

How immuno-oncology (PD-1/PD-L1 inhibitors) cancer treatments could impact patients and Australia's economy.

The Health Impact Projection (HIP) 2.0 analysis examined the effects of access to immuno-oncology therapies (PD-1/PD-L1 inhibitors) on patient's health and to the economy. This fact sheet describes the results from the analysis.

What is the HIP 2.0 analysis?

The HIP 2.0 analysis examines the effects of immuno-oncology therapies compared to standard of care (e.g., chemotherapy) on both health and societal outcomes of populations of patients with cancer in Australia.¹

Immuno-oncology therapies have been studied for survival outcomes, but their impact on Australia's society and economy has not been widely analysed.² To address this need, the HIP 2.0 modelled the possible effects of immunooncology therapies on patient's health, as well as social and economic factors, such as patient's ability to work.¹

What are immunooncology therapies?

Immuno-oncology therapies are emerging as a first-line treatment for several types of cancer.³ They work by blocking proteins in the body called checkpoints. These checkpoints can sometimes stop the body's immune system from attacking cancer cells.

Immuno-oncology inhibitors (PD-1/ PD-L1 inhibitors) can block the checkpoints and help the immune system do its job of finding and killing cancer cells.⁴

What did the HIP 2.0 analysis find?

The HIP 2.0 analysis revealed that if immuno-oncology therapies were used for all eligible patients in eight tumour types in 2021-2025, these therapies could:

- Add ~48,000 life years for these Australian cancer patients – an increase of 37%.¹
- Add ~37,000 progression-free* survival years – an increase of 63%.¹

*Progression-free means the time a patient lives with a cancer that doesn't get worse.



What impact was estimated of immuno-oncology agents on the economy?

HIP 2.0 estimated the benefit derived from helping patients stay in the workplace, stay out of hospital, and allowing them to contribute to their communities and the economy! If immuno-oncology therapies were used for all eligible patients in eight tumour types in 2021-2025, these therapies could:



Help patients to work more than an additional **20 million*** hours.⁵



Generate **\$1.4 billion** in patient productivity (~\$23,000 per patient).¹



Lead to more than \$40 million in additional economic contributions.¹



Lower out-of-pocket costs for patients by \$28 million, or 7.5%.1



Lower end-of-life costs by about \$13,000 a year, per patient.¹

*The equivalent of **2**,**385 full-time people for 5 years** (35 hrs x 48 weeks p/y).



While HIP 2.0 shows the costs to government for funding immuno-oncology therapies are higher than for other cancer treatments, it is important to recognise the broader economic benefits and returns that access to these medicines could provide.

Currently, the government invests 0.3% of total annual health care expenditure on immuno-oncology therapies.¹

What are the next steps?

Government and industry must work together to improve access to immuno-oncology therapies.



- Realise the ambition of the Australian Cancer
 Plan will require new thinking about how to fund access to cuttingedge technologies in a sustainable way for patients and the health system.
- Conduct a health
 technology assessment
 review as outlined in the
 Medicines Australia
 Strategic Agreement.

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1. Health Impact Projection 2.0 Australia. Adelphi Values & PROVE. August 2021. MSD Australia. Data on file. **2**. Bates, N. et al. Labour force participation and the cost of lost productivity due to cancer in Australia. BMC Public Health 18, 375 (2018). https://doi.org/10.1186/s12889-018-5297-9. **3**. Robert, C. A decade of immune-checkpoint inhibitors in cancer therapy. Nat Commun. 11, 3801 (2020). https://doi.org/10.1038/s41467-020-17670-y **4**. National Cancer Institute. Immune Checkpoint Inhibitors. https://www.cancer.gov/publications/dictionaries/cancer-terms/def/ immune-checkpoint-inhibitor Accessed September 2021. **5**. Health Impact Projection 2.0 Australia. Adelphi Values & PROVE. August 2021. Abstract COSA 2021. MSD Australia. Data on file.