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Singapore researchers work on developing personalised livers

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Researchers have developed models of liver tumors called patient-derived xenografts (PDX).



Researchers at the National University of Singapore (NUS) have developed a method to grow patient-derived liver tumor organoids for drug testing.

A major challenge in developing effective drugs for liver cancer is that current preclinical tumor models do not accurately replicate features of the tumor and the tumor environment in humans, causing many potential drugs to fail in clinical testing.

To more accurately mimic these features, researchers have developed models of liver tumors called patient-derived xenografts (PDX). Although these models provide a truer picture of how effective potential cancer drugs would be in humans, they are also expensive and time-consuming to create.

Growing these PDX cancer cells in culture would be more cost effective for drug screening.

With this technology, one PDX can be used to produce tens to hundreds of such organoid-containing scaffolds. Combined with their ability to recapitulate the genetic features and heterogeneity of the original liver tumors, these tumor avatars have the potential to revolutionize the screening and development of liver cancer drugs.