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► **COVER:** 'Magnifying signatures' by Manuel Enriquez Ramirez, inspired by the Perspective on p545.


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With the Human Genome Project came the promise of a future of personalized medicine, but for most diseases, including cancer, this utopian ideal has remained a distant hope. However, studies that identify genetic classifiers that can be used to further our understanding of disease progression and more accurately stratify patients into clinically relevant subtypes are increasing (see p493 for an example). Indeed, advances in breast cancer research seem to typify these developments: the Food and Drug Administration in the United States has approved the use of the genetic classifier MammaPrint in patients with early stage breast cancer. However, the MammaPrint signature still requires full validation and, as discussed by Sotiriou and Piccart on page 545, moving such signatures into the clinic is likely to require substantial investment and collaboration.

The power of multi-institution collaboration in the study of genetic disease was shown in a study published in *Nature* on 7 June 2007 by the Wellcome Trust Case Control Consortium (WTCCC). They reported the identification of 24 genetic variants associated with seven common human diseases; research that has been hailed as a 'new dawn' in disease genetics. However, the promise of genetic profiling is not without ethical concerns. Whenever new predisposition genes or gene signatures are identified they bring with them both hope and fear for patients. How will this information be used? To develop new improved screening and drug treatments, or to identify and discriminate against people who have an increased risk of developing a disease? Although we need to continue our search for mutations that increase the likelihood of illness in later life, we must also ensure that legislation is in place to protect individuals whose genes denote an increased chance of developing a disease such as cancer.


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