Author's response to reviews

Title: Association of Variants on ADIPOQ and ADIPOR1 with Colorectal Cancer Risk: a Chinese Case-control Study and updated Meta-analysis

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Giovanni Neri, Section Editor, BMC Medical Genetics

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Dear Professor Neri,

Please consider the attached manuscript, entitled “Association of Variants on ADIPOQ and ADIPOR1 with Colorectal Cancer Risk: a Chinese Case-control Study and Meta-analysis” for publication in the journal of BMC Medical Genetics. Neither the submitted paper nor any similar paper, either in whole or in part, has been or will be submitted to or published in any other primary scientific journal. All of the authors are aware of and agree to the content of the paper and their being listed as an author on the paper. The authors declare no conflict of interest.

Obesity, hyperinsulinemia and insulin resistance (IR) have been recognized as risk factors for colorectal cancer (CRC); however, the underlying mechanisms remains to be elucidated. Adiponectin, an insulin sensitizer, is excreted by adipocytes and has been found to be involved in the development of these diseases. Previously studies reported that low adiponectin may confer an increased risk for colorectal cancer. Epidemiological studies found that variants on ADIPOQ and one of its receptor ADIPOR1 were significantly associated with the CRC risk, but the results of the studies were controversial. With a hospital based case-control study and the meta-analysis studies of the published results, we found that variant rs1342387 on the ADIPOR1 was associated with a reduced
CRC risk; however, the other variants including rs266729, rs822395, rs2241766 and rs1501299 on ADIPOQ or variant rs12733285 on ADIPOR1, which were also extensively evaluated by many epidemiological studies showed no significant association with CRC risk. These data provide a genetic relationship for obesity, hyperinsulinemia or insulin resistance (IR) and the risk of colorectal cancer. We believe the studies are in the scope of BMC Medical Genetics. Thank you for your consideration. We are looking forward to your review of the paper.

Sincerely,

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