Radiotherapy Utilisation in Geriatric Oncology patients in New South Wales, Australia

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Purpose & Methods

• **Purpose:**
  - To review the current radiotherapy utilisation rates for patients as a function of increasing age and, particularly, in patients older than 80 years of age, and,
  - To determine the factors that contribute to the gap between actual and optimal rates

• **Methods:**
  - **Study Population**
    - NSW patients diagnosed with cancer in the period 2009-2011
      - 110,645 patients
  - **Database**
    - NSW Central Cancer Registry &
    - NSW Retrospective Radiotherapy Dataset from 2009-2012
    - RTU definition = single course of radiotherapy delivered within the first 12 months of diagnosis
### Results: RTU within 1 year of diagnosis by age

<table>
<thead>
<tr>
<th>Age Group (years)</th>
<th>Total number of patients</th>
<th>Received radiotherapy</th>
<th>RTU rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;60</td>
<td>33,088</td>
<td>9,726</td>
<td>29%</td>
</tr>
<tr>
<td>60-69</td>
<td>29,706</td>
<td>8,271</td>
<td>28%</td>
</tr>
<tr>
<td>70-79</td>
<td>26,868</td>
<td>6,812</td>
<td>25%</td>
</tr>
<tr>
<td>80-89</td>
<td>17,955</td>
<td>2,679</td>
<td>15%</td>
</tr>
<tr>
<td>90+</td>
<td>3,028</td>
<td>233</td>
<td>8%</td>
</tr>
<tr>
<td>&lt;80</td>
<td>89,662</td>
<td>24,809</td>
<td>28%</td>
</tr>
<tr>
<td>80+</td>
<td>20,983</td>
<td>2,912</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>110,645</strong></td>
<td><strong>27,721</strong></td>
<td><strong>25%</strong></td>
</tr>
</tbody>
</table>
Conclusion

• Radiotherapy utilisation decreases with:
  • Increasing age and,
  • In patients living further from the nearest radiotherapy department, and in
  • Lower socioeconomic areas

• Further work is required to determine:
  • The appropriate proportion of geriatric patients who should receive radiotherapy,
  • As the optimal RTU rate has not yet been modelled for this cohort of patients.

• The development of a co-morbidity/frailty adjusted score for optimal radiotherapy utilisation rate would assist in clinical decision making, especially in the era of personalised medicine

• This will be addressed in further research
Thank you

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