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## Lung cancer in Maori: a neglected priority

Matire Harwood, Sarah Aldington, Richard Beasley

Cancer is the leading cause of death in New Zealand and lung cancer dominates as the most common cause of death from cancer.<sup>1,2</sup> Its high incidence and poor prognosis make it an important public health issue.

Despite its importance, there has been little research in New Zealand into the causes, prevention, or screening programmes for lung cancer—or its investigation and management. Therefore, it is timely that, in this issue of the *Journal*, Shaw et al have reported trends in the incidence and mortality rates of lung cancer by ethnicity and socioeconomic status for people living in New Zealand.<sup>3</sup>

Disturbingly, the study shows that (despite a reduction in overall rates) lung cancer inequalities by ethnicity and socioeconomic position have remained static or increased in New Zealand from 1981 to 1999.<sup>3</sup> The lung cancer rates for Maori are particularly concerning. The death rate from lung cancer in Maori is three times higher than in non-Maori, and the average age of death from lung cancer in Maori is lower (63 years compared to 70 years) than non-Maori. Furthermore, the incidence of lung cancer in New Zealand Maori is, without exception, the highest in the world.<sup>1,2</sup> The reasons for this ‘unenviable distinction’ need to be explored and addressed.

The association between lung cancer and smoking tobacco is well documented,<sup>4</sup> and the high rates of tobacco smoking in Maori are likely to contribute to the high incidence of lung cancer observed. However, many communities in Asia and Europe have similar rates of smoking, yet lower lung cancer rates. This suggests that other factors (acting independently of or together with tobacco smoking) make Maori more susceptible to developing lung cancer.

Importantly, the proportion of cases of lung cancer in Maori that are due to tobacco smoking has never been ascertained, and remains unknown. While it is assumed that almost all cases of lung cancer in Maori are due to smoking, this is unlikely to be the case. Environmental tobacco smoke (passive smoking), smoking marijuana, occupational exposures, diet, socioeconomic status, or level of deprivation are also likely to play a role in the pathogenesis of lung cancer in Maori.

The prevalence of asthma is also high in Maori adults and there is evidence that this chronic inflammatory disorder of the airways is also a risk factor for lung cancer.<sup>5</sup> The role of these, and other potential risk factors, requires further exploration, as does the efficacy of related prevention programmes.

Currently lung cancer risk reduction programmes tend to focus on reducing tobacco smoking, however, these have made little impact on smoking rates in Maori. Despite widespread public health programmes and other initiatives, the rate of smoking in Maori has remained around 50% over the last 20 years, during a period when the smoking rates in non-Maori have fallen substantially.

The commitment to fund nicotine replacement therapy and ‘Quit Smoking’ programmes in Maori over recent years has been impressive, although the decision by

PHARMAC not to fund bupropion, a proven smoking cessation treatment in Maori,<sup>6</sup> is indefensible and contrary to the Government's tobacco control plan.<sup>7</sup>

The quality of the assessment and management of lung cancer along the care pathway is a related issue. There is circumstantial evidence of inequalities in the care of Maori with lung cancer, and that this results in worse outcomes. For example, the ratio of Maori to non-Maori mortality for lung cancer is higher than that for lung cancer incidence (3.5 for mortality compared with 2.8 for incidence).<sup>8</sup> In other words, case fatality rates for lung cancer are higher for Maori compared to non Maori.<sup>9</sup>

Possible explanations include a delay in presentation (for whatever reason) or delays in the investigation, diagnosis, staging, or treatment of lung cancer. Maori are less likely than non Maori to have their cancer staged at diagnosis and the reasons for this are not clear.

While there is no New Zealand data on whether treatment rates may also differ, ethnic differences certainly exist in the treatment of early stage lung cancer in the United States.<sup>10</sup> Indeed, the lower survival rates for black patients with lung cancer compared to white patients is largely explained by the lower rate of surgery. Screening programmes for lung cancer are not available in New Zealand, and therefore early diagnosis and treatment is important. Late diagnosis of lung cancer has devastating consequences because of the limited treatment options.

The other unrecognised ethnic disparity is the high rates of lung cancer in the Pacific people, which is twice as high as in non Maori non Pacific people. It would be important that any initiatives developed to reduce the incidence of lung cancer and improve the outcomes in Maori are also implemented in the Pacific community.

In conclusion, the disparities in lung cancer rates across ethnicity and socioeconomic status in New Zealand are disturbing, and (as predicted by Shaw and colleagues<sup>3</sup>) these disparities are likely to increase over time. This raises a number of issues, including whether the lack of research and public health emphasis on lung cancer may be due to a lack of concern for the Maori, Pacific, and disadvantaged populations most at risk, or whether it may be in part due to the 'stigma, shame and blame' related to lung cancer.<sup>11</sup>

If the current trends continue, the future burden of lung cancer will fall most heavily on Maori, Pacific, and disadvantaged socioeconomic groups. Can we assure them that we are doing all we can to find solutions?

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