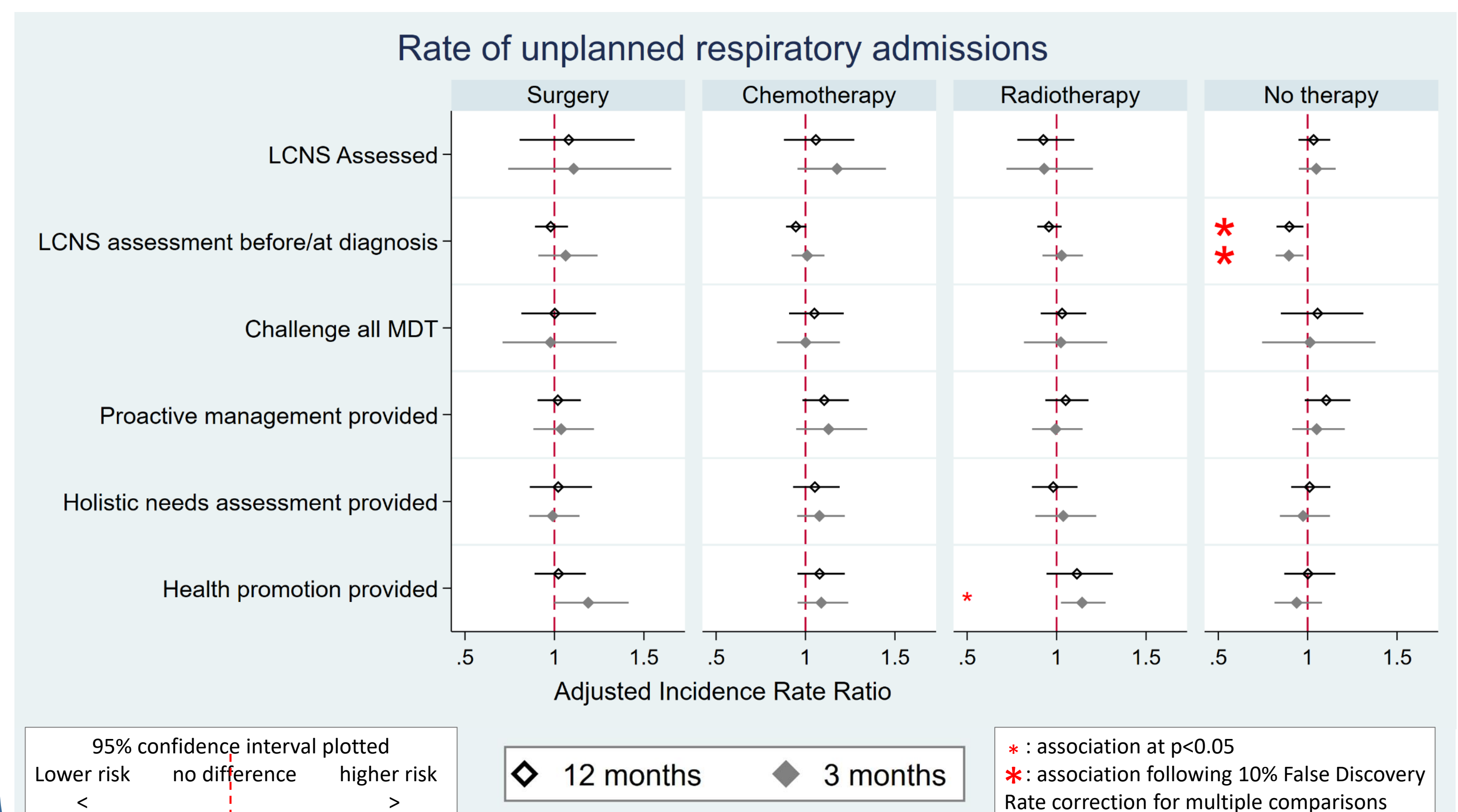
Mortality findings may be influenced by the prehabilitative role of LCNS and support around treatment decisions, advocating at MDT and meeting information needs

**FIGURE 2:** Patients had lower risk of emergency cancer admissions where LCNS assessed people early, were confident in MDT or provided proactive management.



Post-diagnosis admissions for cancer, including metastasis, may be influenced by timing of LCNS assessments and effective channels to communicate concerns

**FIGURE 3:** People who do not receive anti-cancer treatment had lower risk of unplanned admissions for respiratory complications when assessed early.



Fewer respiratory admissions in people who did not receive treatment may be influenced by advanced care planning and early integration of palliative care

## CONCLUSION

Outcomes were not frequently associated with differences in LCNS working practices but important relationships were observed. Practices were associated with at least one positive outcome within each treatment pathway, most notably for those receiving radiotherapy or not receiving anti-cancer therapy. Where outcomes were worse, this may be due to greater health awareness or inefficient communication routes. Pathway management could be improved through opportunities for proactive LCNS-led clinics and engaging MDT cultures. These findings offer valuable intelligence about LCNS services, the impact of which is a challenge to distinguish with current metrics, and will contribute to a growing number of resources informing workforce policy.