

PHARMACOECONOMIC ANALYSIS OF LIPOSOMAL IRINOTECAN AS SECOND-LINE TREATMENT FOR ADVANCED PANCREATIC CANCER VERSUS STANDARD THERAPY FOLFIRINOX

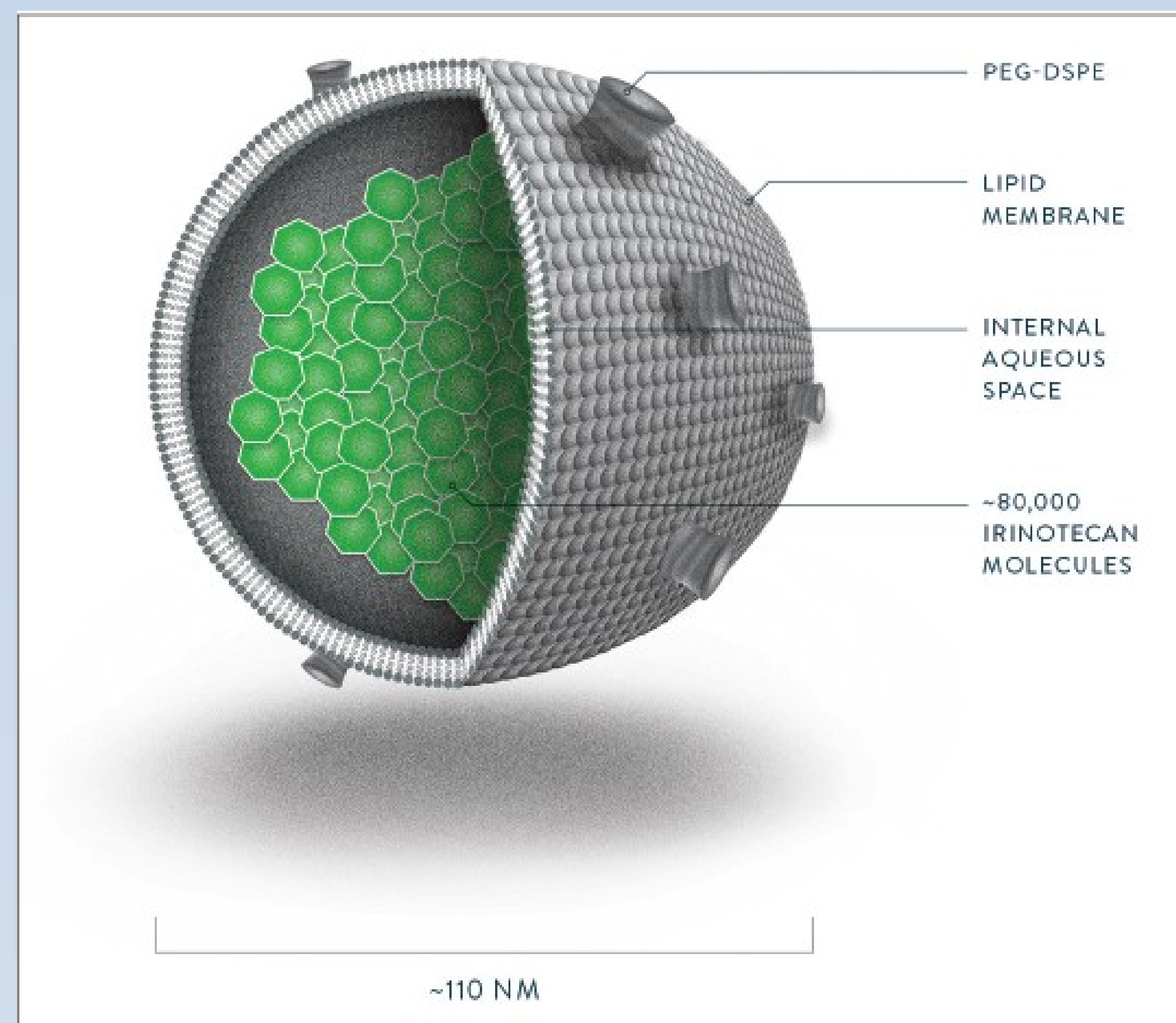


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BACKGROUND AIM AND OBJECTIVES

In a total of 21 studies (3,017 patients with locally advanced, unresectable or metastatic pancreatic cancer), the use of nal-IRI, together with 5-fluorouracil and leucovorin, led to a significant improvement in PFS and OS, with a pooled mean difference of 1.01 months (2.87 vs. 1.87 months) (95% CI = 0.97-1.05, $p < 0.01$) and 0.29 months (95% CI = 0.18-0.39, $p < 0.01$), respectively. The aim of the study was to compare the costs of treatment with nanoliposomal-irinotecan in combination with fluorouracil and leucovorin (nal-IRI+5-FU/LV) versus modified FOLFIRINOX (mFFX) as second-line treatment after gemcitabine with nab-paclitaxel (GnP) for metastatic and recurrent pancreatic cancer



