

Author information

Abstract

Prognosis of patients with carcinoma of the exocrine pancreas is particularly poor. A combination of chemotherapy with immunotherapy could be an option for treatment of pancreatic cancer. The aim of this study was to perform an immunomonitoring of 17 patients with pancreatic cancer from the CapRI-2 study, and tumor-bearing mice treated with combination of chemo (radio) therapies with interferon-2 α . Low doses of interferon-2 α led to a decrease in total leukocyte and an increase in monocyte counts. Furthermore, we observed a positive effect of interferon-2 α therapy on the dendritic cells and NK (natural killer) cell activation immediately after the first injection. In addition, we recorded an increased amount of interferon- γ and IL-10 in the serum following the interferon-2 α therapy. These data clearly demonstrate that pancreatic carcinoma patients also show an immunomodulatory response to interferon-2 α therapy. Analysis of immunosuppressive cells in the Panc02 orthotopic mouse model of pancreatic cancer revealed an accumulation of the myeloid-derived suppressor cells in spleens and tumors of the mice treated with interferon-2 α and 5-fluorouracil. The direct effect of the drugs on myeloid-derived suppressor cells was also registered in vitro. These data expose the importance of immunosuppressive mechanisms induced by combined chemo-immunotherapy.

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