Background

- New treatment modalities for multiple myeloma in recent decades have dramatically improved survival, but were of greatest benefit to those under the age of 65 years [1].
- Recent studies have documented modest improvements in survival for elderly patients [2, 3].
- New technologies may have resulted in diagnosis of myeloma at an earlier time in the course of the disease process… could lead-time bias account for some survival benefits? Also, could diminishing influence of co-morbid conditions account for some increments in observed / overall / all cause survival?

Research Objectives

Utilize population-based public health surveillance databases to assist in the analysis and interpretation of recent trends in multiple myeloma survival:

- Characterizing changes in myeloma cause-specific survival by age at diagnosis and time period
- Documenting trends in myeloma incidence and mortality rates during the study period

Multiple Myeloma: A Plasma Cell Malignancy

<table>
<thead>
<tr>
<th>Measure</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Cases</td>
<td>20,520</td>
<td>11,400</td>
<td>9,120</td>
</tr>
<tr>
<td>Deaths</td>
<td>10,610</td>
<td>5,770</td>
<td>4,840</td>
</tr>
<tr>
<td>~ 10 percent of hematological malignancies</td>
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<tr>
<td>~ 1 percent of all malignancies</td>
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</tbody>
</table>

Results

- Myeloma cause-specific survival increased across time periods for patients of all ages
- Age-specific myeloma incidence rates increased or were stable during the study period
- Age-specific myeloma mortality rates decreased at all ages by the end of the study period

Conclusions

- Increases in cause-specific survival from myeloma at all ages denote real benefits that are unlikely influenced by co-morbid conditions
- Increases in cause-specific survival from myeloma resulted in declining mortality rates from the disease at all ages – in the context of increasing or stable myeloma incidence rates, it is unlikely that observed improvements in cause-specific survival are due to lead-time bias
- Most myeloma patients are over 60 years of age at diagnosis. The greatest improvements in survival have accrued to those under 60 years of age – only modest improvements in survival have been documented for elderly patients

References