Letters to the Editor

Soy Isoflavone Consumption Is Not Associated with Increased Risk of Advanced Prostate Cancer

In Response: Based on our findings, we reported that “positive associations were seen between isoflavones and advanced prostate cancer” in the abstract and that “isoflavone intake tended to be associated with an increased risk of advanced prostate cancer” in the summary of the discussion because we considered that this unemphatic expression accurately reflected the lack of statistical significance in the data. However, our choice of words might have led to a misunderstanding and the perception of exaggeration.

In our study, only the consumption of miso soup showed a statistically significant positive association with the risk of advanced prostate cancer. This result may be explained by chance finding or misclassification of miso (fermented soypaste) consumption because of variation among individuals in the amount of miso consumed in miso soup. If the observed positive association was in fact causal, it might be explained by the high amount of aglycones in miso. Isoflavones are present in the soybean primarily as glycosides (genistin and daidzin), which are estrogically inactive, but the glycosides are converted during the fermentation of soybeans to iso to aglycones (daidzein and genistein), which are estrogically active (1). Miso soup, thus, contains higher levels of aglycone than other soy foods, and our finding that only miso soup was positively associated with advanced prostate cancer is unsurprising.

We are puzzled by Bosland and Gann’s suggestion of errors in our risk estimates. Table 5 shows the results after exclusion of screening-detected prostate cancer. The number of advanced cases is the same as in Table 4 because no advanced cases were detected by screening. If the number of subjects changes (in this case, by exclusion of screening-detected cases), it is hardly surprising that the value of quartile cutoffs also changes. Moreover, as Table 3 shows, the point estimates of age-area adjusted relative risks were not substantially different from those of multivariate relative risk. Similarly, multivariate relative risks in Table 5 were similar to those adjusted for age and area only (data not shown). The highly correlated adjustment factors, therefore, had no substantial effect on the difference in results between Tables 4 and 5. Bosland and Gann’s comments are, thus, the result of a misinterpretation of our results.

Our results come from a prospective study among Japanese men, for whom soy food is a regular dietary item. Moreover, Japanese populations consume larger quantities of soy food than Western populations. As we stated in our study, isoflavone intake from traditional Japanese foods throughout life may be protective against prostate cancer. However, because we found that isoflavones did not prevent advanced prostate cancer, we cannot recommend their intake from supplements to men who do not regularly consume isoflavones. Moreover, we cannot rule out the possibility that they might, in fact, increase the risk of advanced prostate cancer.

We do not consider that fears over popular misinterpretation should stand as a barrier to the presentation of good science when prudently expressed and suitably published. We trust that Bosland and Gann agree.

Norie Kurahashi
Motoki Iwasaki
Shizuka Sasazuki
Tetsuya Otani
Manami Inoue
Shoichiro Tsugane
Epidemiology and Prevention Division, Research Center for Cancer Prevention and Screening, National Cancer Center, Tokyo, Japan

References


Copyright © 2007 American Association for Cancer Research.
doi:10.1158/1055-9965.EPI-07-0689
Soy Isoflavone Consumption Is Not Associated with Increased Risk of Advanced Prostate Cancer

Norie Kurahashi, Motoki Iwasaki, Shizuka Sasazuki, et al.

Cancer Epidemiol Biomarkers Prev 2007;16:2169.

Updated version
Access the most recent version of this article at:
http://cebp.aacrjournals.org/content/16/10/2169.2

E-mail alerts
Sign up to receive free email-alerts related to this article or journal.

Reprints and Subscriptions
To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at pubs@aacr.org.

Permissions
To request permission to re-use all or part of this article, use this link http://cebp.aacrjournals.org/content/16/10/2169.2. Click on "Request Permissions" which will take you to the Copyright Clearance Center's (CCC) Rightslink site.