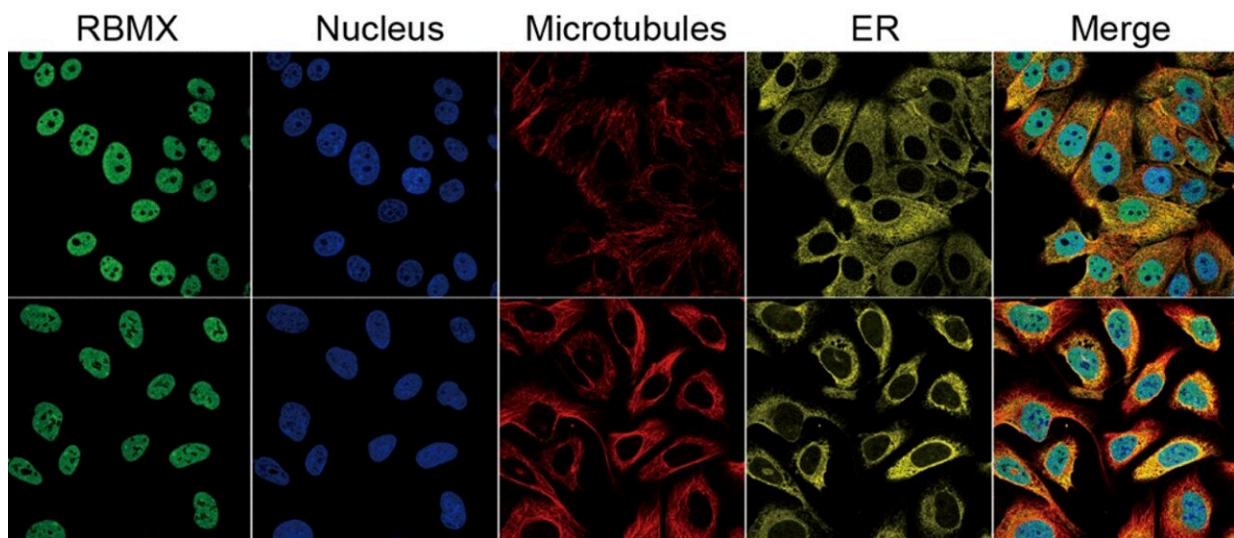


Aberrant RBMX expression relevant for cancer prognosis and immunotherapy response

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Credit: *Aging* (2024). DOI: 10.18632/aging.205363

A new [research paper](#) titled "Aberrant RBMX expression is relevant for cancer prognosis and immunotherapy response" has been published in *Aging*.

Cancer accounts for the highest rates of morbidity and mortality worldwide. RNA binding motif protein X-linked (RBMX) is a nuclear RNA-binding protein, associated with certain types of [cancer](#) by

participating in the integration of sister chromatids and a combination of ribonucleoprotein complexes. However, the specific role of RBMX in cancer immunity remains unknown.

In this new study, researchers Yilei Sheng, Kunjian Lei, Chengpeng Sun, Jia Liu, Zewei Tu, Xingen Zhu, and Kai Huang from Nanchang University, The Second Affiliated Hospital of Nanchang University, Jiangxi Key Laboratory of Neurological Tumors and Cerebrovascular Diseases, JXHC Key Laboratory of Neurological Medicine, and Yale School of Medicine present the aberrant expression levels, single-cell distributions, effective prognostic roles, immune cell infiltration associations, and immunotherapy responses of RBMX as a biomarker in various types of cancer. Moreover, they validate the aberrant expression of RBMX in clinical cancer samples.

The researchers explain that "[...] a pan-cancer analysis is necessary for the identification of novel biological targets and biomarkers involved in carcinogenesis, cancer progression, and immunotherapy response. Such knowledge would improve the precision of [cancer therapy](#)."

The researchers also evaluated the relationships between RBMX expression and myeloid-derived suppressor cells in clinical samples by immunofluorescent staining. Results showed that knockdown of RBMX can impair the proliferation, migration, and invasion of liver cancer cells. Finally, the team indicated that RBMX may play an immunoregulatory role in cancer progression, affecting the therapeutic effects of immune checkpoint inhibitors in patients with cancer.

"In conclusion, we performed an integrated analysis of RBMX, revealing its effective role in predicting cancer prognosis and response to immunotherapy. Abnormal expression of RBMX is associated with immune regulation, prognosis, the tumor microenvironment, immune cell infiltration, MSI, and TMB. The results of this study indicated that

RBMX may play an independent role in clinical diagnosis and prediction," write the researchers.

More information: Yilei Sheng et al, Aberrant RBMX expression is relevant for cancer prognosis and immunotherapy response, *Aging* (2024). [DOI: 10.18632/aging.205363](https://doi.org/10.18632/aging.205363)

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