

Better diagnosis to improve breast cancer treatment

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Micrograph showing a lymph node invaded by ductal breast carcinoma, with extension of the tumour beyond the lymph node. Credit: Nephron/Wikipedia

Breast cancer patients will soon have a better chance of fighting the disease thanks to new pathology guidelines created by University of Queensland researchers.

The guidelines allow pathologists to identify which patients have more aggressive forms of [breast cancer](#), which means they can be classified appropriately and their treatment can be tailored.

From 2019, the World Health Organisation will incorporate these guidelines into the fifth edition of the iconic "Blue book," *Classification of Tumours of the Breast*.

Research Fellow Dr. Amy McCart Reed said the team which developed the guidelines specifically investigated metaplastic breast carcinomas (MBC), a rare but aggressive form of breast cancer.

"For patients with MBC, we found the number of different cell types in the tumours had a significant impact on survival," Dr. McCart Reed said.

"The more diverse the [tumour](#), the worse the patient's prognosis is likely to be.

"Among patients with a bad tumour type like MBC, there are some who will do well and some will do poorly, and this new metric helps us to categorise this.

"Previously, the WHO guidelines have described the types of cancer cells within tumours without telling pathologists specifically what and how much to record.

"Now we can advise pathologists to record the number of types of morphologies within tumours because a more accurate prognosis can be made based on this."

MBC accounts for less than five per cent of all invasive breast cancers, but contributes significantly to [breast cancer](#) mortality because the tumours can be very aggressive.

UQ's Centre for Clinical Research Head of Molecular Pathology Professor Sunil Lakhani said the research was possible due to the establishment of the Asia-Pacific Metaplastic Breast Cancer Consortium (APMBCC).

"Creating APMBCC brought together a large enough cohort of these rare tumour samples for the first time in Australasia, which was necessary to draw conclusions about these incredibly diverse tumours," Dr. Lakhani said.

"Research using APMCC will help to identify novel therapeutic targets and pinpoint the potential for re-purposing existing cancer drugs."

The study was jointly funded by the National Breast Cancer Foundation and Cancer Australia, and involved Professor Sandra O'Toole from the Garvan Institute of Medical Research in Sydney.

The study is published in the *Journal of Pathology*.

More information: Amy Ellen McCart Reed et al. Phenotypic and molecular dissection of Metaplastic Breast Cancer and the prognostic implications, *The Journal of Pathology* (2018). [DOI: 10.1002/path.5184](https://doi.org/10.1002/path.5184)

Provided by University of Queensland

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