The impact of pharmaceutical innovation on New Zealand cancer patients

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New medicines have helped people with cancer improve their chance of survival

- Between 1998 and 2010, the 5-year survival rate for all adult cancers increased by 5.6%
- Between 1998 and 2010, the 5-year survival rate for all childhood cancers increased by 12.9%
- In the absence of new cancer medicines, the 5-year survival rate for all adult cancers would not have increased – it might have decreased slightly
Not all cancers are impacted equally by new medicines

- 5-year survival rate for prostate cancer has increased by 9.2%
- 5-year survival rate for Hodgkin lymphoma has increased by 1.5%
- An increase in 5-year survival rates is strongly related to the number of new medicines that are available to treat New Zealand patients
Access to one new medicine makes a significant difference to reduced cancer mortality and hospital stays

- Funding one medicine for any particular cancer reduces cancer mortality by 5%
- Funding one new medicine for any particular cancer reduces hospital stays by 5.6%
Far fewer New Zealanders are dying early in life

• In 2011, 10,556 years of life were saved as a result of medicines approved between 1986-1997
• If no new medicines were approved, premature mortality would have been 29% higher in 2011 alone
Use of cancer medicines save taxpayers money

- If no new medicines were approved between 1991-2002, the number of cancer related hospitalisations in 2011 would have been 23% higher.
- This would have seen increased hospital expenditure of $28 million on cancer patients.
- This potential expenditure is almost the same as the total investment in all cancer medicines dispensed to cancer patients below age 70 in 2008.
- For every dollar invested in a new cancer medicine, at least one dollar was saved downstream in the healthcare system.

Better Health Outcomes for New Zealanders
New Zealand launched 68 cancer medicines from 1986-2015 compared to the US, which launched 139.

In general, the medicines that were not launched in New Zealand were no less valuable than the medicines that were launched in New Zealand.
Pharmaceutical innovation reduces disability and increases ability to work

With innovative medicines in 2010
• 36.9 million work days saved in 2010
• 10.5 million school days not missed in 2010

Without innovative medicines in 2010
• Expenditure on lost work days would have been 33% larger than the cost of the new medicines

Without innovative medicines in 2004
• 418,000 more Americans on disability allowances
• $4.56 billion more on social security benefits

In the absence of pharmaceutical innovation, the 1995-2004 increase in the Social Security disability rate would have been 30% larger

Summary and conclusions

New cancer medicines are a cost-effective intervention that increases patient longevity, decreases annual hospitalisation rates and saves the New Zealand healthcare system money.

The impact of new cancer medicines in New Zealand could have been much greater.

However, over the time period analysed, New Zealand had both a smaller number of these new cancer medicines funded and a larger lag period before the new funded cancer medicines became available to patients and clinicians compared to other countries.
The impact of pharmaceutical innovation on the longevity and hospitalization of New Zealand cancer patients, 1998-2012

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