'3D printer for your body': Bioprinted tumors could help doctors target cancer more effectively

Scientists have made big strides in the fight against cancer. A person's risk of dying of cancer in the U.S. <u>fell by 27%</u> in the past 2 decades, thanks in large part to researchers who continue to uncover the complex details of how cancer works and to make advances in treatment.

Now the emerging technology of 3D bioprinting – like 3D printing for the human body, using actual human cells – promises to speed up that research, by enabling scientists to develop 3D tumor models that better represent samples from patients.

Follow the latest news and policy debates on sustainable agriculture, biomedicine, and other 'disruptive' innovations. Subscribe to our newsletter. SIGN UP

Why does that matter? Because the 2D cell cultures that scientists often use now may not capture all the complexities of how cancer grows, spreads, and responds to treatment. It's one reason why so few potential new cancer drugs – 3.4%, according to one estimate – can pass all clinical trials. Results may not carry over from the culture dish to the patient.

A 3D-bioprinted model, on the other hand, may be better at copying a tumor's "<u>microenvironment</u>" – all the parts (cells, molecules, blood vessels) that surround a tumor.

This is an excerpt. Read the full article here