



**Question: What is the relationship between dietary patterns and risk of breast cancer?**

**Table 3.** Summary of studies examining the relationship between dietary patterns and risk of breast cancer

Author, Year Study Design; Location (Cohort) Risk of Bias	Sample Size (Age) Number of breast cancer cases; Duration of Follow up	Dietary Patterns**	Results	Summary of Findings
<b>Index/Score Analysis</b>				
<b>Buckland, 2013</b> <b>Prospective Cohort Study (PCS); Europe (European Prospective Investigation into Cancer and Nutrition (EPIC))</b>  <b>Risk of Bias: 4/24</b>	N=335,062 women (~51 y)  10,225 cases; 11y	Mediterranean diet (arMED) score	<ul style="list-style-type: none"> <li>• <b>Inverse association with breast cancer in all women:</b> HR=0.94 (95% CI=0.94-1.00; P for trend=0.048)</li> <li>• <b>Inverse association with breast cancer in postmenopausal women:</b> HR=0.93 (95% CI=0.87-0.99; P for trend=0.037)</li> <li>• <b>Inverse association with ER-/PR- breast cancer in postmenopausal women:</b> HR=0.80 (95% CI=0.65-0.99; P for trend=0.043)</li> <li>• No association with breast cancer risk in premenopausal women (NS).</li> </ul> <p><b>Individual Components of the arMED:</b> High vegetable intake was negatively associated with breast cancer (after adjusting for all other arMED components): HR=0.93 (95% CI=0.88,0.98).</p>	A higher adherence to the MD was associated with a lower risk of breast cancer in postmenopausal women, and this association is potentially greater for ER-/PR- tumors. There was no association between MD and breast cancer in premenopausal women.
<b>Butler, 2010</b> <b>PCS; Singapore (Singapore Chinese Health Study)</b>  <b>Risk of Bias: 0/24</b>	N=34,028 women (~55 y)  629 cases; 10.7y	Mediterranean Diet Score	No association with breast cancer risk (NS).	Consuming a "vegetable-fruit-soy" dietary pattern was associated with reduced breast cancer risk, particularly among postmenopausal women. There was no relationship between consumption of a "meat-dim sum" pattern and risk of breast cancer.
<b>Cade, 2011</b> <b>PCS; UK (UK Women's Cohort)</b>  <b>Risk of Bias: 2/24</b>	N=33,731 women (~52 y)  828 cases; 9y	<ul style="list-style-type: none"> <li>• Mediterranean diet score</li> <li>• WHO Healthy Diet Index (HDI)</li> </ul>	<p><b>Med Diet Score:</b> No association with breast cancer (NS).</p> <p><b>WHO HDI:</b> No association with breast cancer (NS).</p>	There were no significant associations between either Med Diet Score or WHO HDI score and risk of breast cancer.
<b>Couto, 2013</b>	N=44,840 women (30-49 y)	Modified version of the Mediterranean	No association with breast cancer risk or breast tumor characteristics in either pre- or post-menopausal women	Adherence to a Mediterranean dietary pattern was not associated with reduced



