

Cost-effectiveness of Herceptin for early stage breast cancer varies by age and tumour type

26 October 2016

A new study from the University of Otago, Wellington (UOW) found that the cost-effectiveness of the drug trastuzumab (known more commonly as Herceptin) in treating early stage breast cancer was highly variable depending on the disease characteristics and age of the woman.

The researchers developed a computer model to estimate health gains, costs and cost-effectiveness of the drug Herceptin for treating breast cancer. The study, just published in the journal *PLOS Medicine*, used the computer model to simulate the life courses of patients with breast cancer, who were already undergoing chemotherapy, to estimate lifetime outcomes with and without Herceptin.

The UOW study involved collating data and evidence on breast cancer subtypes in New Zealand and internationally, on Herceptin benefits and costs, and using the computer model to estimate the health gains, costs and cost-effectiveness, says lead author William Leung.

"We found that the cost-effectiveness of Herceptin was markedly better for women with a worse-prognosis subtype of [breast cancer](#) compared to a better-prognosis subtype. These results may help inform future resource allocation decisions," Leung says.

Study co-author Professor Tony Blakely says that cost effectiveness of treatments can vary enormously by disease prognosis and background morbidity.

"In this age of precision medicine, i.e. targeting medications by patient characteristics and disease subtypes, it seems odd and outdated that our funding mechanisms for these diseases are still

very blunt," says Professor Blakely.

More information: William Leung et al. Adjuvant Trastuzumab in HER2-Positive Early Breast Cancer by Age and Hormone Receptor Status: A Cost-Utility Analysis, *PLOS Medicine* (2016). [DOI: 10.1371/journal.pmed.1002067](https://doi.org/10.1371/journal.pmed.1002067)

Read about the highly variable cost-effectiveness of Herceptin on the Public Health blog: blogs.otago.ac.nz/pubhealthexp...tin-as-a-case-study/

Provided by University of Otago

APA citation: Cost-effectiveness of Herceptin for early stage breast cancer varies by age and tumour type (2016, October 26) retrieved 16 May 2021 from <https://medicalxpress.com/news/2016-10-cost-effectiveness-herceptin-early-stage-breast.html>

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