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# Title: Validation of a Dietary Inflammatory Index (DII) and association with risk of gastric cancer: A case-control study

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**Background:** Gastric Cancer (GC) is the fifth most common malignancy and the second leading cause of cancer-related deaths worldwide. Studies have shown that dietary components and inflammation are implicated in the etiology of GC.

**Methods:** We examined the ability of a Dietary Inflammatory Index (DII) to predict the odds of GC in a case-control study conducted from December 2014 to May 2016. The subjects were 82 cases and 95 controls who attended specialized centers in Tabriz, Iran. DII scores were computed from a validated 168-item food frequency questionnaire. Logistic regression models were used to estimate Odds Ratios (ORs) adjusted for age, sex, body mass index, education, smoking, alcohol, H.pylori infection, physical activity, aspirin/NSAID use and total caloric intake.

**Results:** In the fully adjusted model, subjects with a DII score >-1.77 had nearly 3.5 times higher odds of having GC compared with subjects with DII $\leq$ -1.77, (OR$_{DII > -1.77 \leq -1.77}$=3.39; 95% CI=1.59,7.22). Also, for every one-unit increase in DII, there was a corresponding increase in hs-C-reactive protein, tumor necrosis factor-alpha, Inter-Leukin (IL)-6 and IL-1b: $\square$=0.09,0.16,0.16 and 0.10 respectively; and a corresponding decrease in IL-10: $\square$=-0.11.

Conclusion: Subjects who consumed a more pro-inflammatory diet were at increased odds of GC compared to those who consumed a more anti-inflammatory diet.

**Keywords:** Gastric cancer, Inflammation, Dietary Inflammatory Index (DII), Nutritional assessment, Validation of DII.

## Biography

Adeleh Khodabakhshi, was born in Iran. She received her PhD degrees in nutrition from Shahid Beheshti University of Medical Sciences in 2019. She is currently working at the nutrition department, Kerman University of Medical Sciences as an assistant professor. Her research interests include nutrition and cancer. She published 26 articles, in clinical nutrition journal with impact factor 7, European Journal of Clinical Nutrition IF=4, nutrition journal IF=3.3, nutrition and cancer journal IF=2.6 and etc. Accord scopus index, her publication h-index is 6. She has been serving as a reviewer board member of several reputed journals such as nutrition and cancer journal and was invited as a speaker to many international congresses.