Australian Government
Department of Health
Cancer Australia
Email: lungcancerscreening@canceraustralia.gov.au

RE: Cancer Australia Lung Cancer Screening enquiry

Lung cancer places a considerable burden on those living with the disease and their families, as well as society and the economy at large. A majority of lung cancer cases are diagnosed at an advanced stage, and this is associated with poorer outcomes. Therefore, early diagnosis of lung cancer is vital to improving outcomes and prolonging survival. The innovative medicines industry can play a critical role in reducing the burden of lung cancer via investment in, and development of, innovative diagnostics and precision medicines.

In our main submission (Appendix 1) we have made specific recommendations. Broadly speaking, Medicines Australia supports the following principles in order to reduce the morbidity and mortality from lung cancer:

- The development of fit for purpose regulatory, reimbursement, and health care delivery systems that will foster continued innovation in precision medicine, in order to unlock the full value of targeted medicines and companion diagnostics; and

- Patient and health professional education on disease awareness via collaborative engagement between industry, health consumer organisations and primary care

About Medicines Australia

Medicines Australia is the peak industry body representing the innovative research-based medicines industry in Australia. Our members are innovative companies that research, develop, manufacture and supply new medicines, therapies and vaccines to the Australian market, including those for lung cancer. The innovative medicines industry is proud of the contribution it makes to the health and well-being of everyday Australians, as well as to the local economy. The innovative medicines industry has developed some ground-breaking discoveries. These emerging innovative medicines and therapies (such as CAR-T and precision medicine) are helping to fight previously untreatable diseases and are providing patients with better survival rates and improved quality of life.

We welcome the opportunity to provide input into this important enquiry. Our members are committed to continuous investment in the development of innovative therapies that will deliver more meaningful treatment efficacy and enhance the lives of patients. Medicines Australia looks forward to reviewing the outcomes of this enquiry and working with stakeholders to explore cutting-edge science and technology that will transform patient outcomes.

To view our submission, please refer to Appendix 1. Please feel free to contact Betsy Anderson-Smith on banderson-smith@medaus.com.au for further information or to discuss any aspect of our submission.

Sincerely

Dr Vicki Gardiner
Director of Policy and Research
Medicines Australia

APPENDIX 1

The burden of lung cancer

Lung cancer has been named as the world's deadliest cancer. It is the most common cancer in the world and accounts for 1 in 5 cancer deaths[1]. Specifically, in Australia, it is the leading cause of cancer death, and has the lowest five-year relative survival rate (17 percent) when compared to the other top five most commonly diagnosed cancers[2]. Importantly, many people with lung cancer are diagnosed in later stages when compared with other cancers. For example, the proportion of people diagnosed in Stage I for lung cancer is 11.7 percent, compared to 42.8 percent for breast cancer[1]. This is significant as delays in diagnosis result in poorer outcomes[1].

Lung cancer, like many medical conditions, imposes significant costs to the health system, patients, and their families. Indeed, the economic burden of lung cancer for patients diagnosed in 2018 is estimated to reach $283.7 million (direct costs – i.e. treatment and out of hospital costs), and $13.5 million (indirect costs – i.e. loss of productivity, absenteeism). These costs are estimated to grow with population projections and new incidences of lung cancer growing at a similar rate (in 2028 direct costs are estimated to be $6.2 billion and indirect costs $325.9 million)[2].

This economic burden affects multiple stakeholders including[2]:

- Government (health spending, investment in smoking interventions, welfare subsidies, lower tax revenue, hospital infrastructure)
- Patients (premature mortality, quality of life, out of pocket expenses, psychological burden, stigma, absenteeism)
- Private health insurers (medical care claims and premium increases)
- Families and carers (quality of life, carer absenteeism, home service care)
- Employers (absenteeism and presenteeism)

Innovative medicines play a key role in the reduction of cancer burden. Research has shown that pharmaceutical innovation improves patient outcomes, reduces hospital demand, and is cost effective[3]. The same research found that pharmaceutical innovation directly improves cancer survival rates[3]. This research examined the effect of the number of new drugs launched for treating cancer at different sites on the five-year relative survival rate, and on the mean age of cancer deaths over a ten-year period[3].

