

The model allowed death before or after metastasis, which meant that the company divided deaths from PROSPER in its model into participants who died before metastasis and those who died after metastasis. The evidence review group considered this model inappropriate because it increased the uncertainty of already immature data and also introduced a bias for patients who died after metastasis. The committee also noted that this model structure required data on metastasis-free survival, which was only available from the first analysis. Further interim analyses used to estimate overall survival would therefore not have accurate metastasis-free survival data. The committee recognised that differences in overall survival attributed to enzalutamide were the most important driver of the economic model, and concluded that it was appropriate to use the most mature data for overall survival with data on metastasis-free survival from the first analysis. The committee noted that the modelled data for overall survival from the economic model did not match what actually happened in PROSPER: that is, the observed data from the second interim analysis. The committee concluded that this discrepancy was a problem with the model structure, and its results for the proportions of participants in each health state, and the duration of treatment.

The company derived utility values in the economic model from PROSPER, which the committee

concluded was the appropriate source of data for health-related quality of life. However, PROSPER showed no significant difference in quality of life between the enzalutamide and placebo groups of the trial. The company commented that enzalutamide delayed the time to deterioration of quality of life, rather than directly improving quality of life, but did not include this measurement in its economic model.

The committee was concerned that the company modelled the proportion of people who take each treatment after metastases incorrectly because the data did not match what is seen in NHS clinical practice. Notably, the company assumed that all patients who receive placebo (rather than enzalutamide) before metastatic disease receive enzalutamide after metastasis, but used data in the model from PROSPER in which a much lower number of patients received enzalutamide after metastasis. Additionally, the company did not include NHS treatment options such as cabazitaxel and radium-223 hydrochloride in its modelling.

The company estimated that the incremental cost-effectiveness ratio was £28 853 per quality-adjusted life-year gained for enzalutamide compared with ADT alone, taking into account a confidential discount. The evidence review group estimated that the incremental cost-effectiveness ratio was £56 168 per quality-adjusted life-year gained using different assumptions including using data from the second interim analysis. The

committee concluded that there was substantial uncertainty around both estimates because of the immaturity of the survival data; because it had not been presented with evidence that enzalutamide prolongs life or improves quality of life; and the model's structural problems. The committee concluded that enzalutamide did not represent a cost-effective use of NHS resources and decided not to recommend enzalutamide for non-metastatic hormone-relapsed prostate cancer.

Stakeholders were given the opportunity to appeal against the committee's recommendations, but no appeals were received.

We declare no competing interests.

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- 1 NICE. NICE technology appraisal guidance TA377. Enzalutamide for treating metastatic hormone-relapsed prostate cancer before chemotherapy is indicated. Jan 27, 2016. <https://www.nice.org.uk/guidance/ta377> (accessed May 13, 2019).
- 2 NICE. NICE technology appraisal guidance TA316. Enzalutamide for metastatic hormone-relapsed prostate cancer previously treated with a docetaxel-containing regimen. July 23, 2014. <https://www.nice.org.uk/guidance/ta316> (accessed May 13, 2019).
- 3 Astellas. Enzalutamide for treating non-metastatic hormone-relapsed prostate cancer, 2018. <https://www.nice.org.uk/guidance/ta580> (accessed May 13, 2019).
- 4 Robertson C, Chong H, Scotland G, et al. Enzalutamide for treating non-metastatic hormone-relapsed prostate cancer. Aberdeen HTA Group, 2018. <https://www.nice.org.uk/guidance/ta580> (accessed May 13, 2019).
- 5 Hussain M, Fizazi K, Saad F, et al. Enzalutamide in men with nonmetastatic, castration-resistant prostate cancer. *N Engl J Med* 2018; **378**: 2465-74.

Australia's election could bring down cancer costs for patients

Cancer care in Australia is set for a major shake-up if polls prove to be right and the opposition Labor party regains power in the election on Saturday, May 18, 2019. Labor

has made cancer funding central to its campaign, pledging AUS\$2.3 billion (US\$1.6 billion) to fund millions of free scans and free consultations plus cheaper medicines, in an attempt to

reduce out-of-pocket expenses, which can run into tens of thousands of dollars per patient.

One in three Australians are estimated to be diagnosed with



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cancer during their lives. Oncologists welcome Labor's proposed changes and agree that the changes should indeed reduce out-of-pocket expenses to access their services and make cancer-related scans more widely available through the public health system.

