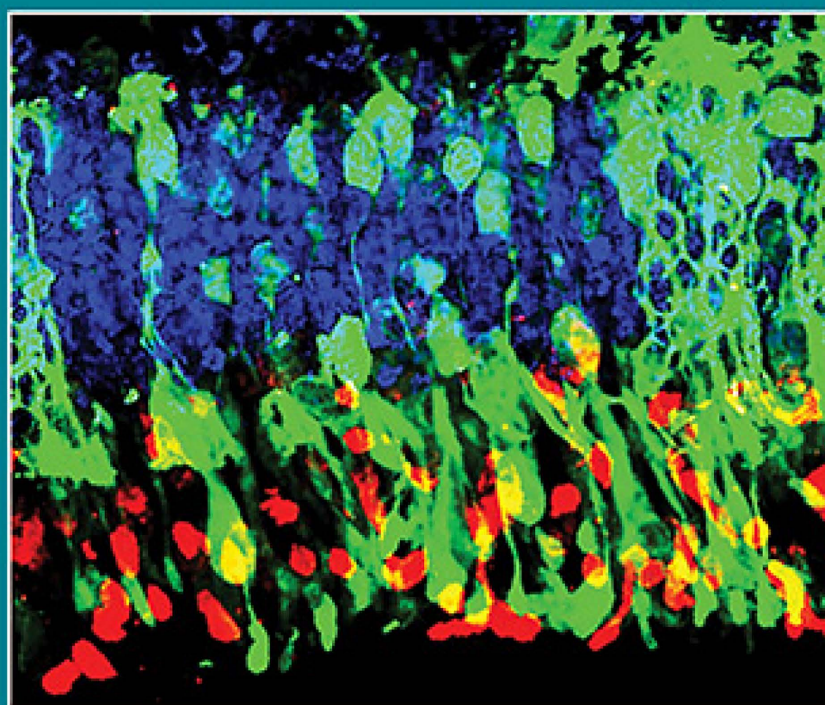


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SLC34A2 as a potential prognostic marker of triple-negative breast cancer patients' survival

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Triple-negative breast cancer (TNBC) remains the most aggressive subtype among breast cancers in particular because of the lack of targeted therapies. In spite of the variable patients' response to treatment and a high recurrences rate, chemotherapy remains a conventional treatment for TNBC. Thus, the identification of new prognostic markers for TNBC management is a relevant subject. In this study, we aimed to evaluate the sodium-dependent phosphate transporter NaPi2b, as a molecular marker for TNBC patient's survival prognosis. The mRNA and protein expression of NaPi2b (SLC34A2) were evaluated in formalin-fixed paraffin-embedded tumors of 39 TNBC patients by real-time qPCR and immunohistochemical (IHC) staining of tissue microarray sections, respectively. As a reference gene, the ACTB was used. The NaPi2b was considered as «overexpressed» if the value of mRNA expression was higher than the median in qPCR analysis, and if more than 10% of cells were stained with «++» or «+++» intensity in ICH analysis. Using RStudio, the Kaplan-Meier and Log-rank tests were carried out for survival analysis. It was shown that overexpression of NaPi2b protein in the tumors is associated with a more prolonged overall survival of TNBC patients (p-value = 0,034). But any correlations were not observed on the transcriptional level. This finding could be related to the crucial role of NaPi2b regulation exactly on the translational level. Based on this study results, performed according to the Russian Government Program of Competitive Growth of Kazan Federal University, the NaPi2b could be considered as potential prognostic TNBC marker.