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<b>PCS; Sweden (Swedish Women's Lifestyle and Health Cohort)</b>  <b>Risk of Bias: 2/24</b>	1,278 cases; 16y	Diet Score	(NS).	risk of breast cancer overall, nor of specific breast tumor characteristics, overall, or in premenopausal and postmenopausal participants.
<b>Fung, 2006</b>  <b>PCS; US (National Health Survey (NHS))</b>  <b>Risk of Bias: 0/24</b>	N=71,058 postmenopausal women (30-55 y)  3,580 cases; 18y	<ul style="list-style-type: none"> <li>• Healthy Eating Index (HEI)</li> <li>• Alternate HEI (AHEI)</li> <li>• Diet Quality Index-Revised (DQIR)</li> <li>• Recommended Food Score (RFS)</li> <li>• Alternate Mediterranean Diet Score (aMED)</li> </ul>	<p>None of the dietary patterns were associated with total breast cancer (NS).</p> <p><b>Stratified by ER Receptor Status:</b></p> <ul style="list-style-type: none"> <li>• <i>AHEI</i>: Inverse association with ER- breast cancer (quintile 5 vs. 1) (HR=0.78 (95% CI=0.59-1.04; P for trend=0.01))</li> <li>• <i>RFS</i>: Inverse association with ER- breast cancer (quintile 5 vs. 1) (HR=0.69 (95% CI=0.51-0.94; P for trend=0.003))</li> <li>• <i>aMED</i>: Inverse association with ER- breast cancer (quintile 5 vs. 1)(HR=0.79 (95% CI=0.60-1.03; P for trend=0.03))</li> <li>• <i>HEI</i>: No association with breast cancer risk (NS)</li> <li>• <i>DQIR</i>: No association with breast cancer risk (NS).</li> </ul>	There were no associations between any of the dietary patterns examined and total or ER+ breast cancer risk among postmenopausal women. Women with higher scores on the AHEI, RFS, and aMed had a lower risk of ER- breast cancer. HEI and DQIR scores were not associated with ER- breast cancer risk.
<b>Fung, 2011</b>  <b>PCS; US (NHS)</b>  <b>Risk of Bias: 0/24</b>	N=86,620 postmenopausal women (30-55y)  5,522 cases; 2y	DASH Score	<p>Inverse association with ER-breast cancer (Q1 vs. Q5) (RR=0.80 (95% CI 0.64-1.01; P for trend=0.02))</p> <p>No association with or ER+ breast cancer (NS)</p>	Consuming a dietary pattern consistent with the DASH diet (based on DASH score) was associated with lower risk of ER- breast cancer, but not total or ER+ breast cancer risk.
<b>Mai, 2005</b>  <b>PCS; US (Breast Cancer Detection Demonstration Project)</b>	N=37,135 women (~61y)  1,586 cases; 9.5y	Recommended Food Score (RFS)	No association with breast cancer (NS)	There was no association between RFS score and risk of breast cancer.



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<b>Risk of Bias: 6/24</b>				
<b>Trichopoulos, 2010</b> <b>PCS; Greece (EPIC-Greece)</b>  <b>Risk of Bias: 2/24</b>	N=14,807 women (20-86 y)  240 cases; 9.8y	Mediterranean Diet Score (MDS)	No association with breast cancer in all women (NS)  Inverse association with breast cancer in postmenopausal women (HR=0.78 (95% CI=0.62-0.98; P for trend=0.05).	Increased adherence to the Mediterranean diet (measured using MDS) was associated with reduced breast cancer risk among postmenopausal women. There was no evidence for an association among premenopausal women.
<b>Factor and Cluster Analysis</b>				
<b>Adebamowo, 2005</b> <b>PCS; US (NHS)</b>  <b>Risk of Bias: 0/24</b>	N=90,638 women (~36y)  710 cases; 8y	<ul style="list-style-type: none"> <li>• "Prudent"</li> <li>• "Western"</li> </ul>	No associations with breast cancer, including when results were stratified by smoking status (NS).	Neither of dietary patterns identified using factor analysis (PCA) ("Prudent" or "Western") was associated with risk of breast cancer.
<b>Agurs-Collins, 2009</b> <b>PCS; US (Black Women's Health Study)</b>  <b>Risk of Bias: 2/24</b>	N=50,778 women (~39y)  1,094 cases; 13y	<ul style="list-style-type: none"> <li>• "Western"</li> <li>• "Prudent"</li> </ul>	<p>No associations with total breast cancer (NS).</p> <p><b>Stratified by BMI:</b> The "Prudent" pattern was inversely associated with breast cancer in women with BMI&lt;25 (Q1 vs. 5) (IIR=0.64 (95% CI=0.43-0.93; P for trend=0.01)).</p> <p><b>Stratified by menopausal status:</b> The "Prudent" pattern was inversely associated with breast cancer in premenopausal women (Q1 vs. 5) (IIR=0.70 (95% CI=0.52-0.96; P for trend=0.01)).</p> <p><b>Stratified by receptor status:</b> The "Prudent" pattern was inversely associated with ER- tumors, (Q1 vs. 5) (IIR=0.52 (95% CI=0.28-0.94; P for trend=0.01)), PR- tumors (IIR=0.66 (95% CI=0.39-1.09; P for trend=0.03), and ER/PR-negative tumors combined (IIR=0.70 (95% CI=0.34-1.26; P for trend=0.04)).</p>	A "Prudent" dietary pattern was associated with a reduced risk of breast cancer among normal-weight women, premenopausal women, and receptor-negative breast cancer. A "Western" dietary pattern was not associated with breast cancer risk.



