

natureOUTLOOK

BREAST CANCER

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Breast cancer is perhaps the most-studied malignancy in the world — and no wonder. Some 1.7 million women were diagnosed with the disease in 2012, making it a global priority. Researchers have made great strides in the treatment of some types of breast cancer (see page S102), but the battle continues on many fronts. Perhaps the most exciting area of research is immunotherapy (page S105), whereby scientists are attempting to harness the body's own immune system to fight and prevent malignancies. The success of biological drugs in the treatment of people with a specific tumour demonstrates the potential of targeted treatments (page S110). Meanwhile, researchers are using big data to identify new targets and treatment strategies (page S108). But not every cancer needs treatment, and the hunt is on for biomarkers that can sort the cases that demand action from those that are better left alone (page S114). Research on the interplay between environment and genes has illuminated the workings of the disease and helped to identify who is really at risk (page S116). Although many women try to protect themselves through regular mammograms, worries about false alarms and overdiagnosis have spurred efforts to reform screening to focus on the cancers that really matter (page S118).

However, each woman needs to decide for herself whether to be screened (page S104). And patients should have a say in the course of treatment. Some may want to go down the aggressive path no matter what the side effects, and others prefer to take the slow, cautious route. With many of the world's top minds working on their behalf, they should not feel alone in the fight.

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Chris Woolston
Contributing editor

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