**SUPPLEMENTAL TABLE 1**
Population characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>46 (100)</td>
</tr>
<tr>
<td>Age (years), median [range]</td>
<td>46 [26-85]</td>
</tr>
<tr>
<td>Menopausal status</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>18 (39)</td>
</tr>
<tr>
<td>No</td>
<td>28 (61)</td>
</tr>
<tr>
<td>Tumor size</td>
<td></td>
</tr>
<tr>
<td>≤ 2 cm</td>
<td>3 (6)</td>
</tr>
<tr>
<td>2 cm &lt; size ≤ 5 cm</td>
<td>39 (85)</td>
</tr>
<tr>
<td>&gt; 5 cm</td>
<td>4 (9)</td>
</tr>
<tr>
<td>Histological type</td>
<td></td>
</tr>
<tr>
<td>Ductal</td>
<td>45 (98)</td>
</tr>
<tr>
<td>Lobular</td>
<td>1 (2)</td>
</tr>
<tr>
<td>AJCC* clinical stage</td>
<td></td>
</tr>
<tr>
<td>IIA</td>
<td>16 (35)</td>
</tr>
<tr>
<td>IIB</td>
<td>14 (30)</td>
</tr>
<tr>
<td>IIIA</td>
<td>4 (9)</td>
</tr>
<tr>
<td>IIIB</td>
<td>2 (4)</td>
</tr>
<tr>
<td>IIIC</td>
<td>10 (22)</td>
</tr>
<tr>
<td>Tumor grading (SBR†)</td>
<td></td>
</tr>
<tr>
<td>Grade I</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Grade II</td>
<td>8 (18)</td>
</tr>
<tr>
<td>Grade III</td>
<td>36 (78)</td>
</tr>
<tr>
<td>Unavailable</td>
<td>2 (4)</td>
</tr>
<tr>
<td>Number of mitoses</td>
<td></td>
</tr>
<tr>
<td>Score I</td>
<td>3 (7)</td>
</tr>
<tr>
<td>Score II</td>
<td>8 (17)</td>
</tr>
<tr>
<td>Score III</td>
<td>31 (67)</td>
</tr>
<tr>
<td>Unavailable</td>
<td>4 (9)</td>
</tr>
<tr>
<td>chemotherapy regimen</td>
<td></td>
</tr>
<tr>
<td>6 courses of fluorouracil, epirubicin and cyclophosphamide (FEC 100)</td>
<td>3 (7)</td>
</tr>
<tr>
<td>3 courses of FEC 100, followed by 3 courses of docetaxel</td>
<td>43 (93)</td>
</tr>
<tr>
<td>Surgery</td>
<td></td>
</tr>
<tr>
<td>Mastectomy</td>
<td>16 (35)</td>
</tr>
<tr>
<td>Breast-conserving</td>
<td>30 (65)</td>
</tr>
<tr>
<td>Histological response</td>
<td></td>
</tr>
<tr>
<td>pCR</td>
<td>20 (43)</td>
</tr>
<tr>
<td>No pCR</td>
<td>26 (57)</td>
</tr>
<tr>
<td>Follow-up information</td>
<td></td>
</tr>
<tr>
<td>Months, median [range]</td>
<td>30 [6-73]</td>
</tr>
<tr>
<td>Index cancer recurrence, n (%)</td>
<td>8 (17)</td>
</tr>
<tr>
<td>Index cancer death, n (%)</td>
<td>7 (15)</td>
</tr>
</tbody>
</table>

*American Joint Committee on Cancer staging (tumor size assessed with US scan, lymph node involvement and metastasis status assessed both with US scan and with FDG PET).
† SBR = scarf-bloom-Richardson.
SUPPLEMENTAL FIGURE 1. Tumor blood flow measurement using the first 5-sec $^{18}$F-FDG PET images (early dynamic acquisition) with the volumes of interest (VOI) drawn on the ascending aorta and tumor. (A) The red line represents the arterial time-activity curve and the green line the tumor time-activity curve. The peak count time ($T_m$) is visually defined as the end of the first pass of the tracer through the arterial VOI. (B) The green line represents the tumor time-activity curve. $T_m$ is the peak count time as previously defined on the arterial time-activity curve.