### Additional file 1
Complete case analysis of breast cancer-specific mortality according to smoking exposure at time of diagnosis among 4,334 women with invasive breast cancer (1987-2008)

<table>
<thead>
<tr>
<th>Smoking status</th>
<th>Number of Women Deaths</th>
<th>Crude HR (95% CI)</th>
<th>Agea-adjusted HR (95% CI)</th>
<th>Adjustedb HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neverc</td>
<td>2,517 401</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Former</td>
<td>986 126</td>
<td>0.89 (0.73-1.09)</td>
<td>0.94 (0.77-1.15)</td>
<td>0.99 (0.81-1.22)</td>
</tr>
<tr>
<td>Current</td>
<td>831 138</td>
<td>1.00 (0.82-1.21)</td>
<td>0.98 (0.81-1.20)</td>
<td>1.11 (0.91-1.36)</td>
</tr>
<tr>
<td>≤15 pack years</td>
<td>177 28</td>
<td>0.77 (0.53-1.14)</td>
<td>0.69 (0.47-1.02)</td>
<td>0.84 (0.57-1.25)</td>
</tr>
<tr>
<td>&gt;15 to ≤30 pack years</td>
<td>218 43</td>
<td>1.11 (0.81-1.53)</td>
<td>1.07 (0.78-1.47)</td>
<td>1.18 (0.85-1.63)</td>
</tr>
<tr>
<td>&gt;30 pack years</td>
<td>212 42</td>
<td>1.18 (0.86-1.62)</td>
<td>1.32 (0.96-1.82)</td>
<td>1.45 (1.05-2.02)</td>
</tr>
<tr>
<td>P-value, test for trendc</td>
<td>0.10 0.01</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤10 cigarettes/day</td>
<td>209 28</td>
<td>0.85 (0.58-1.25)</td>
<td>0.82 (0.56-1.21)</td>
<td>1.07 (0.72-1.57)</td>
</tr>
<tr>
<td>&gt;10 to ≤20 cigarettes/day</td>
<td>313 54</td>
<td>0.98 (0.74-1.30)</td>
<td>0.98 (0.73-1.30)</td>
<td>1.07 (0.79-1.43)</td>
</tr>
<tr>
<td>&gt;20 cigarettes/day</td>
<td>258 53</td>
<td>1.22 (0.91-1.62)</td>
<td>1.21 (0.90-1.61)</td>
<td>1.20 (0.89-1.62)</td>
</tr>
<tr>
<td>P-value, test for trendc</td>
<td>0.13</td>
<td>0.14</td>
<td>0.28</td>
<td></td>
</tr>
<tr>
<td>≤20 years</td>
<td>150 32</td>
<td>1.00 (0.70-1.44)</td>
<td>0.82 (0.56-1.18)</td>
<td>0.91 (0.62-1.33)</td>
</tr>
<tr>
<td>21 to 30 years</td>
<td>196 36</td>
<td>0.94 (0.67-1.32)</td>
<td>0.89 (0.63-1.26)</td>
<td>1.03 (0.72-1.46)</td>
</tr>
<tr>
<td>&gt;30 years</td>
<td>265 46</td>
<td>1.13 (0.83-1.53)</td>
<td>1.33 (0.98-1.81)</td>
<td>1.54 (1.12-2.12)</td>
</tr>
<tr>
<td>P-value, test for trendc</td>
<td>0.57 0.08 0.009</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: HR, hazard ratio; CI, confidence interval.

a HRs adjusted for age at diagnosis (≤39, 40-49, 50-59, 60-69, ≥70 years).
b HRs adjusted for age at diagnosis (≤39, 40-49, 50-59, 60-69, ≥70 years), year of diagnosis (≤1994, 1995-1999, 2000-2004, ≥2005), age at menarche (≤11, 12, 13, ≥14 years), parity (0, 1, 2, ≥3), menopausal status (premenopausal, postmenopausal), current hormone replacement therapy use (yes, no), first degree family history of breast cancer (yes, no), estrogen and progesterone receptors positivity (positive, negative, not investigated), histological grade (well, moderately, poorly differentiated), size of the tumor (≤10, 11-20, 21-30, 31-40, >40 mm, no pathological investigation), regional or distant involvement (node-negative, 1-3 positive nodes, ≥4 positive nodes, unknown nodal involvement, distant metastases), locoregional treatment (mastectomy, breast-conserving surgery, no surgery), neoadjuvant therapy (yes, no), adjuvant endocrine therapy (yes, no), adjuvant chemotherapy (yes, no).
c Reference category.
d Among the 1,079 current smokers, number of pack years of smoking, number of cigarettes smoked and duration of smoking were unknown for 296, 60 and 290 women, respectively.
e P for trend in hazard ratios comparing current smokers further categorized based on number of pack years of smoking, number of cigarettes smoked daily or duration of smoking, to never smokers.