Clinical Effectiveness of FOLFIRINOX or nab-Paclitaxel plus Gemcitabine or Gemcitabine in Locally Advanced or Metastatic Pancreatic Cancer: A Population-Based Analysis.

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Background

• Efficacy of FOLFIRINOX (FFN), nab-paclitaxel plus gemcitabine (NG), and gemcitabine (gem) not directly compared in unresectable pancreatic cancer

• Goal: to examine and compare the real world effectiveness of the three regimens
Methods

• Pts diagnosed with unresectable pancreatic cancer who initiated palliative chemotherapy
  – August 2014 to August 2015
  – Identified from the British Columbia provincial pharmacy

• Comparison of clinical, pathological, treatment, and outcome characteristics
Table 1. Baseline characteristics by treatment received.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>FOLFIRINOX</th>
<th>Nab-paclitaxel + gemcitabine</th>
<th>Gemcitabine</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pts receiving tx</td>
<td>n</td>
<td>59</td>
<td>59</td>
<td>32</td>
</tr>
<tr>
<td>Age at Metastasis</td>
<td>Median</td>
<td>63 (34 – 86)</td>
<td>69 (41 – 81)</td>
<td>74 (56 – 86)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
<td>33 (55.9%)</td>
<td>29 (49.2%)</td>
<td>17 (53.1%)</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>26 (44.1%)</td>
<td>30 (50.9%)</td>
<td>15 (46.9%)</td>
</tr>
<tr>
<td>ECOG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>12 (26.1%)</td>
<td>5 (10.9%)</td>
<td>4 (13.3%)</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>30 (65.2%)</td>
<td>20 (43.5%)</td>
<td>9 (30.0%)</td>
</tr>
<tr>
<td>2+</td>
<td></td>
<td>4 (8.7%)</td>
<td>21 (45.7%)</td>
<td>17 (56.7%)</td>
</tr>
<tr>
<td>Location of Tumour</td>
<td>Head</td>
<td>11 (19.3%)</td>
<td>12 (21.1%)</td>
<td>5 (16.7%)</td>
</tr>
<tr>
<td></td>
<td>Body</td>
<td>38 (66.7%)</td>
<td>27 (47.4%)</td>
<td>13 (43.3%)</td>
</tr>
<tr>
<td></td>
<td>Tail</td>
<td>8 (14.0%)</td>
<td>18 (31.6%)</td>
<td>12 (40.0%)</td>
</tr>
<tr>
<td>Biliary Stent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>17 (28.8%)</td>
<td>10 (17.0%)</td>
<td>8 (25.0%)</td>
</tr>
<tr>
<td>Metastatic Disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 (59.3%)</td>
<td>46 (78.0%)</td>
<td>25 (78.1%)</td>
</tr>
<tr>
<td>Site of Metastases</td>
<td>Liver only</td>
<td>12 (36.4%)</td>
<td>19 (42.2%)</td>
<td>12 (48.0%)</td>
</tr>
<tr>
<td></td>
<td>One extra-hepatic only</td>
<td>19 (57.6%)</td>
<td>24 (53.3%)</td>
<td>11 (44.0%)</td>
</tr>
<tr>
<td></td>
<td>Multiple</td>
<td>2 (6.1%)</td>
<td>2 (4.4%)</td>
<td>2 (8.0%)</td>
</tr>
<tr>
<td>Bili</td>
<td>Median</td>
<td>10 (3 – 81)</td>
<td>11 (4 – 113)</td>
<td>11 (2 – 168)</td>
</tr>
<tr>
<td>CA 19.9</td>
<td>Median</td>
<td>307</td>
<td>1182</td>
<td>930</td>
</tr>
<tr>
<td></td>
<td>(1.2 – 140000)</td>
<td>(1.0 – 497300)</td>
<td>(1.0 – 240900)</td>
<td></td>
</tr>
<tr>
<td>2nd line Treatment</td>
<td>n</td>
<td>18</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 3. Reasons for treatment discontinuation.

<table>
<thead>
<tr>
<th>Reason for Discontinuation</th>
<th>FFN (%)</th>
<th>NG (%)</th>
<th>Gem (%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment discontinuations (n)</td>
<td>50 (85%)</td>
<td>41 (78%)</td>
<td>30 (94%)</td>
<td></td>
</tr>
<tr>
<td>Toxicity (n)</td>
<td>16 (36%)</td>
<td>7 (17%)</td>
<td>7 (23%)</td>
<td>0.119</td>
</tr>
<tr>
<td>Progression (n)</td>
<td>12 (27%)</td>
<td>17 (41%)</td>
<td>7 (23%)</td>
<td>0.203</td>
</tr>
<tr>
<td>Death (n)</td>
<td>4 (9%)</td>
<td>3 (7%)</td>
<td>7 (23%)</td>
<td>0.091</td>
</tr>
<tr>
<td>Other (n)</td>
<td>11 (25%)</td>
<td>13 (32%)</td>
<td>10 (33%)</td>
<td>0.692</td>
</tr>
</tbody>
</table>
Conclusion & Next Steps

- Modified FFN and NG portends a better prognosis than gem alone
- Suggests real world effectiveness for patients with unresectable pancreatic cancer
- Future directions:
  - Cohort expansion
  - Comparison of real world with trial patients at baseline
  - Detailed toxicity analysis