An Indirect Treatment Comparison and Cost-effectiveness Analysis Comparing FOLFOXINOX to nab-Paclitaxel + Gemcitabine for First-line Treatment of Patients with Metastatic Pancreatic Cancer
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INTRODUCTION & OBJECTIVE

\begin{itemize}
  \item The ACCORD 11 and MPACT trials have respectively demonstrated the significant clinical benefits of FOLFIRINOX vs gemcitabine and nab-Paclitaxel plus gemcitabine (Nab-PG) compared to traditional gemcitabine for patients with metastatic pancreatic cancer (mPC) \cite{1,2}.
  \item Head-to-head trials comparing FOLFIRINOX with Nab-PG are currently unavailable.
\end{itemize}

Overview of the Analytical Approach

- **Indirect Treatment Comparison**
- **Cost-Utility Analysis (Markov Model)**

\textbf{Indirect Treatment Comparison}

- The comparability of ACCORD 11 and MPACT was sufficient for an ITC (Table 2).
- The efficacy (i.e., OS, PFS) and safety outcomes (i.e., grade 3 or 4 adverse events [AEs]) were extracted from the ACCORD 11 and MPACT trials.
- The relative risk ratios (RRs) were calculated using the number of patients experiencing each grade 3 or 4 AE.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>ACCORD 11</th>
<th>MPACT</th>
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<tbody>
<tr>
<td>OS (months)</td>
<td>11.1</td>
<td>11.5</td>
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<tr>
<td>PFS (months)</td>
<td>6.8</td>
<td>7.6</td>
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**Cost-Utility Analysis**

- The objective was to conduct an indirect treatment comparison (ITC) and a cost-effectiveness analysis (CEA) of first-line FOLFIRINOX compared with first-line Nab-PG from the Canadian public payer perspective.

\textbf{RESULTS}

**Results of the Indirect Treatment Comparison**

- The ITC results indicated that FOLFIRINOX was associated with numerically greater OS compared with Nab-PG (HR [95% CI] = 0.792 [0.597 to 1.050]).
- The results also demonstrated that FOLFIRINOX had statistically significantly greater OS compared with Nab-PG (HR [95% CI] = 0.681 [0.509 to 0.911]).
- When comparing AEs, there were few statistically significant differences.

**Results of the Canadian Cost-Effectiveness Analysis**

- Results of the Canadian CEA indicated that FOLFIRINOX was cost-effective when compared with Nab-PG ($1,617 CAD/QALY [ICER: $1,235 CAD/QALY] (Table 7).
- Due to longer treatment, and improved OS and PFS, there were slightly higher costs for FOLFIRINOX over a lifetime horizon versus Nab-PG.
- AEs were not cost drivers in the CEA.

**CONCLUSIONS**

- As per the ITC, FOLFIRINOX had numerically greater OS and significantly greater PFS compared with Nab-PG.
- FOLFIRINOX and Nab-PG had comparable safety profiles.
- There was a 0.06% probability that FOLFIRINOX is cost-effective compared to Nab-PG at a willingness to pay threshold of $50,000.
- FOLFIRINOX is dominant over Nab-PG 45% of the time.
- The cost-effectiveness acceptability curve shows that FOLFIRINOX is an attractive cost-effective first-line treatment.

**REFERENCES**


Victoria University study conducted under a research contract and sponsored by sanofi-aventis Canada.