

## Interactions between host and environmental factors and the risk of stomach cancer in Viet Nam

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### Background

The present study aim was to test a hypothesis of interactions between host and environmental factors and the risk of stomach cancer.

### Methods

A case-control study was performed for 356 cases of stomach cancer matched with 670 hospital controls for sex and +/- 5 ages admitted to three hospitals in Hanoi city in the North Viet Nam from October 2006 to September 2007. Host factors included two candidate genes of CYP1A1. Environmental factors included an infection by Hp, dietary habits collected by DLQ and SQFFQ. Crude and adjusted estimation of odds ratio was done in controlling for possible confounding factors using STATA 8.0.

### Results

CYP1A1 promoted risk of stomach cancer with age-adjusted OR=2.05, 95% CI=1.32-3.20. High intake of vegetables (mungo-bean sprouts) and fruit (banana) decreased the risk of stomach cancer as much as OR=0.83, 95% CI=0.71-0.96 and OR=0.89, 95% CI=0.77-1.00, respectively. Also high intake of foods rich in protein of meats decreased the risk with OR=0.66, 95% CI=0.55-0.79. High intake of roasted meats and heated wheat increased the risk with OR=1.13, 95% CI=1.01-1.22 and OR=1.11, 95% CI=1.01-1.22, respectively. Infection with Hp is not detected an association with stomach cancer in the present study with OR = 0.95, 95% CI = 0.69-1.31.

### Conclusions

The present study confirmed that there are an interaction between gene of CYP1A1 and environmental factors of roasted meats and heated wheat in developing stomach cancer in our study population.