The OBJECTIVES of this study were to:
1. Investigate patterns of care in omission of SLNB and radiation therapy (RT) in patients:
   - Over age 70 with ER+ clinical T1N0 invasive breast cancer from 2009-2017 who underwent breast conservation treatment.
   - A total of 141 patients were identified. Date of treatment, patient age, tumor characteristics (size and grade), use of SLNB, and use of RT were evaluated.
   - The trend of patterns of care (lumpectomy without SLNB or RT compared to lumpectomy with additional intervention) was evaluated over time using the Exact Cochran-Armitage Trend Test.

2. Determine if patient or tumor characteristics can predict omission of radiation therapy or SLNB in patients over age 70 with early, ER+ breast cancer receiving breast conserving surgery.

Methods:
A retrospective analysis of a prospectively maintained single academic center tumor registry database was queried for all patients over age 70 with ER+/clinical T1N0 invasive breast cancer from 2009-2017 who underwent breast conservation treatment. A total of 141 patients were identified. Date of treatment, patient age, tumor characteristics (size and grade), use of SLNB, and use of RT were evaluated. The trend of patterns of care (lumpectomy without SLNB or RT compared to lumpectomy with additional intervention) was evaluated over time using the Exact Cochran-Armitage Trend Test. Multivariable logistic regression analysis was performed on the subgroup of patients (2014-2017; n=84) receiving care after publication of the CALGB 9343 data to assess if specific patient characteristics were associated with omission of radiation therapy. A 6 month period for adoption of this practice was given after publication of the study.

Materials & Methods

<table>
<thead>
<tr>
<th>Variable</th>
<th>Radiation Therapy</th>
<th>No Radiation Therapy</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>75.4 ± 5.0</td>
<td>76.7 ± 5.6</td>
<td>0.16</td>
</tr>
<tr>
<td>Histologic Grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well Differentiated</td>
<td>75%</td>
<td>73%</td>
<td>0.67</td>
</tr>
<tr>
<td>Moderately Differentated</td>
<td>18%</td>
<td>19%</td>
<td>0.88</td>
</tr>
<tr>
<td>Poorly Differentiated</td>
<td>18%</td>
<td>18%</td>
<td>0.88</td>
</tr>
<tr>
<td>Tumor Size (mm)</td>
<td>10.9 ± 7.7</td>
<td>13.1 ± 6.9</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Regional Nodes Examined
1.4 ± 1.3                      1.0 ± 1.5                      0.11

No Radiation Therapy vs. Radiation Therapy Rate of Lumpectomy Alone Over Time

Discussion
Omission of both RT and SLNB are increasing in clinical practice in appropriately selected patients. The likelihood that patients are offered omission of these interventions increases with age. Tumor grade and size were not predictive of omission of RT or SLNB in this group of low risk patients. Long term data on patient outcomes and variation in care are needed as these approaches are more widely adopted in clinical practice.

References