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			<b>Stratified by smoking status:</b> No associations between the "Prudent" or "Western" dietary patterns and breast cancer (NS).	
<b>Baglietto, 2011</b> <b>PCS; Australia</b> <b>(Melbourne</b> <b>Collaborative</b> <b>Cohort)</b>  <b>Risk of Bias: 2/24</b>	N=20,967 women (~55y)  815 cases; 14.1y	<ul style="list-style-type: none"> <li>• "Vegetable"</li> <li>• "Fruit and salad"</li> <li>• "Traditional Australian"</li> <li>• "Meat"</li> </ul>	<p><b>"Fruit and salad":</b> Inverse association with:</p> <ul style="list-style-type: none"> <li>• Total breast cancer (Q1 vs. 5, HR=0.81 (95% CI=0.63-1.03, P for trend=0.03)</li> <li>• ER-negative breast cancer (Q1 vs. 5, HR=0.55 (95% CI=0.32-0.93, P for trend=0.004)</li> <li>• PR-negative breast cancer (Q1 vs. 5, HR=0.67 (95% CI=0.46-0.98, P for trend=0.01)</li> </ul> <p><b>"Traditional Australian":</b> Positive association with breast cancer (Q1 vs. 5, HR=1.58 (95% CI=0.87-2.85, P for trend=0.04)</p> <p><b>"Vegetable"</b> and <b>"Meat"</b> patterns were not associated with breast cancer (NS).</p>	A "Fruit and salad" dietary pattern reduced the risk of developing breast cancer, especially ER and PR-negative receptor breast cancer. A "Traditional Australian" diet was associated with increased risk of breast cancer.
<b>Butler, 2010</b> <b>PCS; Singapore</b> <b>(Singapore Chinese</b> <b>Health Study)</b>  <b>Risk of Bias: 0/24</b>	N=34,028 women (~55y)  629 cases; 10.7y	<ul style="list-style-type: none"> <li>• "Vegetable-fruit-soy"</li> <li>• "Meat-dim sum"</li> </ul>	<p><b>"Vegetable-Fruit-Soy":</b></p> <ul style="list-style-type: none"> <li>• Inverse association with total breast cancer (Q1 vs. 4) (HR=0.82 (95% CI=0.63-1.05, P for trend=0.03)</li> <li>• Inverse association with postmenopausal breast cancer (Q1 vs. 4) (HR=0.70 (95% CI=0.51-0.95, P for trend=0.01), and in those with follow-up &gt;5y (HR=0.57 (95% CI=0.36-0.88, P for trend&lt;0.01)</li> <li>• No association with breast cancer risk by ER or PR receptor status (NS)</li> </ul> <p><b>"Meat-Dim Sum":</b> No association with breast cancer (NS).</p>	Consuming a "vegetable-fruit-soy" dietary pattern was associated with reduced breast cancer risk, particularly among postmenopausal women. There was no relationship between consumption of a "meat-dim sum" pattern and risk of breast cancer.



