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## Unmetabolized folic acid and serum folate concentrations and cancer risk in the post-folic acid fortification period

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In the US, the FDA mandated folic acid fortification of processed cereals commenced on January 1, 1998. The intent of folic acid fortification was to reduce the risk of having children with Neural Tube Defects (NTD). This nationwide fortification effort reduced the prevalence of NTD by ~20%. However, the non-target populations such as older women are exposed to high amounts of folic acid regardless of their need. Because the folic acid fortification resulted in more than the FDA predicted intake of folic acid, there was a concern regarding the Unmetabolized Folic Acid (UFA). Although the effect of UFA on health is not clearly known, there is a concern that it may have deleterious effects on health in non-target population. The purpose of this present study was to investigate the relation between UFA, serum folate and all cancers and breast cancer in older US women ( $\geq 60$  y old) using the data from the National Health and Nutrition Examination Survey, 1999-2002. In US older adults, the risk of having all cancers in UFA negative subjects was significantly lower than in subjects with UFA positive (OR 0.76 vs. 1.0) (n=2682). The risk of having cancer in the highest quartile serum folate group was significantly higher compared to those who were in the lowest quartile group (OR: 1.4 vs. 1.0;  $P < 0.01$ ) (n=7981). The breast cancer risk in the fourth quartile serum folate group was significantly higher compared to those in the first quartile group (OR: 1.81 vs. 1.0) (n=4007). Increased risk for cancer in those with high folate status and in those positive for UMF is a cause for concern. Because little data exist on the safety of folic acid, it is important to monitor the folate status in non-target population such as older adults, specifically in post-menopausal women.

### Biography

Vijay Ganji has completed his MS and PhD from the University of Nebraska, Lincoln, USA. He worked as a Faculty in the US for 25 years. Since 2016, he has been with the Qatar University. He has published more than 35 papers in reputed journals and has been serving as an Editor in Chief of *Nutrition and Food Science*, Emerald publishing company, UK.

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