



Extended Research Article

Tumour profiling tests to guide adjuvant chemotherapy decisions in lymph node-positive early breast cancer: a systematic review and economic evaluation

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Plain language summary

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Plain language summary

Breast cancer is the most common cancer in women in England. Breast cancer, and its treatment, can affect a person's quality of life and how long they live for. Most women with early-stage breast cancer which has spread to one to three lymph nodes receive chemotherapy to stop the cancer from coming back and spreading elsewhere in the body, but this treatment can cause side effects, including damage to the heart and secondary cancers. Currently, some doctors use computer tools which use information about the patient and the tumour to decide if chemotherapy is needed. Tumour profiling tests are used to help women with early breast cancer to decide whether they should have chemotherapy. They test small samples of a patient's tumour to find out whether the genes in it mean that a person has a high or low risk of the disease returning. If this risk is low, the patient might not need chemotherapy and, therefore, they can avoid its side effects. Some tests might also be able to identify which patients are more likely to respond to chemotherapy.

This study looked at the evidence for four tumour profiling tests. Fifty-four clinical studies were identified. The results suggest that all of the tests can give information on the risk of the cancer returning. There was some information about whether one of the tests (Oncotype DX) can predict which patients will respond to chemotherapy. There was information about how using one test (Oncotype DX) affects the decision to have chemotherapy. Our study also looked at whether or not these tests represent good value for money for the National Health Service through cost-effectiveness analyses. The analyses showed that two of the tests (Oncotype DX and EPclin) may represent a good use of National Health Service resources for some patient groups.

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This article

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