

Letter to the Editor

MiR-340-5p is a potential prognostic indicator of colorectal cancer and modulates ANXA3. It is a cost-effective genetic test

Dear Editor,

we read with great consideration the draft titled "MiR-340-5p is a potential prognostic indicator of colorectal cancer and modulates ANXA3." by Yang et al¹, and published by European Review of Medical and Pharmacological Science issue number 22/2018. It is a noteworthy report in the "Era" of target therapies and personalized medicine. They have demonstrated the tumor-suppressive function of micro RNA (miR)-340-5p by directly targeting Annexin A3 (ANXA3) in Colorectal Cancer (CRC). It is an essential novel prognostic biomarker and therapeutic target for CRC. Since CRC is the second primary source of cancer death in Western countries, this report improves the availability of targeted drugs in order to schedule targeting therapy². In the last decade, successful therapeutic approaches are required for specific genetic signature as EGFR and KRAS mutations in CRC combined with classical 5-fluorouracil (5-FU)-irinotecan and oxaliplatin-based chemotherapeutic regimens³⁻⁶. The monoclonal antibodies expenditure such as bevacizumab, cetuximab/panitumumab and Nivolumab improves the panel of drug options especially in so called frail patients^{7,8}. On the other hand, the use of these new drugs has opened problems to overcome the emergent drug-resistances^{9,10}. These results were achieved by evaluating the quantitative expression of ANXA3 and miR-340 by Reverse Transcriptase Real Time-PCR (qRT-PCR). The method utilized in the study is the SYBR-Green platform assay. It has been deep validated and it is sufficiently specific in term of the accuracy and precision¹¹. Our consideration for this issue focusing on the economic evaluation of the qRT-PCR for ANXA3 and miR-340-5p, includes more than just the cost of the test itself. Additional charges are genetic counseling, laboratory equipment, labor time and further diagnostics are potential of greater magnitude and should be evaluated¹². Few studies have addressed the testing costs implication in clinical practice¹³. Moreover, we think that the genetic test improvements may support clinicians to recognize patients who are vulnerable to severe treatment-related toxicities at standard doses, due to hepatic disorders¹⁴. Genomic knowledge of the field of miRNAs is quickly developing and changing, and it is mandatory that healthcare professionals keep abreast of the advances and clinical indications¹⁵.

Conflict of interest

The authors declare no conflicts of interest.

References

- 1) YANG L, MEN WL, YAN KM, TIE J, NIE YZ, XIAO HJ. MiR-340-5p is a potential prognostic indicator of colorectal cancer and modulates ANXA3. Eur Rev Med Pharmacol Sci 2018; 22: 4837-4845.
- 2) DE DIVITIIS C, NASTI G, MONTANO M, FISICHELLA R, IAFFAIOLI RV, BERRETTA M. Prognostic and predictive response factors in colorectal cancer patients: between hope and reality. World J Gastroenterol 2014; 20: 15049-15059.
- 3) BERRETTA M, CAPPELLANI A, FIORICA F, NASTI G, FRUSTACI S, FISICHELLA R, BEARZ A, TALAMINI R, LLESHI A, TAMBARO R, COCCIOLIO A, RISTAGNO M, BOLOGNESE A, BASILE F, MENEGUZZO N, BERRETTA S, TIRELLI U. FOLFOX4 in the treatment of metastatic colorectal cancer in elderly patients: a prospective study. Arch Gerontol Geriatr 2011; 52: 89-93.

