

# Colon cancer discovery could take treatment up a notch

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(Medical Xpress)—Scientists at the Western Australian Institute for Medical Research (WAIMR) have made an exciting discovery which may lead to more effective chemotherapy treatments of colorectal cancer patients.

The study, which has just been published by the *British Journal of Cancer*, examined colorectal tumour tissues from 441 consenting patients undergoing surgery and chemotherapy to treat their cancers at Sir Charles Gairdner Hospital.

The researchers found that genes involved in a process called "Notch signalling" caused tumours to grow quickly when switched on by the

[colorectal cancers](#), leading to a lower survival rate for patients.

WAIMR researcher Dr Patrick Candy said Notch signalling in the colon was normally at low levels in healthy adults but studies on [colon cancer](#) cell-lines revealed that when tumours learned how to switch it on, they became much more resistant to chemotherapy.

"The WAIMR team looked for the first time at Notch signalling in human colon cancer patients and we saw a very dramatic result," Dr Candy said. "For example, one protein we studied (SOX9) showed patients had an eight-fold higher risk of death when it was found at high levels.

"Our work is leading to the point where medical professionals may be able to test levels of these Notch proteins and use it to decide whether Notch inhibitory drugs might be helpful in making chemotherapy treatment work better."

Dr Candy said although the study had come up with a statistically powerful result, significantly more work was needed before 'Notch testing' could enter into clinical practice in pathology.

Lead author WAIMR Deputy Director, Professor Peter Leedman, and his research team work in the Laboratory for Hormone Dependent Cancers. The study is: "Notch induced [transcription factors](#) are predictive of survival and 5-fluorouracil response in colorectal cancer patients."

Provided by University of Western Australia

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