"The Labor party is certainly proposing a major change to the way that cancer care is funded", said Chris Karapetis, a medical oncologist and chair of the Medical Oncology Group of Australia. "They have seen cancer as a priority area."

However, not everyone is convinced that the changes will be as effective, or mean zero cost for all patients, as opposition leader, Bill Shorten, promises. Australians working in cancer care say many areas, such as prevention, have not been addressed, and some of the changes could be hard to implement.

The key proposals relate to the way oncology appointments and cancer-related imaging scans are funded. Technically, cancer care is covered by Australia's state-based health services, in partnership with its federal health funding body, Medicare. In reality, time and resources are limited, and many patients are referred to see oncologists privately. These clinicians might receive a federally funded payment from Medicare, but generally the patient will be asked to pay a so-called gap fee in addition. Furthermore, many scans or blood tests recognised as necessary under clinical guidelines are simply not listed as such under Medicare.

If patients with cancer want to have these scans, they have to pay for them out of pocket, even if they have been advised to have them by a doctor. Certain fees relating to surgery and anaesthesia are also not covered by Medicare. To pay all these costs, patients are often forced to withdraw from their superannuation or retirement savings.

Labor has proposed new payments under Medicare. Some will make cancer-related scans more accessible and more widely available. Others will give oncologists better remuneration through Medicare on the condition that they do not charge any gap fees. Labor has also made a commitment to ensure that service providers are clearer up-front about the potential cost of cancer care.

"Many patients, even though treated in the public sector, are facing an ever-increasing avalanche of private costs", said Sanchia Aranda, chief executive of Cancer Council Australia, adding that this often translates to poorer outcomes for those who are financially worse off. "There will be much more informed choice and less bill shock", she said. "We want to see that bill shock disappear."

One patient with breast cancer told *The Lancet Oncology* that she estimated her out-of-pocket expenses over 3 years of treatment to be over AUS\$20 000, despite some of her care being publicly funded. Kathy Hayes, who lives near Canberra, was diagnosed with cancer in her right breast in 2016. She has since had a double mastectomy and remains on

chemotherapy. Many of her costs—eg, blood tests, surgical fees, and transport—were not covered by the public system. Although she welcomed Labor's pledges, she is not convinced that the changes would have made a difference in her case. "I don't think that they can cover all the costs", she said.

Labor's focus on the issue has certainly made it a key campaign issue, and forced the ruling conservative coalition to respond. Australian politicians have learned from experience that policies seen as likely to weaken health services are liable to be punished at the ballot box.

Prime Minister Scott Morrison's Liberal party has stressed its own record on providing funding to subsidise new cancer drugs through Australia's Pharmaceutical Benefits Scheme. It has also promised millions of dollars in funding for cancer if it wins, including for childhood cancer. However, its pledges have fallen short of the billions of dollars offered by Labor, and although polls have tightened during the campaign, latest predictions are still for a Labor victory on Saturday.

Nick Pavlakis, an oncologist and president of the Clinical Oncology Society of Australia, said Labor's proposals were welcome changes. "It will reduce the out-of-pocket costs", he said, although he regretted the way the issue had been politicised. "Patients should not be pawns in an election."

Chris McCall

For more on the **Labor cancer funding pledge** see <https://www.theguardian.com/australia-news/2019/apr/04/labor-budget-reply-bill-shorten-pledges-23bn-cancer-care-package>

For more on the **election policies of the three major parties** see <https://www.theguardian.com/australia-news/ng-interactive/2019/apr/15/who-should-i-vote-for-policy-guide-to-the-2019-australian-election>

For more on the **Liberal National Government's investment in new cancer drugs** see <http://www.health.gov.au/internet/ministers/publishing.nsf/Content/health-mediarel-yr2019-hunt026.htm>



Gaps in US laws leave some vulnerable to workplace discrimination

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It was reported recently that the San Francisco Unified School District in California, USA, docked a second-grade public school teacher's wages during her extended sick leave for breast cancer treatment to cover the

cost of her substitute. The case sparked headlines and outrage nationwide, but state law has allowed California school districts to do this since 1976.

A handful of federal laws, including the 1990 US Americans

with Disabilities Act (ADA), offer workplace protections against discrimination for many patients with cancer and cancer survivors, but ambiguities and gaps serve to worsen socioeconomic disparities in