

natureOUTLOOK

COLORECTAL CANCER

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Cover art: Mario Wagner

Editorial

Herb Brody,
Michelle Grayson,
Kathryn Miller,
Eric Bender,
Nick Haines

Art & Design

Wesley Fernandes,
Mohamed Ashour,
Kate Duncan,
Theo Mackie

Production

Karl Smart,
Ian Pope

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Publisher

Richard Hughes

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Colorectal cancer (CRC) kills almost 700,000 people every year, making it the world's fourth most deadly cancer (after lung, liver and stomach cancer). It is a disease of modernity: the highest rates of incidence are in developed countries (see page S2). As the world becomes richer, and more people shift to Western diets and lifestyles, the incidence of CRC is likely to increase.

But there is encouraging news. Screening for the disease has become routine in many parts of the world, and newer, less invasive technologies are being developed to replace the highly invasive colonoscopy (S4). And evidence is mounting that the disease could be largely prevented by a combination of drugs, nutritional supplements, diet and exercise (S6).

There is encouraging research on several fronts. The development of three-dimensional 'organoids' derived from adult stem cells could help match drugs to a patient's specific tumour type (S15). And DNA fragments that have escaped from tumours into the blood could be detected in 'liquid biopsies' that can characterize the tumour and help monitor the effectiveness of treatments (S9).

On the therapeutic front, however, progress is a matter of inches. New drugs have roughly doubled the average survival time for advanced CRC over the past decade, but the patient usually dies within three years (S12).

As with many other diseases, scientists are finding that the organisms that live inside us play a big role (S10). But whether an abnormal microbiome is a cause of CRC or an effect is still shrouded in mystery. This is just one of several fundamental questions about the disease that remain to be resolved (S16).

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Herb Brody

Supplements Editor

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