Fruit and Vegetable Consumption as a Preventive Strategy Against Breast Cancer Risk

Dear Editor,

In a recently published paper, Ramezani *et al.* revealed a unique perspective on dietary intake and breast cancer, focusing on the Middle Eastern population, where dietary habits, genetic predispositions, and lifestyle factors differ significantly from Western counterparts.^[1] The study's findings reveal an inverse relationship between vegetable consumption and breast cancer risk, whereas fruit consumption, intriguingly, is associated with increased odds of breast cancer, particularly among postmenopausal women.^[1]

The study's sample comprises 350 breast cancer cases and 700 controls from Isfahan, Iran, recruited between July 2013 and July 2015.^[1] Using a validated 106-item Willett-format semi-quantitative dish-based food frequency questionnaire, the authors assessed dietary intake.^[1] Logistic regression models were applied to determine associations, controlling for potential confounders such as age, body mass index (BMI), and lifestyle factors.^[1] A major strength of this study is its sample size, which, whereas moderate, provides reasonable power for detecting associations.

the Philippines, where vegetables malunggay (moringa), ampalaya (bitter melon), and kangkong (water spinach) are culturally significant and widely available, public health initiatives could focus on incorporating these foods into daily diets.[2] Many of these vegetables are rich in antioxidants, fiber, and phytochemicals that may contribute to their potential protective effects against cancer, as evidenced by the study's findings.[1] The surprising association between fruit intake and increased breast cancer risk invites further scrutiny, especially in the Philippines, where tropical fruits such as mangoes, bananas, and papayas are dietary staples. These fruits are relatively high in natural sugars, which may influence insulin levels, a factor linked to breast cancer development. Public health practitioners in the Philippines may want to consider moderating fruit intake recommendations, especially for postmenopausal women while focusing on a balanced diet rich in fiber, antioxidants, and a variety of nutrients from both fruits and vegetables.[3] I would like to offer five key questions about the paper in the context of preventive medicine:

 How can the inverse association between vegetable intake and breast cancer risk inform dietary guidelines for women, particularly in high-risk groups, as part of a preventive strategy?

- 2. What impact do specific fruits or sugar content have on breast cancer risk?
- 3. How can women balance fruit intake with cancer risk factors like obesity?
- 4. How can public health campaigns effectively promote the intake of protective vegetables while educating about the potential risks of excessive fruit consumption?
- 5. What further studies are needed to establish causative links between specific dietary components and breast cancer, and how might these inform preventive medicine approaches tailored to different populations or life stages?

These questions would contribute to valuable insights in the context of preventive medicine. Further research is necessary to clarify which types of fruits and vegetables specifically impact breast cancer risk. Additional studies that consider the types of fruits, preparation methods, and serving sizes would also benefit the local context in the Philippines.^[4] Public health campaigns could focus on encouraging varied and balanced consumption of locally available vegetables, fostering dietary habits that support long-term health outcomes.^[4]

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Conflicts of interest

There are no conflicts of interest.

Jeff Clyde G. Corpuz

Department of Theology and Religious Education, De La Salle University, College of Liberal Arts, Manila, Philippines

Address for correspondence:

Prof. Jeff Clyde G. Corpuz,

Department of Theology and Religious Education, De La Salle University, College of Liberal Arts, Manila, Philippines. E-mail: jeff.corpuz@dlsu.edu.ph

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