### Results

#### Table 2: Survival outcomes differ as a result of socio-demographic factors and their effect size

<table>
<thead>
<tr>
<th>Author</th>
<th>Exposure measure</th>
<th>Outcome measure</th>
<th>Significant</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acharya et al. (2016)</td>
<td>Demographic &amp; community income level</td>
<td>5 and 10 year OS</td>
<td>Yes</td>
<td>91.2% vs 69.5%</td>
</tr>
<tr>
<td>Adam et al. (2016)</td>
<td>Community income level</td>
<td>5 year mortality</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>Bona et al. (2016)</td>
<td>Demographic &amp; community income level</td>
<td>5 year OS</td>
<td>Yes</td>
<td>92% vs 85%</td>
</tr>
<tr>
<td>Walsh &amp; Chawla (2016)</td>
<td>Demographic income level</td>
<td>5 year OS</td>
<td>Yes</td>
<td>79% vs 52%</td>
</tr>
<tr>
<td>Watanabe et al. (2016)</td>
<td>Demographic &amp; Income</td>
<td>Mortality</td>
<td>Yes</td>
<td>4.9% vs 1.9%</td>
</tr>
<tr>
<td>Embree et al. (2016)</td>
<td>Family income and education</td>
<td>10 year OS</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>Soll et al. (2016)</td>
<td>Community income level</td>
<td>Mortality</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>Yooliaki et al. (2011)</td>
<td>Demographic income level</td>
<td>5 year OS</td>
<td>No</td>
<td>--</td>
</tr>
<tr>
<td>Kadan-Lottick et al. (2003)</td>
<td>Demographic income level</td>
<td>Risk of death</td>
<td>Yes</td>
<td>80% vs 49% and 39%</td>
</tr>
</tbody>
</table>

*Marginally nonsignificant findings

#### Discussion

- **Key Findings:**
  - 59 studies established that children with leukemia from different socioeconomic backgrounds have decreased survival outcomes and consequently increased mortality rates when compared to their white counterparts (Acharya et al. 2016; Bona et al. 2016; Kadan-Lottick et al. 2003; Walsh et al. 2016; Winestone et al. 2016).
  - However, results from other studies contradict socio-demographic factors to be contributing factors.

- **Contextualization of results:**
  - Although many literature reviews determined a positive relationship between low socioeconomic status and inferior survival rates among pediatric leukemia, the final results remain inconsistent.

- **Strengths:**
  - Articles from different nations were analyzed to target results from high-income countries.
  - Selection bias was minimized because no limitation was used on the year of publication for articles that met the criteria.
  - No foreign language exclusion bias.

- **Limitations:**
  - Although the association is generalized because individual factors differ in magnitude and effect size in various countries.
  - Low-income countries may have confounding factors such as race and poverty. Other studies suggested no association between the survival rates as well as mortality rates and socio-demographic factors. Various studies have provided evidence and indicated that children with leukemia belonging to specific ethnic groups, and economic minority groups experience inferior survival outcomes as compared to their high-income counterparts.

### Conclusion

On average there is an association between socioeconomic determinants and the survival outcome of childhood leukemia. Taking limitations of the study and the mixed findings into account this relationship should be further explored.

### References