

MEDICAL ONCOLOGY GROUP OF AUSTRALIA CANCER ACHIEVEMENT AWARD – CANCER, THEN AND NOW

James F Bishop AO

Chief Medical Officer, Government Department of Health and Ageing, Australian Government, ACT.

Email: jim.bishop@health.gov.au

When I graduated in 1972, the most common cancer in males was lung cancer, with cancer overall equally distributed between men and women.¹ In 1980, less than half of all people diagnosed with cancer lived for five years.² Today, nearly two thirds of all those diagnosed with cancer survive at least five years and more survive much longer if the cancer is localised at diagnosis. The five year survival for those with localised breast cancer is around 98%.

The mortality reductions from cancer in the last 10-15 years have been dramatic. Most recent information suggests that mortality rates have fallen by around 13% in men and 6% in women over the last decade.³ Join-point analysis suggests that the change in mortality trends occurred in the late 1980s for both men and women.⁴ It may be useful to reflect on the new cancer control programs coming into practice in the 1980s and 1990s and to speculate if they were partly responsible for this dramatic change in cancer mortality.

Major advances in the late 1980s and 1990s were the ongoing population-wide reductions in smoking prevalence, the introduction of new adjuvant treatment for breast cancer and the start of screening activities for breast and cervical screening, as well as the introduction of new and more effective anti-cancer agents such as platinum. In breast cancer, extensive modelling by the US National Cancer Institute would suggest that screening and adjuvant therapy equally contributed to the dramatic reductions seen in breast cancer mortality in the US.⁵ The long-term survival improvement in breast cancer, with early detection through screening and more effective post-surgical treatment, provides an important approach or hypothesis that should now undergo rigorous testing in clinical trials in all types of cancer.

It could be a challenge to sustain the mortality reduction realised in the last 15 years, given the predicted increase in the number of cancer patients expected in the next 15 years. These increases in cancer numbers are being driven by ageing of the population and population growth, as well as an increase in some types of cancer.⁶ Even with continuing reductions in smoking prevalence, some modelling has predicted that lung cancer will remain the largest cause of cancer deaths in Australia for the next 20 years, with tobacco the major cause. Recently, lung cancer overtook breast cancer as the major cause of cancer deaths in women.³ The effective control and cure of cancer must go hand in hand with proven interventions to prevent cancer. A further challenge to the current long average life expectancy of Australians will be the influence of increasing obesity and the ongoing lack of physical activity in our population.⁷⁻⁸ While they are major determinants of

health relevant to a range of diseases, obesity and lack of physical activity have now been well established as important risk factors in a number of cancers.⁷

While cancer deaths should continue to reduce as a proportion of incidence, future projections predict increasing numbers of cancers diagnosed and also increasing numbers of cancer deaths for the future.⁶

This challenge will require an ongoing commitment to medical research and its success with medical research breakthroughs. In turn, these need to be quickly implemented as large scale public health programs, important new screening markers or new therapeutics. Such successful research discoveries will need to be as successful as those since the 1980s, if the ongoing reduction in cancer mortality is to be maintained.

The Australian Government's approach has been to imbed major new cancer funding initiatives within an emerging health reform agenda. In the 2008-09 Federal Budget, an additional \$1.3 billion was allocated to cancer projects, including adding further depth to the large scale comprehensive cancer centres at Camperdown and Parkville, 10 new regional cancer centres, including one in Canberra, and a planned roll out of digital mammography.

The current Council of Australian Governments' agreement has provided \$872 million in 2008-09 for preventative health, with the Government considering the Preventative Health Taskforce Report. There are plans to establish a national preventative health agency to take these initiatives forward. Since the common determinants of health are risk factors for cancer, cardiovascular, respiratory and metabolic diseases, a successful prevention strategy has the potential to improve a range of diseases including cancer.

To focus improvements in many chronic diseases, the Primary Care Strategy and Health and Hospital Reform Commission have provided a number of recommendations for Government addressing the above determinants of health. This reform agenda provides opportunities to reduce risk factors, to improve access, to promote early diagnosis and enable timely interventions to deliver improved evidence-based cancer care in Australia.

New areas for cancer research include new insight into genomic changes leading to new markers, new therapeutic targets and drugs, psycho-oncology, clinical service improvement and an emphasis on making new basic research discoveries lead to clinical practice improvement in a timely fashion. The increase in National Health and Medical Research Council funding for cancer research

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from \$28m in 2000 to nearly \$155m in 2009 represents a major government investment in these opportunities.⁹ Better use of data to better inform practice and an emphasis on agreed best practice also provide hope for better cancer outcomes. Such developments provide the basis for optimism that cancer outcomes will continue to improve in the next decade, as they have in the last.

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