

Cancer

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Cancer research is one of the fastest-moving areas in biological science, thanks to global funding of hundreds of billions of dollars each year (see page S58). Of particular interest are mRNA vaccines, which, if they can be designed to reliably harness the immune system to attack cancer cells, could be used as a post-surgical treatment for cancer patients to reduce the risk of recurrence. There is some tension, however, around the future development of mRNA cancer vaccines. In March, *Nature* reported that the US National Institutes of Health had terminated at least one grant related to work on mRNA vaccines and COVID-19. Some researchers are concerned that cuts to funding could be applied to cancer-related mRNA vaccines, too. Others are more optimistic. Vinod Balachandran, a New York-based surgical oncologist, says the high burden of cancer will probably curtail similar actions against mRNA cancer vaccines (see page S54). A bill introduced in Montana (and subsequently voted down) in March that sought to ban mRNA vaccines for infectious disease, but not for cancer, supports Balachandran's view. But there are other ways that scepticism about mRNA technology – and anti-vaccine advocacy generally – might slow progress. UK-based medical oncologist, Siow Ming Lee, told Nature Index that he has had one patient refuse to take part in his lung cancer study because they did not want to receive an mRNA vaccine. Cancer researchers cannot afford to lose momentum. With the global burden of cancer on the rise – and rapidly so, in places such as sub-Saharan Africa – there are major challenges ahead. Support from governments and the public is crucial if researchers are to come up with the full arsenal of creative approaches that are needed to fight this disease.

Bec Crew
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On the cover
 Illustration of cancer screening and vaccination.
 Credit: Peter Greenwood

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