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<b>Cottet, 2009</b>  <b>PCS; France (E3N-EPIC)</b>  <b>Risk of Bias: 2/24</b>	N=65,374 women (~53y)  2,381 cases; 9.7y	<ul style="list-style-type: none"> <li>• "Alcohol/Western"</li> <li>• "Healthy/Mediterranean"</li> </ul>	<p><b>"Alcohol/Western Pattern"</b></p> <ul style="list-style-type: none"> <li>• Positive association with total breast cancer (Q 4 vs. 1) (HR=1.20 (95% CI 1.03-1.38, P for trend=0.007)</li> <li>• Positive association with ER+/PR+ breast cancer (Q4 vs. 1) HR=1.33 (95% CI 1.07-1.65, P for trend=0.005)</li> <li>• Positive association with breast cancer in women with BMI&lt;25 (Q4 vs. 1) (HR=1.34 (95% CI 1.13-1.60, P for trend 0.001)), but not in women with BMI &gt;25</li> <li>• No associations with ductal vs. lobular breast cancer (NS)</li> </ul> <p><b>"Healthy/Mediterranean Pattern"</b></p> <ul style="list-style-type: none"> <li>• Inverse association with total breast cancer (Q4 vs. 1) (HR=0.85 (95% CI 0.75-0.95, P for trend=0.003)</li> <li>• Inverse association with ER+/PR- breast cancer (Q4 vs. 1) HR=0.65 (95% CI 0.49-0.87, P for trend=0.001)</li> <li>• Inverse association with breast cancer in women consuming &lt;2,037kcal (Q4 vs. 1) (HR=0.75 (95% CI 0.63-0.90, P for trend=0.002)), but not in women above the median</li> <li>• No associations with ductal vs. lobular breast cancer (NS).</li> </ul>	<p>The "alcohol/western" dietary pattern was associated with increased risk of breast cancer development, particularly for risk of ER+/PR+ breast cancer and among women with BMI&lt;25.</p> <p>The "healthy/Mediterranean" dietary pattern was associated with decreased risk of breast cancer, particularly for risk of ER+/PR- breast cancer and among women with energy intakes below the median (&lt;2,037 kcal).</p>
<b>Engeset, 2009</b>  <b>PCS; Norway (EPIC-Norway)</b>  <b>Risk of Bias: 4/24</b>	N=34,352 women (~48y)  546 cases; 7y	<ul style="list-style-type: none"> <li>• "Traditional fish eaters"</li> <li>• "Healthy"</li> <li>• "Average, less fish, less healthy"</li> <li>• "Western"</li> <li>• "Traditional bread eaters"</li> <li>• "Alcohol users"</li> </ul>	<p>No associations with breast cancer (NS)</p> <p><b>Individual Components:</b></p> <p>Breast cancer risk was higher among those consuming the "Western" pattern and:</p> <ul style="list-style-type: none"> <li>• <i>Higher levels of alcohol</i> (HR=1.74 (95% CI=1.14-2.68, P=0.0111))</li> <li>• <i>Lower levels of fruit/veg</i> (HR=1.76 (95% CI=1.10-2.82,</li> </ul>	<p>There was no overall relationship between the dietary patterns examined and risk of breast cancer. However, when results were stratified, breast cancer risk was higher among those consuming a "Western" pattern and high levels of alcohol, low levels of fruit/veg, and low levels of fish.</p>



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			P=0.0189)) • Lower levels of fish (HR=1.80 (95% CI=1.17-2.78, P=0.0079)).	
<b>Fung, 2005</b>  <b>PCS; US (NHS)</b>  <b>Risk of Bias: 2/24</b>	N=71,058 women (30-55y)  3,026 cases; 16y	<ul style="list-style-type: none"> <li>• "Prudent"</li> <li>• "Western"</li> </ul>	No associations with total breast cancer (NS).  <b>Stratified by smoking status:</b> The "Western" diet was associated with increased breast cancer risk among smokers (Q1 vs. 5), RR=1.44 (95% CI=1.02-2.03; P for trend=0.03)  <b>Stratified by family history of breast cancer:</b> No associations with total breast cancer when results were stratified by family history of breast cancer (NS).  <b>Stratified by ER Receptor status:</b>  <ul style="list-style-type: none"> <li>• The "Prudent" diet was associated with lower risk of ER- breast cancer (RR=0.62 (95% CI=0.45-0.88; P for trend=0.006))</li> <li>• The "Prudent" diet was not associated with risk ER+ breast cancer (NS)</li> <li>• The "Western" diet was not associated with ER receptor status (NS).</li> </ul>	There was no overall association between the "Prudent" or "Western" dietary patterns and risk of postmenopausal breast cancer. However, risk of breast cancer was higher among smokers consuming a "Western" pattern, and risk of ER- breast cancer was lower among those consuming the "Prudent" pattern.
<b>Link, 2013</b>  <b>PCS; US (California Teachers Study)</b>  <b>Risk of Bias: 2/24</b>	N=91,779 women (~50y)  4,140 cases; 14.1y	<ul style="list-style-type: none"> <li>• "Plant-based"</li> <li>• "High-protein, high-fat"</li> <li>• "High-carbohydrate"</li> <li>• "Ethnic"</li> <li>• "Salad and wine"</li> </ul>	<b>"Plant-based":</b>  <ul style="list-style-type: none"> <li>• Inverse association with breast cancer (Q5 vs. 1) (RR=0.85 (95% CI: 0.76, 0.95, P for trend=0.003).</li> <li>• Inverse association with ER-/PR- breast cancer (Q5 vs. 1) (RR=0.66 (95% CI: 0.48-0.91, P-trend=0.03))</li> </ul> <b>"Salad and wine":</b>	Consuming a plant-based diet was associated with a reduced risk of breast cancer, whereas consuming a salad and wine pattern was associated with an increased risk of breast cancer. The latter finding was only slightly attenuated when overall alcohol consumption was accounted for.