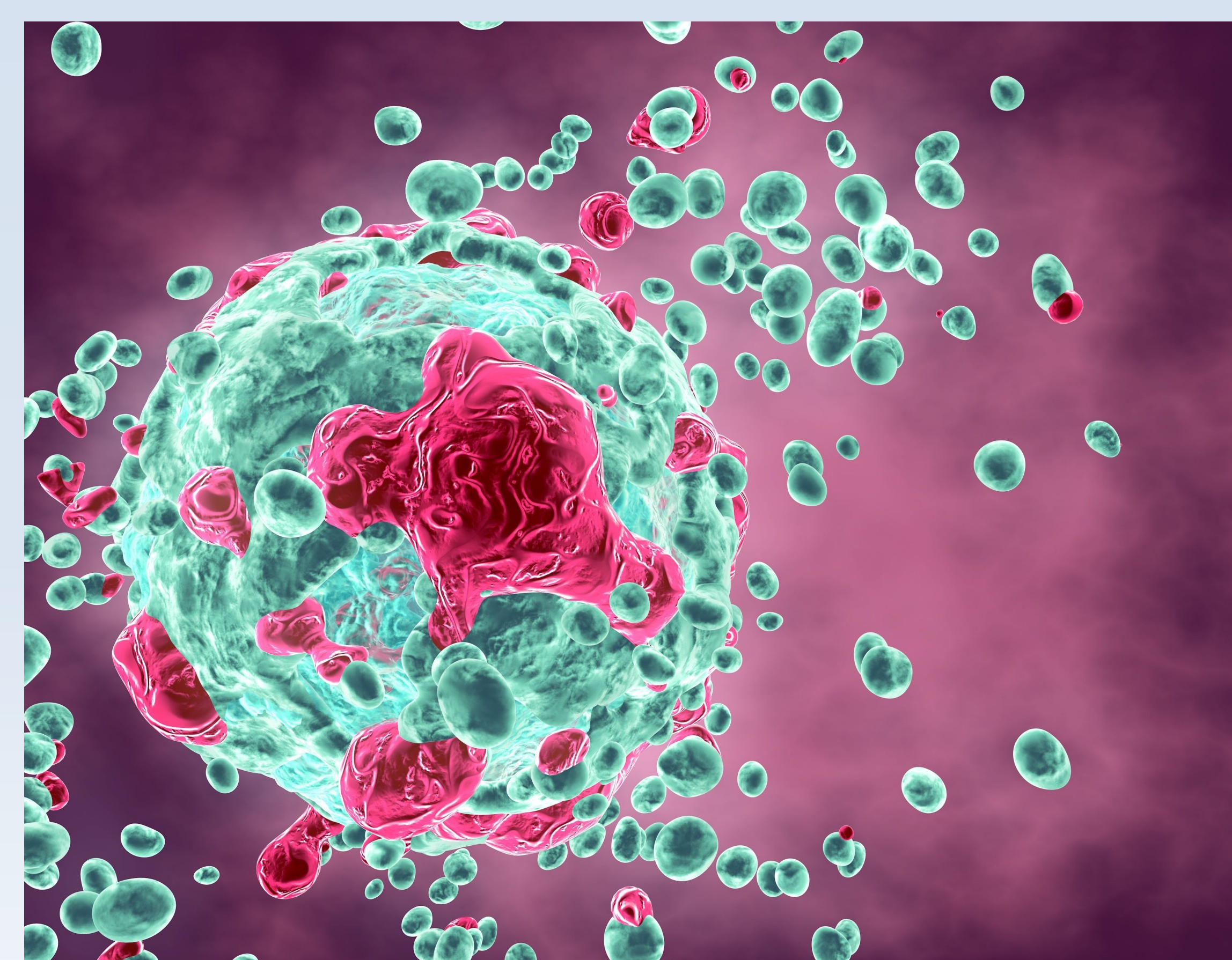
Abbreviations: PEG-DSPE, polyethylene glycol-distearoylphosphatidylethanolamine.

MATERIALS AND METHODS:

We analyzed the costs of nal-IRI+5-FU/LV or mFFX therapies in our hospital. Data were extracted from the AREAS management software and the purchase prices of drugs and DM necessary for the preparation of the therapies of each cycle were taken into account for an average patient of 80kg, 180cm tall and 2sqm. The nal-IRI+5-FU/LV has an average duration of 6 cycles (2.87 months) while mFFX of 4 cycles (1.87 months). The costs of the necessary personnel and indirect costs, not easily identifiable, were not taken into account. Furthermore, the incidence of side effects was evaluated for both alternatives

RESULTS:

Nal-IRI+5-FU/LV has a cost of €923.5/cycle (€5,541.27/6 cycles) while mFFX €48.13/cycle (€192.52/4 cycles) with a difference of €5,348.75 per patient, equivalent to the month gained in PFS. However, with nal-IRI+5-FU/LV an increased risk of neutropenia, anemia, hypokalemia, diarrhea and vomiting of grade 3 or higher was also noted compared to mFFX, manageable adverse events



CONCLUSIONS:

Second-line treatments based on Nal-IRI have shown a significant improvement in PFS and OS compared to other available treatments in advanced pancreatic cancer, despite an increase in toxicity and healthcare costs required for the most modern treatment. Further research is also needed to define the role of nal-IRI both in the first and subsequent lines of therapy, also considering an increase in costs for the NHS, as in the NAPOLI-2 studies in biliary cancer (NCT04005339) and NAPOLI-3 in first-line pancreatic cancer.

References:

- 1.Crit.Rev. Oncol.Hematol.2024 May 10:104386. doi:10.1016/j.critrevonc.2024.104386. PMID: 38735505
- 2.STUDIO NAPOLI-3 cancro pancreas di prima linea : Wainberg et al., 2023b

