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Commentary Open Access

Commentary on "Association of mir12475p Expression with Clinicopathological Parameters and Prognosis in Breast Cancer"

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Commentary

I am glad to write a few comments on our recently published article "Association of miR-1247-5p expression with clinicopathological parameters and prognosis in breast cancer" [1]. I hope our study will contribute to the research of this field and clinical application for breast cancer.

Breast cancer is the most common form of cancer and the second most common cause of cancer death in women [2]. Although great advances have been made in clinical treatments, satisfactory outcomes have not always been achieved [3]. Thus prevention and treatment of breast cancer still remains a concern and challenge for oncologists throughout the world [4,5]. Early detection is one of the most important methods which might improve the survival of breast cancer patients, so it remains significant to find new biomarkers for diagnosis and prognosis estimation of breast cancer. Cancer initiation and progression can involve microRNAs (miRNA), which are small noncoding RNAs that can regulate gene expression. More and more studies showed that microRNAs could be promising biomarkers for diagnosis, prediction of therapy response and prognosis of breast cancer [6-8]. As I know, it was the first paper in which the relationship of mir-1247-5p and breast cancer has been investigated. According to our study, mir-1247-5p could be a novel tumor suppressor and its lower expression was associated with malignant biological behavior and poor prognosis of breast cancer. In latest study, mir-1247-5p was down-regulated in breast cancer [9] and this is in accordance with our conclusion. Although it was a pity that we could not complete the functional assay in this study, we mentioned a variety of pathways which mir-1247-5p might be involved in section of discussion [10-12]. I want to say that mir-1247-5p may not be a common suppressor as other one. Because in our following study, we found its specific target gene *CPEB4*, and *CPEB4* is a key gene which has been shown to be involved in promoting tumor growth, vascularization and invasion in variety of cancers [13]. The emerging evidence showed that *CPEB4* functioned as a key role in controlling cell growth and malignancy of cancer cells [14]. In the aspect of clinical application, mircroRNAs have been shown to be used as potential indicators for classification, diagnosis, and prognosis of human malignancies [15]. Furthermore, it has been reported that microRNA could modulate multidrug resistance in human cancer by controlling its target genes [16]. So more and more oncologists turn to throw themselves into the research on the association of microRNAs and clinical therapy of human cancers. In the past few years, many studies have indicated the possible clinical application of microRNAs [17]. Thus, we firmly believe that the prospect on microRNAs in cancer therapy will turn into reality in the near future.

Few as current studies on association of mir-1247-5p and breast cancer were, it has shown that mir-1247-5p might be a potential indicator of diagnosis and prognosis prediction even provide choice for treatment of breast cancer. I hope our contribution stimulates our institutions to increase the basic, translational and clinical research in this field. I also hope it attracts the interest of researchers from other countries who are willing to perform international cooperation.

References

1. Zhang P, Fan C, Du J, Mo X, Zhao Q (2018) Association of miR12475p expression with clinicopathological parameters and prognosis in breast cancer. Int J Exp Pathol 99: 199-205.
2. Nattinger AB (2010) Breast cancer screening and prevention. Ann Intern Med 152: ITC41.
3. Dubey AK, Gupta U, Jain S (2015) Breast cancer statistics and prediction methodology: a systematic review and analysis. Asian Pac J Cancer Prev 16: 42374245.
4. Abdal Dayem A, Choi HY, Yang GM, Kim K, Saha SK, et al. (2016) The anticancer effect of polyphenols against breast cancer and cancer stem cells: molecular mechanisms. Nutrients 8: 581.
5. Berry DA, Cronin KA, Plevritis SK, Fryback DG, Clarke L, et al. (2005) Effect of screening and adjuvant therapy on mortality from breast cancer. N Engl J Med 353: 1784-1792.
6. Agarwal S, Hanna J, Sherman ME, Figueroa J, Rimm DL (2015) Quantitative assessment of miR34a as an independent prognostic marker in breast cancer. Br J Cancer 112: 6168.
7. Ahmad A, Ginnebaugh KR, Sethi S, Chen W, Ali R, et al. (2015) MiR20b is upregulated in brain metastases from primary breast cancers. Oncotarget 6: 1218812195.
8. Li W, Jin X, Zhang Q, Zhang G, Deng X, et al. (2014) Decreased expression of miR204 is associated with poor prognosis in patients with breast cancer. Int J Clin Exp Pathol 7: 32873292.
9. Zeng B, Li Y, Feng Y, Lu M, Yuan H, et al. (2018) Downregulated miR-1247-5p associates with poor prognosis and facilitates tumor cell growth via DVL1/Wnt/β-catenin signaling in breast cancer. Biochem Biophys Res Commun 505: 302-308.
10. Sun ZP, Li AQ, Jia WH, Ye S, Van Eps G, et al. (2017) MicroRNA expression profiling in exosomes derived from gastric cancer stemlike cells. Oncotarget 8: 9383993855.
11. Basso D, Gnatta E, Padoan A, Paola F, Sara F, et al. (2017) PDACderived exosomes enrich the microenvironment in MDSCs in a SMAD4dependent manner through a new calcium related axis. Oncotarget 8: 8492884944.
12. Romano G, Kwong LN (2017) miRNAs, melanoma and microenvironment: an intricate network. Int J Mol Sci 18: 2354.
13. Ortiz-Zapater E, Pineda D, Martínez-Bosch N, Fernandez-Miranda G, Iglesias M, et al. (2011) Key contribution of CPEB4-mediated translational control to cancer progression. Nat Med 18: 83-90.
14. Dambrogio A, Nagaoka K, Richter JD. Translational control of cell growth and malignancy by the CPEBs. Nat Rev Cancer 2013; 13: 283-290.

15. Calin GA, Croce CM (2006) microRNA-cancer connection: the beginning of a new tale. Cancer Res 66: 7390-7394.

16. Xu K, Liang X, Shen K, Sun L, Cui D, et al. (2012) miR-222 modulate multidrug resistance in human colorectal carcinoma by down-regulating ADAM-17. Exp Cell Res 18: 2168-2177.

17. Chakraborty C, Sharma AR, Sharma G, Doss CGP, Lee SS (2017) Therapeutic miRNA and siRNA: moving from bench to clinic as next generation medicine. Mol Ther Nucleic Acids 8: 132-143.