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			<ul style="list-style-type: none"> <li>• Positive association with breast cancer (Q5 vs. 1) (RR = 1.12 (95% CI: 1.01-1.25, P for trend = 0.010). Adjustment for alcohol intake reduced the association to 1.09 (95% CI: 0.97-1.23; P-trend = 0.06).</li> <li>• Positive association with ER+/PR+ breast cancer (Q5 vs. 1) (RR: 1.29 (95% CI: 1.12-1.49, P-trend , 0.001))</li> </ul> <p>The "High-protein, high-fat," "High-carbohydrate," and "Ethnic" patterns were not associated with breast cancer (NS).</p> <p><b>Individual Components:</b> Risk of breast cancer when alcohol consumption of &gt;20g/d (compared with none) was reduced from 1.24 (95% CI: 1.11, 1.38) to 1.12 (95% CI: 0.99, 1.27) with adjustment for all 5 dietary patterns.</p>	<p>"High-protein, high-fat," "High-carbohydrate," and "Ethnic" patterns were not associated with breast cancer risk.</p>
<p><b>Männistö, 2005</b></p> <p><b>PCS; Netherlands; Italy; Sweden (Dietary Patterns and Cancer)</b></p> <p><b>DIETSCAN Project: Netherlands Cohort Study (NLCS); (Hormones and Diet in the Etiology of Breast Cancer cohort (ORDET)); Swedish Mammography Cohort (SMC)</b></p>	<p><b>NLCS:</b> N=1598 women (55-69 y) 1,127 cases; 7y</p> <p><b>ORDET:</b> N=10,788 women (35-69 y) 210 cases; 9y</p> <p><b>SMC:</b> N=61,463 women (40-74y) 1,932 cases; 13y</p>	<ul style="list-style-type: none"> <li>• "Vegetables "</li> <li>• "Pork, Processed meat, Potatoes"</li> </ul>	<p><b>"Vegetables":</b> No associations with breast cancer (NS)</p> <p><b>"Pork, Processed meat, Potatoes":</b></p> <p><i>NLCS:</i> Inverse association with breast cancer (Q1 vs. 4) (RR=0.69 (95% CI=0.52-0.92, P for trend=0.02))</p> <p><i>ORDET, SMC:</i> No association with breast cancer (NS).</p>	<p>The "Vegetables" dietary pattern was not associated with breast cancer risk.</p> <p>The "Pork, Processed meat, Potatoes" dietary pattern was associated with breast cancer risk in the NLCS cohort, but not in the ORDET or SMC cohorts.</p>



