

Molecule predicts patient's ability to survive melanoma

December 20 2018



Melanoma in skin biopsy with H&E stain—this case may represent superficial spreading melanoma. Credit: Wikipedia/CC BY-SA 3.0

Doctors may be able to assess the survival rates of melanoma patients following the discovery of a molecule that allows the cancer to spread from the skin to other parts of the body.

University of Queensland researchers hope that targeting this molecule may offer a way to stop the cancer from spreading.

UQ Diamantina Institute's Professor Nikolas Haass said levels of the molecule, RAB27A, correlated to patient [survival rates](#).

"Patients with high levels of RAB27A in their [melanoma cells](#) have a lower survival rate," Professor Haass said.

"So measuring RAB27A levels could become a new prognostic tool when assessing patients.

"This would enable patients with a poorer prognosis to be treated more aggressively, sooner."

Professor Haass said metastasis, the ability of melanoma to spread within the body, was what made it so deadly.

"Melanoma [cells](#) with high RAB27A levels instruct other less aggressive cancer cells to spread to new areas of the body," he said.

"It makes aggressive [cancer](#) cells produce exosomes, small vesicles that can carry material or information from one cell to another.

"Other, initially less aggressive, [cancer cells](#) that are contacted by these vesicles then become more aggressive and are able to spread to other parts of the body."

Professor Haass noted that making RAB27A a target for new therapeutic treatments was not straightforward.

"It's often difficult to target molecules like this directly," he said.

"But we've identified two binding partners of RAB27A.

"By blocking these, the molecule would potentially be unable to produce the invasive exosomes and the ability of melanoma to spread could be inhibited.

The study involved researchers from the University of Sydney and is published in the *International Journal of Cancer* ([DOI: 10.1002/ijc.32064](https://doi.org/10.1002/ijc.32064)).

More information: Dajiang Guo et al. RAB27A promotes melanoma cell invasion and metastasis via regulation of pro-invasive exosomes, *International Journal of Cancer* (2018). [DOI: 10.1002/ijc.32064](https://doi.org/10.1002/ijc.32064)

Provided by University of Queensland

Citation: Molecule predicts patient's ability to survive melanoma (2018, December 20) retrieved 3 May 2024 from <https://medicalxpress.com/news/2018-12-molecule-patient-ability-survive-melanoma.html>

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