Impact of treatment modality on overall survival in localized ductal prostate adenocarcinoma: A National Cancer Database analysis

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Objective

- Given the rarity of ductal prostate adenocarcinoma (PCa), optimal treatment strategies for men with localized disease is largely unknown.
- Aim: to describe the impact of surgery, radiotherapy, and systemic therapy on overall survival (OS) in men with nonmetastatic ductal PCa.
Methods

- Cases from National Cancer Database (NCDB) from 2004-2015.
- Cox regression analysis tested impact of treatment on OS:
  1. Surgery
  2. Radiotherapy
  3. Systemic therapy
  4. No treatment or other treatment

Prostate adenocarcinoma
n = 1345618

Ductal PCa
n = 2209

Nonmetastatic Ductal PCa
n = 1993
## Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age (IQR)</td>
<td>67 (61-74)</td>
</tr>
<tr>
<td>Median PSA, ng/ml (IQR)</td>
<td>6.3 (4.3-10.8)</td>
</tr>
<tr>
<td>Stage ≥ cT3, n (%)</td>
<td>195 (9.8)</td>
</tr>
<tr>
<td>Charlson Comorbidity Score ≥4, n (%)</td>
<td>68 (3.4)</td>
</tr>
<tr>
<td>Gleason biopsy score ≥4, n (%)</td>
<td>808 (40.6)</td>
</tr>
<tr>
<td>Treated surgically, n (%)</td>
<td>1212 (60.8)</td>
</tr>
<tr>
<td>Treated with radiotherapy, n (%)</td>
<td>406 (20.4)</td>
</tr>
<tr>
<td>Treated with systemic therapy, n (%)</td>
<td>102 (5.1)</td>
</tr>
</tbody>
</table>

Compared to men treated surgically, OS was significantly lower for patients receiving radiotherapy (HR 2.6; 95% CI 1.7-4.0) and systemic therapies (HR 9.1; 95% CI 5.0-16.5).
Conclusions

- In the rare ductal PCa variant, starting treatment with surgery offers more favorable long-term OS outcomes than radiotherapy and systemic therapies.
- Given the rarity of ductal PCa, the presented data represents the best available level of evidence on this topic.