Gemcitabine, nab-paclitaxel, cisplatin, and anakinra (AGAP) treatment in patients with non-metastatic pancreatic ductal adenocarcinoma (PDAC)

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ABSTRACT

Introduction: Solid tumors are often associated with chronic inflammation that promotes cancer cell survival and metastasis. PDAC is associated with chronic inflammation that stimulates a desmoplastic reaction and promotes cancer cell survival and metastasis. Pancreatic cancer cells can induce secretion of interleukin-1β (IL-1β) which facilitates tumor development and progression. We showed that anakinra, a recombinant, non-glycosylated form of the human interleukin-1 receptor antagonist, can reduce IL-1β activity in patients with PDAC.

Methods: We conducted a pilot clinical trial treating patients with metastatic PDAC with anakinra and modified FOLFIRINOX [3]. Overall anakinra and FOLFIRINOX activity in patients with PDAC.

Results: The study was completed in May 2021. We conducted a pilot clinical trial treating patients with metastatic PDAC with anakinra and modified FOLFIRINOX [3]. Overall anakinra and FOLFIRINOX activity in patients with PDAC.

Conclusion:

1. The study regimen was well tolerated with neutropenia being the most frequent toxicity.
2. Growth factor support on days 2-3 and 9-10 post AGAP allowed for patients to receive chemotherapy on schedule and without the need for dose reductions.
3. There was no radiologic or biochemical evidence of disease progression while on treatment with AGAP.
4. Patients who received XRT after neoadjuvant AGAP did not have surgery due to disease progression or unresectability on restaging evaluation.
5. The role of IL-1 inhibition is currently under investigation with ongoing biomarker evaluation on resected specimens.
6. The study has been expanded to include additional patients.

REFERENCES:

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RESULTS

Figure 1. Kaplan-Meier Analysis of the probability of survival in all 16 patients.

Figure 2. Kaplan-Meier Analysis of the probability of survival in all 16 patients.

CONCLUSIONS

- The study regimen was well tolerated with neutropenia being the most frequent toxicity.
- Growth factor support on days 2-3 and 9-10 post AGAP allowed for patients to receive chemotherapy on schedule and without the need for dose reductions.
- There was no radiologic or biochemical evidence of disease progression while on treatment with AGAP.
- Patients who received XRT after neoadjuvant AGAP did not have surgery due to disease progression or unresectability on restaging evaluation.
- The role of IL-1 inhibition is currently under investigation with ongoing biomarker evaluation on resected specimens.
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