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<b>Risk of Bias: 2/24</b>				
<b>Sant, 2007</b> <b>PCS; Italy (ORDET)</b> <b>Risk of Bias: 5/24</b>	N=8,861 women (34-70y)  267 cases; 9.5y	<ul style="list-style-type: none"> <li>• "Salad Vegetables"</li> <li>• "Western"</li> <li>• "Canteen"</li> <li>• "Prudent"</li> </ul>	<p><b>"Salad Vegetables":</b></p> <ul style="list-style-type: none"> <li>• Inverse association with HER-2+ breast cancer (Tertiles 2/3 vs. 1) (2nd: RR=0.33 (95% CI=0.15-0.73; 3rd: RR=0.25 (95% CI=0.10-0.64; P for trend=0.001))</li> <li>• No association with HER-2- breast cancer (NS)</li> </ul> <p>The "Western," "Canteen," and "Prudent" patterns were not associated with either HER-2+ or HER-2- breast cancer (NS).</p>	Consuming the "Salad Vegetables" (characterized by high consumption of raw vegetables and olive oil as added fat) had a significant protective effect against HER-2+ breast cancer.
<b>Sieri, 2004</b> <b>PCS; Italy (ORDET)</b> <b>Risk of Bias: 4/24</b>	N = 8,984 women (34-70y)  207 cases; 9.5y	<ul style="list-style-type: none"> <li>• "Salad Vegetables"</li> <li>• "Western"</li> <li>• "Canteen"</li> <li>• "Prudent"</li> </ul>	<p><b>"Salad Vegetables":</b></p> <ul style="list-style-type: none"> <li>• Inverse association with breast cancer (Tertiles 2/3 vs. 1) (2nd: RR=0.65 (95% CI=0.47-0.91; P for trend=0.016)) (3rd: RR=0.66 (95% CI=0.47-0.95; P for trend=0.016))</li> <li>• Inverse association with breast cancer in women with BMI&lt;25 (Tertile 2 vs. 1) (RR=0.39 (95% CI=0.22-0.69, P for trend=0.001)), but not in women with BMI&gt;25.</li> </ul> <p>The "Western," "Canteen," and "Prudent" patterns were not associated with breast cancer (NS).</p>	Consuming the "Salad Vegetables" (characterized by high consumption of raw vegetables and olive oil as added fat) had a significant protective effect against breast cancer, particularly among women with BMI <25.
<b>Terry, 2001</b> <b>PCS; Sweden</b> <b>(Swedish Mammography Screening Cohort)</b> <b>Risk of Bias: 5/24</b>	N = 61,463 women (40-76 y)  1,328 cases 9.6 y	<ul style="list-style-type: none"> <li>• "Healthy"</li> <li>• "Western"</li> <li>• "Drinker"</li> </ul>	<p><b>"Drinker":</b></p> <ul style="list-style-type: none"> <li>• Positive association with breast cancer (Q1 vs. 5; RR=1.27 (95% CI=1.06-1.52; P for trend=0.002)</li> <li>• Positive association with breast cancer among women &gt;50y (Q1 v 5; RR=1.31 (95% CI=1.05-1.63; P for trend=0.002), but not among women &lt;50y.</li> </ul> <p>The "Healthy" and "Western" patterns were not associated with breast cancer (NS).</p>	The "Drinker" dietary pattern (higher in wine, beer, liquor, snacks) was positively associated with breast cancer risk, particularly among women older than 50y. The "Healthy" and "Western" patterns were not associated with breast cancer risk.



