

Bubbly drinks inspire more effective cancer treatment

June 8 2016



Credit: University of Oxford

Cancer researchers are developing a bubbly drink packed with oxygen microbubbles to make treatments more potent for hard to treat tumours like pancreatic cancer.

Researchers at the Universities of Oxford and Ulster, supported by Cancer Research UK, are investigating how to re-oxygenate tumours with a drink that could deliver extra [oxygen](#) to the site of the tumour, allowing radiotherapy and chemotherapy to deliver a knock-out blow.

Some tumours have learnt to adapt to harsher, [low oxygen conditions](#) making them more resistant to drugs. This is because as tumours grow, the blood vessels delivering essential nutrients, including oxygen, become increasingly twisted and weak meaning chemotherapy fails to penetrate the heart of the tumour.

Scientists are investigating how oxygen bubbles get from the stomach to pancreatic tumours in the laboratory and working out whether this could be done by giving patients the equivalent of a bubbly drink.

The scientists chose [pancreatic cancer](#) because these tumours are badly starved of oxygen and so patients have limited treatment options.

Current methods of oxygenating tumours in patients includes breathing pure oxygen, putting patients in oxygen chambers or injecting liquids full of oxygen directly to the [tumour](#) site. These are effective but can have quite serious side effects including damage to the surface of the lungs and nervous system.

This new approach could have fewer risks, cost less, and could easily be used to boost other treatments.

Professor Eleanor Stride, Cancer Research UK scientist at the University of Oxford, said: 'We're especially excited about the potential this bubbly drink could have for hard to treat cancers like pancreatic cancer, where survival rates are low and better treatments are urgently needed.

'We've had success in the lab in mice, so we're now looking at how to scale this up for patients.'

Pancreatic cancer is the fifth most common cause of cancer death in the UK, taking the lives of around 8,700 people each year. Cancer Research UK has made it a priority area and are increasing investment in

pancreatic cancer research, citing a need for 'bold approaches that try something new where things haven't worked in the past.'

Dr Iain Foulkes, executive director for research funding at Cancer Research UK, said: 'We're investing in pioneering ways to improve survival for [patients](#). Prof Stride and her team are thinking outside the box, and this is just the sort of innovation we want to spark through our Pioneer Awards scheme. By being bold we aim to make a difference.'

Provided by University of Oxford

Citation: Bubbly drinks inspire more effective cancer treatment (2016, June 8) retrieved 23 April 2024 from <https://medicalxpress.com/news/2016-06-effective-cancer-treatment.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.