

Does Glutathione-S-transferase associate with gastrointestinal cancer in Korean population?

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The glutathione S-transferase M1 (GSTM1) and glutathione S-transferase T1 (GSTT1) null genotypes have been linked to increased risk of developing cancer. The results regarding the association between GSTM1 and GSTT1 null genotypes and the risk of GC or CRC were contradictory. However, the majority of previous reports are limited by their small sample sizes. Therefore, the association of the GSTM1/GSTT1 null genotype with the risk of GC and CRC need to be confirmed in studies with larger numbers of samples.

A research article to be published on December 7, 2009 in the [World Journal of Gastroenterology](#) addresses this question. The research team led by Dr. Shin from Chonnam National University Medical School conducted a population-based, large-scale case-control study, to evaluate the association of GSTM1 and GSTT1 null genotypes with the risk of gastric and colorectal [cancer](#) in a South Korean population.

This is the first investigation of the risk of GC and CRC according to the GSTM1 and GSTT1 null genotypes in a large Korean population, and in addition, this study aims to determine whether smoking, alcohol consumption, and age modify the association between these [polymorphisms](#) and GC or CRC risk.

They found that GSTM1 and GSTT1 null genotypes were not associated with increased risk of GC or CRC in Koreans. Smoking, alcohol

consumption and age did not modify the association. No difference in the frequency of the combined GSTM1 and GSTT1 null [genotype](#) was observed between the two cancer groups and controls.

Although there is a profusion of reports on the association of polymorphisms with GC or CRC risk, few of these results have been convincingly replicated. Therefore, large sample size replication studies are required to confirm these associations in the future.

More information: Piao JM, Shin MH, Kweon SS, Kim HN, Choi JS, Bae WK, Shim HJ, Kim HR, Park YK, Choi YD, Kim SH. Glutathione-S-transferase (GSTM1, GSTT1) and the risk of gastrointestinal cancer in a Korean population. *World J Gastroenterol* 2009; 15(45): 5716-5721; www.wjgnet.com/1007-9327/15/5716.asp

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