

Cancer cells poisoned with sugar

- 04 December 2011
- Magazine issue [2841](#). [Subscribe and save](#)
- For similar stories, visit the [Cancer](#) Topic Guide

IT'S a heavy price to pay for a sweet tooth. Researchers have tricked [glucose-eating cancer cells](#) into consuming a sugar that essentially poisons them - it leaves a "suicide" switch within the cells open to attack.

"Most cancer cells rely almost exclusively on glucose to fuel their growth," says Guy Perkins of the University of California at San Diego. With Rudy Yamaguchi of Kyushu University in Fukuoka, Japan, Perkins found the cells would take up a similar sugar called 2-deoxyglucose. But this sugar physically dislodges a protein within the cell that guards a suicide switch. Once exposed, the switch can be activated by a drug called [ABT-263](#). This kills the cell by liberating proteins that order it to commit suicide ([Cancer Research](#), DOI: [10.1158/0008-5472.can-11-3091](#)).

The approach could ultimately spell doom for several types of cancer, including liver, lung, breast and blood. In mice, the treatment made aggressive [human prostate cancer tumours](#) [virtually disappear within days](#).

Yamaguchi and Perkins are now hoping to mount a clinical trial at UC San Diego.