- 4) BERRETTA M, ALESSANDRINI L, DE DIMITIS C, NASTI G, LLESHI A, DI FRANZIA R, FACCHINI G, CAVALIERE C, BUONERBA C, CANZONIERI V. Serum and tissue markers in colorectal cancer: state of art. *Crit Rev Oncol Hematol* 2017; 111: 103-116.
- 5) DI BENEDETTO F, BERRETTA M, D'AMICO G, MONTALTI R, DE RUVO N, CAUTERO N, GUERRINI GP, BALLARIN R, SPAGGIARI M, TARANTINO G, DI SANDRO S, PECCHI A, LUPPI G, GERUNDA GE. Liver resection for colorectal metastases in older adults: a paired matched analysis. *J Am Geriatr Soc* 2011; 59: 2282-2290.
- 6) BERRETTA M, RINALDI L, DI BENEDETTO F, LLESHI A, DE RE V, FACCHINI G, DE PAOLI P, DI FRANZIA R. Angiogenesis inhibitors for the treatment of hepatocellular carcinoma. *Front Pharmacol* 2016; 7: 428.
- 7) BERRETTA M, DI BENEDETTO F, DI FRANZIA R, LO MENZO E, PALMERI S, DE PAOLI P, TIRELLI U. Colorectal cancer in elderly patients: from best supportive care to cure. *Anticancer Agents Med Chem* 2013; 13: 1332-1343.
- 8) BERRETTA M, LLESHI A, CAPPELLANI A, BEARZ A, SPINA M, TALAMINI R, CACOPARDO B, NUNNARI G, MONTESARCHIO V, IZZI I, LANZAFAME M, NASTI G, BASILE F, BERRETTA S, FISICHELLA R, SCHIANTARELLI C C, GARLASSI E, RIDOLFO A, GUELLA L, TIRELLI U. Oxaliplatin based chemotherapy and concomitant highly active antiretroviral therapy in the treatment of 24 patients with colorectal cancer and HIV infection. *Curr HIV Res* 2010; 8: 218-222.
- 9) LUTRINO SE, BERGAMO F, SCHIRRIPIA M, ROSATI G, AVALLONE A, GIAMPIERI R, CORDIO S, BERRETTA M, LUMPE FR, PISA FE, LONARDI S, LOUPAKIS F, FASOLA G, APRILE G. Bevacizumab and first-line chemotherapy for older patients with advanced colorectal cancer: final results of a Community-based Observational Italian Study. *Anticancer Res* 2015; 35: 2391-2399.
- 10) NAPPI A, BERRETTA M, ROMANO C, TAFUTO S, CASSATA A, CASARETTI R, SILVESTRO L, DIMITIS C, ALESSANDRINI L, FIORICA F, OTTAIANO A, NASTI G. Metastatic colorectal cancer: role of target therapies and future perspectives. *Curr Cancer Drug Targets* 2018; 18: 421-429.
- 11) DE MONACO A, D'ORTA A, FIERRO C, DI PAOLO M, CILENTI L, DI FRANZIA R. Rational selection of PCR-based platforms for pharmacogenomic testing. *WCRJ* 2014; 1: e391.
- 12) CILLO M, DI PAOLO M, PUGLIESE S, TROISI A, CRESCENTE G, MAROTTA G. Costs and quality of genomics tests in the oncology field. *WCRJ* 2016; 3: e801.
- 13) DI FRANZIA R, DE LUCIA L, DI PAOLO M, DI MARTINO S, DEL PUP L, DE MONACO A, LLESHI A, BERRETTA M. Rational selection of predictive pharmacogenomics test for the Fluoropyrimidine/Oxaliplatin based therapy. *Eur Rev Med Pharmacol Sci* 2015; 19: 4443-4454.
- 14) DI FRANZIA R, RINALDI L, CILLO M, VARRIALE E, FACCHINI G, D'ANIELLO C, MAROTTA G, BERRETTA M. Antioxidant diet and genotyping as tools for the prevention of liver disease. *Eur Rev Med Pharmacol Sci* 2016 Dec; 20: 5155-5163.
- 15) BERRETTA M, DI FRANZIA R, TIRELLI U. The new oncologic challenges in the 3RD millennium. *WCRJ* 2014; 1: e133.

S. Di Martino^{1,2}, C. Di Iorio³, G. Marotta⁴

¹Pathology Unit, Cav. Apicella Hospital, Pollena Trocchia (ASL NA 3 SUD), Naples, Italy

²Scientific directorate, CETAC Research Center, Caserta, Italy

³Department of Biology and Biotechnology University of Pavia, Pavia, Italy

⁴Institute for Study and Care of Diabetes (ISCD), Genetic Service, "Abetaia" Casagiove (CE), Italy