

Smoking cessation after a cancer diagnosis

Potential survival benefits

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Is
survival increased
if smokers quit after

diagnosis?

CVD



MS



Diabetes



Cancer



What we *do* know

- Continued smoking after a cancer diagnosis increases the risk of treatment complications, second primary tumours, cancer recurrence
- All-cause mortality is higher for cancer survivors who continue to smoke vs. *never* smokers, or survivors who quit sometime before diagnosis
- What about *recent quitters*? - people who quit around the time they are diagnosed with cancer?

Recent quitters

- Meta-analysis of small cell lung cancer: 5-year survival 63% recent quitters vs. 29% smokers (Parsons, 2010)
- US study of ~5000 cancers: overall mortality ~17% higher for continuing smokers after 12 year follow-up period compared to recent quitters (Warren, 2013)
- RCT, where smoking cessation compliance was between 5% – 40%, would need 9,500 - 600,000 cancer patients

Parsons, et al: *BMJ* 340:b5569, 2010

Warren, et al: *Int J Cancer* 132:401-10, 2013

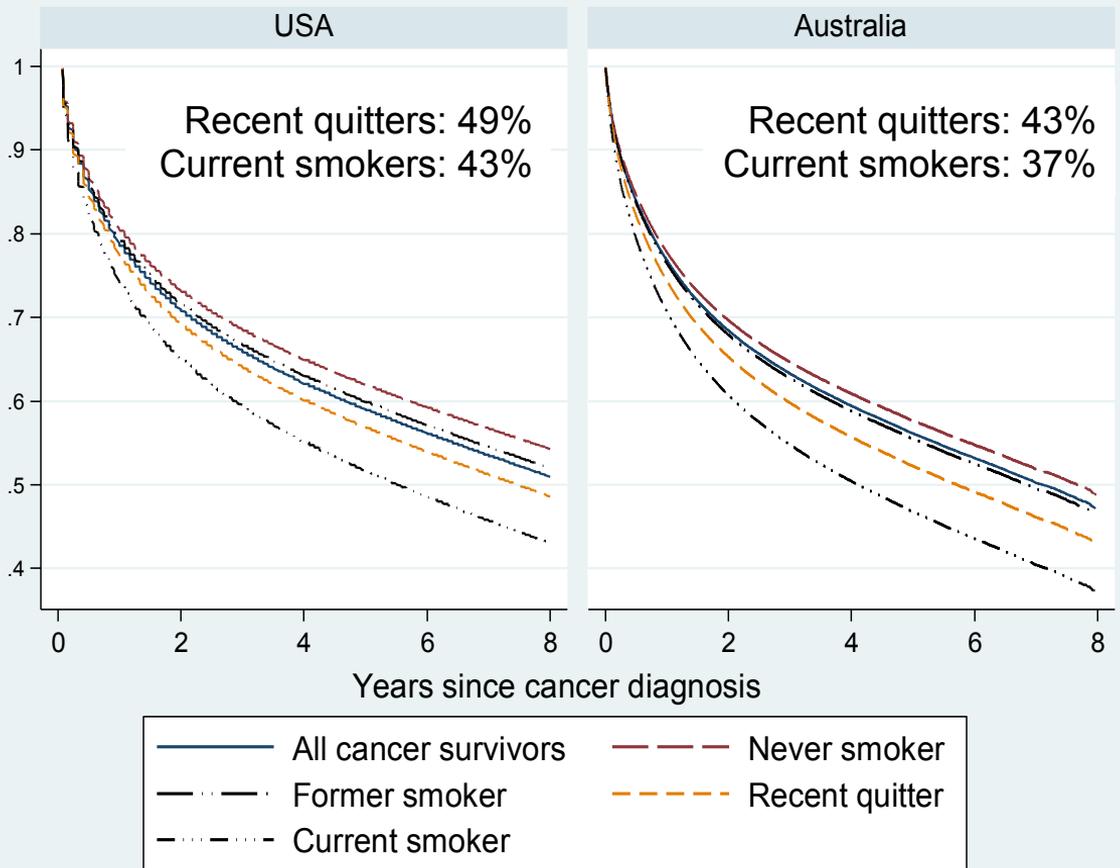
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Modelling approach

- We estimated the effects of smoking on the probability of survival after a cancer diagnosis in Australia and USA.
- Used 3 pieces of information:
 1. Cancer survival estimates 2001-08 (from CCR, NSW and SEER, USA)
 2. Mortality risk estimates by smoking status (from the US study of 5000 cancers, Warren, et al., 2013)
 3. Proportion of cancer patients that are smokers, recent quitters, former smokers or never smokers (from CLEAR and Warren, et al., 2013)

Warren, et al: *Int J Cancer* 132:401-10, 2013

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Limitations

The model is only as good as the information we feed it. Survival estimates could change depending on a number of factors:

- The relative risk of survival by smoking status used – the Warren estimates may not be generalisable across populations
- Different proportions of cancer types represented - e.g. potential for very different distributions of underlying cancers, stages of cancer and cancer therapies
- Estimates of smoking prevalences - might not be typical of the whole population
- Possible local variation around the treatment of people with cancer who smoke

Where to now?

- Can we integrate smoking cessation as adjuvant therapy in smokers with cancer?
- Planned editorial changes in our “*Understanding Cancer*” Series (3-5 years)
- Advocacy to add info into National Treatment Guidelines
- Model probabilities for LMIC