This research indicated that[3]:

- Almost half (48%) of the increase in mean age at death from cancer between 2008-2018 was due to the launch of new cancer drugs
- 44% of the increase in the five-year cancer survival rate between 2001-2005 and 2011-2015 was due to the launch of new cancer drugs
- Cancer drugs launched during 1998-2008 reduced the number of cancer deaths in 2018 by 7.8%

The role of the innovative medicines industry in the diagnosis and treatment of lung cancer

Improve and simplify access to quality diagnostics

Recommendation: *With the potential for companion diagnostics to enable appropriate and earlier diagnoses, and the associated curative potential of precision medicines, Medicines Australia recommends that the Government move to innovative evaluation and payment models, which focus on the value of therapy to individual patients, the community, and the health system.*

Access to innovative diagnostics that have the ability to screen a broad range of the population and a range of tumour types can allow lung cancer to be identified earlier and patient outcomes to be improved. Diagnosing and treating lung cancer early also has economic benefits. For example, as cancer progression increases, so does the cost of treatment, on average costing $15,500 more to treat Stage IV lung cancer than Stage I[2]. Treatment options for lung cancer can vary and depend on the type and stage of the cancer, as well as the size and position of the tumour, the presence of metastases, and the overall health of the patient. Diagnostics play a role in ensuring the most optimal treatment is selected with consideration of these factors.

Innovative diagnostics also allow for faster and less invasive identification of clinically relevant biomarkers in patients to guide treatment decisions. For example, in non-small cell lung cancer (NSCLC), epidermal growth factor receptor (EGFR) testing is not performed in approximately 20% of eligible patients due to unavailable or insufficient tissue. This is where liquid biopsy can help overcome complications of a traditional lung biopsy. Liquid biopsy is an alternative to surgical biopsies and involves a blood sample that detects EGFR gene mutations, which enable clinicians to choose the right treatment for the right patient. In addition, most cancers have multiple genetic mutations and they may not have the same mutations in all parts of the cancer.
The tissue samples removed for biopsy may not show all mutations whereas liquid biopsies offer an improved chance of detecting the various genetic changes.

In a similar respect, liquid biopsies can detect disease progression or treatment resistance long before it would normally trigger clinical symptoms or appear on imaging scans. Innovative diagnostics such as liquid biopsies therefore have the potential to improve progression and survival rates.

Precision medicine and targeted treatments

Recommendation: *Medicines Australia recommends that the Government work with stakeholders to create policies that incentivise and facilitate access to precision medicines. This can be achieved by reviewing existing regulatory and reimbursement systems to ensure they reflect these emerging technologies.*

Precision medicine involves using unique patient and disease characteristics (such as biomarkers, treatment history, and genetic makeup of both patient and disease), to more precisely guide treatment planning.

With the knowledge of an individual's genetic, genomic, and other biomarker data, as well as an in depth understanding of disease, precision medicine can benefit patients and the health system in many ways, including:

- Using diagnostic tests to allow the most appropriate treatment option to be selected at the outset, reducing inefficient prescribing
- The use of safer treatments, reducing the risks and costs of adverse events, thus improving the cost effectiveness of care
- Reduction of health care costs – By being aware of genetic risk factors which encourage preventative care and early diagnosis, the prevention of advanced disease states, and the efficient use of resources

Medicines Australia's member companies are committed to investing in precision medicine to optimise patient care and deliver efficiencies to the health care system. Specific to lung cancer for example, our members have developed several immuno-oncology medications including atezolizumab, durvalumab, and pembrolizumab. These new medicines will provide additional treatment options and hope for some late stage lung cancer patients.