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<b>Velie, 2005</b>  <b>PCS; US (Breast Cancer Detection Demonstration Project)</b>  <b>Risk of Bias: 2/24</b>	N=40,559 women (40-91 y)  1,868 cases; 8y	<ul style="list-style-type: none"> <li>• "Vegetable/fish/poultry/fruit"</li> <li>• "Beef/pork/starch"</li> <li>• "Traditional southern"</li> </ul>	<p><b>"Traditional southern":</b></p> <p>Inverse association with invasive breast cancer (Q1 vs. 5) (RH=0.78 (95% CI=0.65-0.95; P for trend=0.003).</p> <p>The "Vegetable/fish/poultry/fruit" or "Beef/pork/starch" patterns were not associated with breast cancer (NS).</p>	There was no association between "Vegetable/fish/poultry/fruit " and "Beef/pork/starch" and breast cancer risk; however, the traditional southern pattern was associated with a reduced risk among women with invasive breast cancer, but not total breast cancer.
<b>Reduced Rank Regression</b>				
<b>Fung, 2012</b>  <b>PCS; US (NHS)</b>  <b>Risk of Bias: 2/24</b>	N=67,802 women (30-55 y)  4,596 cases; 22y	<p>"Estrogen Pattern"</p> <p><b>Response variables:</b> Estradiol, estrone sulfate</p>	No associations with breast cancer (total and based on estrogen and progesterone receptor status) (NS).	A dietary pattern derived based on estradiol and estrone sulfate was not associated with risk of breast cancer.
<b>Schulz, 2008</b>  <b>PCS; Germany (EPIC-Potsdam)</b>  <b>Risk of Bias: 2/24</b>	N=15,351 (~49y)  137 cases; 6y	<p>"Fatty Acid" Pattern</p> <p><b>Response variables:</b> Nutrient densities of fatty acid fractions (i.e., SFA, MUFA, n-3 PUFA, n-6 PUFA)</p>	Positive association with breast cancer (Tertile 1 vs. 3) (HR=2.34 (95% CI=1.45-3.79; P for trend=0.0004)).	Consuming a "Fatty Acid" dietary pattern (high in processed meat, fish, butter, animal fats, margarine; lower in bread, fruit juice) was associated with increased risk of breast cancer.
<b>Other Dietary Patterns Methods</b>				
<b>Cade, 2010</b>  <b>PCS; UK (UK Women's Cohort)</b>  <b>Risk of Bias: 2/24</b>	N=33,725 women (~52y)  783 cases; 9y	<ul style="list-style-type: none"> <li>• "Vegetarian"</li> <li>• "Fish Eater"</li> <li>• "Poultry Eater"</li> <li>• "Red Meat Eater"</li> </ul>	<p>No associations with breast cancer in the full sample, or in premenopausal women (NS).</p> <p>In postmenopausal women, breast cancer risk was lower for "Fish Eaters" compared to "Red Meat Eaters" (HR=0.60 (95% CI =0.38-0.96)).</p>	There were no statistically significant associations with dietary pattern and risk of premenopausal breast cancer. In postmenopausal women, consuming a fish dietary pattern was associated with lower risk of breast cancer compared to those consuming a red meat dietary pattern.
<b>Key, 2009</b>	N=40,476 women	• Vegetarians	No associations with breast cancer (NS).	None of the dietary patterns examined



**Question: What is the relationship between dietary patterns and risk of breast cancer?**

**Table 3.** Summary of studies examining the relationship between dietary patterns and risk of breast cancer

Author, Year Study Design; Location (Cohort) Risk of Bias	Sample Size (Age) Number of breast cancer cases; Duration of Follow up	Dietary Patterns**	Results	Summary of Findings
<b>PCS; UK (EPIC-Oxford)</b>  <b>Risk of Bias: 9/24</b>	(~45y)  861 cases; 8y	<ul style="list-style-type: none"> <li>• Non-vegetarians:</li> <li>• Meat eaters</li> <li>• Fish eaters</li> </ul>		(vegetarian, non-vegetarian, meat eater, fish eater) were associated with risk of breast cancer.
<b>Prentice, 2006</b>  <b>RCT; US (Women's Health Initiative)</b>  <b>Risk of Bias: 6/28</b>	N=46,775 women (~62 y)  1,727 cases; 8.1y	<ul style="list-style-type: none"> <li>• Low-fat dietary intervention group</li> <li>• Comparison group</li> </ul>	<p>No differences in breast cancer incidence between the intervention and comparison groups (NS).</p> <p>Incidence of PR- breast cancer was lower in the treatment vs. comparison group (HR=0.76 (95% CI=0.63-0.92, P=0.004), and for the ratio of ER+/PR- (HR=0.64 (95% CI=0.49-0.84, P=0.001).</p>	Among postmenopausal women, a low-fat dietary pattern did not reduce breast cancer risk. However, secondary analyses suggest that the low-fat dietary intervention may reduce risk of PR- breast cancer.

\*Risk of Bias as determined using the Nutrition Evidence Library Bias Assessment Tool

\*\*Additional details regarding the dietary patterns, as reported by the authors, are found in the "Description of Evidence" section of the Evidence Portfolio