Balanced, Low-Fat Diet Reduces Risk of Death From Breast Cancer in Postmenopausal Women

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ASCO Perspective

“This study shows that diet can make a difference in the risk of dying from breast cancer. This study makes clear there are no down-sides, only up-sides to a healthier diet, and it adds to a growing volume of studies showing similar positive effects across cancer types,” said ASCO President Monica M. Bertagnolli, MD, FACS, FASCO.

ALEXANDRIA, Va. – The federally funded Women’s Health Initiative (WHI) clinical trial of dietary modification in nearly 49,000 postmenopausal women with no previous history of breast cancer reported that women who followed a balanced diet that was low in fat and included daily servings of fruits, vegetables, and grains had a 21% lower risk of death from breast cancer than women in the control group who continued their normal diet, which was higher in fat overall. This is the first large, randomized clinical trial to show that diet can reduce the risk of dying from breast cancer. The study will be presented at the upcoming 2019 ASCO Annual Meeting in Chicago.

“Ours is the first randomized, controlled trial to prove that a healthy diet can reduce the risk of death from breast cancer,” said lead study author Rowan Chlebowski, MD, PhD, FASCO, from the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center in Torrance, CA. “The balanced diet we designed is one of moderation, and after nearly 20 years of follow-up, the health benefits are still accruing.”

Diet and nutrition are only some of the components of a complex and increasingly prevalent medical issue in America today – obesity. The incidence of obesity has dramatically increased
over the past several decades, and if current trends continue over the next 20 years, it is estimated that obesity will lead to more than 500,000 additional cases of cancer each year in the United States. In addition, the majority of Americans remain unaware that obesity is a risk factor for cancer. This is why ASCO has identified “Reducing Obesity's Impact on Cancer Incidence and Outcomes” as a critical research priority. Although not specifically testing a weight-loss intervention, the WHI findings help advance our understanding of the role of diet in this complex issue and in reducing cancer mortality.

**About the Study**

WHI, launched in 1993, is a set of ongoing randomized, controlled clinical trials that are looking at methods for preventing heart disease, breast and colorectal cancer, and osteoporotic fractures in postmenopausal women.

This analysis comes from a WHI trial of dietary modification that enrolled 48,835 postmenopausal women age 50 to 79 with no previous breast cancer history. From 1993 to 1998, researchers randomly assigned women to their normal diet, where fat accounted for 32% or more of their daily calories, or a diet with a goal of reducing fat consumption to 20% or less of caloric intake as well as requiring at least one serving of a vegetable, fruit, and grain in their daily diets. Women in the balanced, low-fat diet group adhered to the diet for approximately 8.5 years. The investigators continued to follow all of these women after completion of the intervention period to see if they died from any cause or from breast cancer.

**Key Findings**

Most women in the balanced, low-fat diet group reduced daily fat consumption to 25% or less (the majority did not reach the 20% goal) and increased their intake of fruits, vegetables, and grains. Among patients who maintained the balanced diet, there was an average 3% weight loss, although weight loss did not affect risk of death, according to the researchers.

So far, the trial has followed participants for a median of 19.6 years, and 3,374 cases of breast cancer were diagnosed in the group between 1993 and 2013.

Altogether, women in the intervention group experienced a range of short- and long-term health benefits as compared with women in the normal diet group:
• **Deaths after breast cancer from any cause:** There was a 15% lower risk of death from any cause after a breast cancer diagnosis in the balanced, low-fat diet group.
• **Breast cancer-specific death:** There was a 21% lower risk of death solely from breast cancer in the balanced, low-fat diet group.

The researchers have also conducted a study of the same dietary modification in women with poor metabolic factors, such as diabetes and high blood pressure [ASCO 2019 Abstract 1539]. Five million women in the U.S. today have poor metabolic function and are at three times the risk of dying from breast cancer than women with normal metabolic function. Dr. Chlebowski noted that greater uptake of the balanced, low-fat diet could lead to a major reduction in deaths from breast cancer in the U.S. and big savings in health care costs, as preventing a disease is not only better for overall health but is also much less expensive than treating a cancer once it develops.

**Next Steps**
The researchers collected blood samples from the women when they joined the trial and will continue to do so periodically so that they can follow the women's health based on a variety of blood biomarkers.

This study received funding from the National Institutes of Health.

**Study at a Glance**

<table>
<thead>
<tr>
<th>Study Focus</th>
<th>Reduction in death from breast cancer for women who consumed a balanced, low-fat diet as well as daily portions of fruits, vegetables and grains</th>
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</thead>
<tbody>
<tr>
<td><strong>Trial Type</strong></td>
<td>Randomized trial of a dietary intervention</td>
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<tr>
<td><strong>Patients on Trial</strong></td>
<td>48,835 postmenopausal women age 50-79</td>
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<tr>
<td><strong>Treatment Tested</strong></td>
<td>A low-fat diet with the goal of 20% or fewer calories from fat along with increased consumption of fruits, vegetables, and grains</td>
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<tr>
<td><strong>Primary Finding</strong></td>
<td>21% lower risk of death from breast cancer in women on a balanced, low-fat diet compared with women whose diet comprised 32% or more calories from fat</td>
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</table>
15% lower risk of death from any cause after a breast cancer diagnosis in women on a balanced, low-fat diet compared with women whose diet comprised 32% or more calories from fat.

For your readers:

- Guide to Breast Cancer
- Obesity, Weight, and Cancer Risk
- Food and Cancer Risk
- ASCO Annual Meeting 2019: An Early Look at This Year’s Research (Reunión Anual de la American Society of Clinical Oncology 2019: Un vistazo temprano a la investigación de este año)

View the disclosures for the 2019 Cancer Communications Committee. View the disclosures for Dr. Bertagnolli.

ATTRIBUTION TO THE AMERICAN SOCIETY OF CLINICAL ONCOLOGY ANNUAL MEETING IS REQUESTED IN ALL COVERAGE.

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1. National Cancer Institute: Take action to decrease your cancer risk: Obesity and its role in cancer health disparities. https://www.cancer.gov/about-nct/organization/crchd/blog/2015/nmhm15-spo...


3. ASCO: Nine Research Priorities to Accelerate Progress Against Cancer. https://www.asco.org/research-progress/reports-studies/clinical-cancer-a...


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About ASCO:

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