Patient and health professional engagement

Recommendation: *In order to ensure that patients with lung cancer are diagnosed and treated appropriately at an earlier stage, Medicines Australia proposes that health professionals and patients are provided with education on lung cancer to enhance public disease awareness and reduce stigma.*

Medicines Australia believes that the more patients are engaged with (and educated about) their healthcare, the better their outcomes will be.

The innovative medicines industry has a responsibility to promote the quality use of medicines. In doing so, our industry produces educational materials about their products for healthcare professionals and patients, including the approved Product Information (PI) and the Consumer Medicine Information (CMI) respectively. The provision of medicines information and education to patients and healthcare professionals assists in the quality use of medicines; ensures prescribers and other healthcare professionals can prescribe, dispense and administer products appropriately; and enables better health literacy for patients.

Whilst our member companies have a responsibility to promote quality use of medicines, they also have a responsibility to ensure ethical conduct amongst organisations in the healthcare sector. The ethical promotion of prescription medicines to healthcare professionals is governed by the Medicines Australia Code of Conduct (the Code). The Code specifies requirements to ensure the ethical promotion of prescription medicines to healthcare professionals, including that only TGA-approved indications are promoted, and it requires that adequate safety information is readily available to healthcare professionals in the form of the PI.

Medicines Australia member case study – Patient and health professional engagement - Lung Foundation Australia (LFA) and Astra Zeneca partnership

Medicines Australia member company Astra Zeneca has partnered with LFA to improve disease awareness and reduce the stigma associated with lung cancer. Stigma leads to late diagnoses, less research funding, and poor access to essential services and treatment. While advances continue to be made regarding new treatments for lung cancer, the systemic stigma will remain a barrier to improved care if it goes unaddressed.

Astra Zeneca, together with LFA, commissioned a PriceWaterhouseCoopers report, alongside an expert steering committee, to quantify the poor outcomes confronting Australians living with lung cancer, and to propose tangible solutions to some of the systemic issues.

The report found that:

- 28% are not staged when diagnosed, potentially thereby missing out on life changing treatment and care as a result.
- 20% do not receive any treatment following a diagnosis, and others can wait up to 2 months until they receive any treatment.
- Only 50% have access to multidisciplinary teams (MDTs), and therefore best practice care and outcomes. One in two miss out.
- 50% of Australians living with lung cancer experience distress, anxiety and or depression, which worsens their quality of life.

As a result, five tangible solutions were proposed, to help improve outcomes and ensure patients accessed what they deserved:

1. Australian Government to fund more lung cancer clinical nurse specialists to assist people to navigate best practice care pathways to improve outcomes
2. Increase access to multidisciplinary team (MDT) care in local health districts, and facilitate earlier referrals and GP education in regional areas
3. Increase education on the needs of people living with lung cancer and disease complexities in medical workforce training and curriculum, with strategies to improve outcomes
4. Fund a public awareness campaign that encourages Australia to “give everyone a fair go”
5. Screen all people living with lung cancer to understand individual psychosocial support needs, complete mental health plans and refer patients for help as early as appropriate

LFA and Astra Zeneca then launched the report, *Making Lung Cancer a Fair Fight: A Blueprint for Reform*, at Parliament House and to media on 24 October 2018, to both the powerful national media networks, and to Federal MPs and the Minister.

The media generated more coverage for LFA than it had ever had before. With a suite of clinical spokespeople and patients, Astra Zeneca and LFA ensured the report had the potential to make 23 million impressions.

News of the report syndicated throughout Fairfax, NewsCorp, Channels 9, 10 and 7. ABC News Breakfast and Sky News also interviewed key spokespeople. The campaign also took home the prestigious PRIME Award 2019 for ‘Best PR Campaign.’

By drawing attention to the inequities in care, Astra Zeneca and LFA ensured patients around Australia knew that they were worthy of the very best treatment, care and support. LFA and Astra Zeneca continue to fight for a fair go for Australians living with lung cancer.

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