

Tumour profiling tests to guide adjuvant chemotherapy decisions in early breast cancer: a systematic review and economic analysis

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Plain English summary

Adjuvant chemotherapy decisions in early-stage breast cancer

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Plain English summary

Breast cancer is the most commonly diagnosed cancer in women in England and Wales. Breast cancer, and its treatment, can have an impact on a person's health-related quality of life and survival. Tumour profiling tests are used before chemotherapy. They test small samples of a patient's tumour (removed during surgery) to find out whether the genes in it mean that a person has a high or low risk of the disease returning (relapse). If the risk is low, the patient may be able to avoid having chemotherapy and, therefore, avoid its side effects. Some tests might also be able to identify which patients will respond to chemotherapy.

This study looked at the evidence for five tumour profiling tests. A total of 153 studies were identified. This study considered the results and the quality of the studies to find out if the tests are helpful. Most studies had design flaws (e.g. some patients had already had chemotherapy) that meant that the studies were of low quality overall. The results suggest that all of the tests can give information on the risk of relapse; however, some tests may be less useful in patients whose disease has spread to the lymph nodes (lymph node-positive disease). There was limited and varying evidence about whether or not two of these tests can also predict which patients will respond to chemotherapy.

This study also looked at whether or not these tests represent good value for money for the NHS through cost-effectiveness analyses. The analyses showed that some of the tests may represent a good use of NHS resources for some patient groups; however, there was still a lot of uncertainty about this.

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This report

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