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Early breast cancer detection

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Early detection is critical for the clinical management of breast cancer. In the February 27 Proceedings of the National Academy of Science, Martin *et al*. describe a highly sensitive blood-based assay to detect and classify solid tumours (*Proc Natl Acad Sci USA* 2001, **98:**2646-2651). The high-throughput assay involves a two-step approach, combining differential display with cDNA microarrays. Martin *et al*. analysed blood samples from 26 breast cancer patients for the expression of 12 breast cancer marker genes. The markers were elevated in 77% of untreated invasive cancer patients, but not in those treated with chemotherapy. The authors suggest that their technique is particularly sensitive as a result of the use of P32 labelling, membrane filters and longer cDNA tags. The assay can detect as few as five tumor cells per millilitre of blood, making it suitable for clinical screening and early detection.

References

1. *Proceedings of the National Academy of Science*, [http://www.pnas.org]

2. Differential display of eukaryotic messenger RNA by means of the polymerase chain reaction.

3. Linking Gene Expression Patterns to Therapeutic Groups in Breast Cancer, [http://mbcf.dfci.harvard.edu/labs/pardee/expression_patterns.html]

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