Tamoxifen

These studies also confirm that soya does not interfere with tamoxifen, a drug used in the treatment of breast cancer. In the past, there was controversy whether soya counteracted the effectiveness of tamoxifen but the recent meta-analysis of Chi et al shows that the intake of soya has no effect on treatment.

American Institute for Cancer Research (AICR)

- Scientists from AICR extensively evaluated the findings from laboratory, animal and human studies (November 2012). AICR categorically stated that soya foods are perfectly safe to be consumed by women pre and post breast cancer diagnosis.
- Scientist from AICR concluded that soya foods do not cause any unfavourable effects for patients with breast cancer and in fact may provide a benefit. This was published in a report entitled "Soy is safe for breast cancer survivors".
- "Doctors and health care workers can inform their patients with breast cancer that soya products are completely safe and may even have a protective effect on health in the long term", says Karen Collins (Nutrition expert from the AICR).

Soya foods fit in a healthy balanced diet

Breast cancer patients can safely opt for a more plant-based diet based on soya. There is clear scientific evidence that soya foods do not interfere with the treatment of breast cancer patients.
Clinicians should consider soya foods as part of a healthy balanced diet for breast cancer patients and survivors.

References

- *AICR. Soy is safe for breast cancer survivors. November 21, 2012 | Issue 109 (http://www.aicr.org/cancer-research-update/november_21_2012/cru-soy-safe.html)*
- *Caan BJ, Natarajan L, Parker BA et al. Soy Food Consumption and Breast Cancer Prognosis. Cancer Epidemiol Biomarkers Prev 2011.*
- *Chi F, Wu R, Zeng YC, Xing R, Liu Y, Xu ZG. Post-diagnosis Soy Food Intake and Breast Cancer Survival: A Meta-analysis of Cohort Studies. Asian Pac J Cancer Prev 2013;14:2407-12.*
- *Dong JY, Qin LQ. Soy isoflavones consumption and risk of breast cancer incidence or recurrence: a meta-analysis of prospective studies. Breast Cancer Res Treat 2011;125:315-23.*
- *Guha N, Kwan ML, Quesenberry CP, Jr., Weltzien EK, Castillo AL, Caan BJ. Soy isoflavones and risk of cancer recurrence in a cohort of breast cancer survivors: the Life After Cancer Epidemiology study. Breast Cancer Res Treat 2009.*
- *Kang X, Zhang Q, Wang S, Huang X, Jin S. Effect of soy isoflavones on breast cancer recurrence and death for patients receiving adjuvant endocrine therapy. CMAJ 2010;182:1857-62.*
- *Nechuta SJ, Caan BJ, Chen WY et al. Soy food intake after diagnosis of breast cancer and survival: an in-depth analysis of combined evidence from cohort studies of US and Chinese women. Am J Clin Nutr 2012.*
- *Shu XO, Zheng Y, Cai H et al. Soy food intake and breast cancer survival. JAMA 2009;302:2437-43.*

European Breast Cancer Conference 9
Glasgow, March 2014

Meet the Expert
Breakfast session

It's Time for Clinicians to Reconsider Their Proscription Against the Use of Soyfoods by Breast Cancer Patients

by Dr Mark Messina

enjoy plant power
alpro

Dr Mark Messina

BREAST CANCER PATIENTS NEED TO BE REASSURED THAT THERE IS NO REASON TO AVOID CONSUMING SOYA FOODS AS PART OF A HEALTHY BALANCED DIET.

History

Impact of soya food intake on the risk of developing breast cancer has been intensively investigated for more than two decades because of following observations:

- In Asian (soya food-consuming) countries the incidence of breast cancer is much lower than in Western countries.
- Increased breast cancer rates among Japanese migrants to US
- Soya isoflavones are sometimes classified as phyto-estrogens

Controversy

In the past there were some concerns about consuming soya foods in breast cancer patients and survivors because soya foods contain isoflavones which may in some ways mimic estrogen

- Isoflavones are sometimes classified as phytoestrogens because they exert estrogen-like effects under certain experimental conditions although they bind more weakly to ERs than estradiol.
- More importantly, isoflavones preferentially bind to ERß in comparison to ERα whereas estrogen binds with equal affinity to both receptors. This preferential binding likely accounts for their tissue selectivity and why isoflavones are classified as SERMs (selective oestrogen receptor modulators).
- However, despite their SERM classification the estrogenic properties of isoflavones have led to concerns being raised about the use of soya by breast cancer patients.
- Animal studies are of limited values because the difference in pharmacokinetics between humans and rodents.

Epidemiological data

There is now impressive epidemiologic data indicating that soya foods do not worsen the prognosis of breast cancer patients but may actually improve it.

- Shanghai Breast Cancer Survival study: over 5,042 breast cancer patients were followed on average 3.9 years. Women in the fourth soya protein quartile (→ 15.6 g/d) were 30% less likely to die from all causes and 30% less likely to suffer from breast cancer recurrence.
- The findings from this Chinese population are confirmed in Caucasian women. Two studies in US:
  - Women's Healthy Eating and Living study (WHEL) with 3,088 breast cancer patients followed for on average 7.3 years
  - Life after Cancer Epidemiologic study (LACE) with 1,954 breast cancer survivors followed for on average 6.3 years
  - In both studies higher soya food intake was associated with improvements in prognosis both in regard to survival and relapse.
- A pooled analysis of these 3 studies with 9,514 breast cancer patients (half Asian and half Caucasian) with a median follow up of 7.4 year concluded that soya food consumption did not have any adverse effects. In fact, regular soya food consumption had the potential to lower mortality and tumour recurrence rates independent of the type of breast cancer tumour (ER– or ER+). Women consuming around 12g soya protein daily (equivalent to 400ml soya drink) had a 25% lower risk of breast cancer recurrence as compared with women who never consumed soya. This favourable effect in cancer survivors was seen in patients treated with and without Tamoxifen.
- Just recently Chi et al performed a meta-analysis in 11,206 breast cancer patients from five studies (three Asian and two American). A daily intake of soya increases survival probability by 29 % and reduces the risk of recurrence by 21 %.
  - This analysis showed that women who consume over 13 g of soya protein per day (corresponding to two glasses of soya drink) have 29 % less chance of dying from breast cancer as compared to women who consume little or no soya (less than 2 g soya protein per day). The risk of recurrence is 21 % lower when soya is consumed daily.
  - Soya provides protection from both types of breast cancer, ER negative and ER positive, and its beneficial effect applies to both before and after menopause.