The tumor microenvironment is correlated with clinicopathological traits and indicates the adjuvant chemotherapeutic efficacy of Gemcitabine in pancreatic cancer after curative Whipple procedure

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Pancreatic cancer is a devastating malignance with extremely complicated tumor microenvironment. Adjuvant gemcitabine treatment is the golden standard regimen for pancreatic cancer after curative resection, however its 5-year overall survival is only 20% for this kind of patients. The correlation between tumor microenvironment and the efficacy of gemcitabine has been seldom reported. By using tumor tissue microarray technology, we analyzed the landscape of the tumor microenvironment of 95 cases of pancreatic cancer patients who underwent pancreaticoduodenectomy (Whipple procedure) and adjuvant gemcitabine treatment. The different components in the microenvironment, including the immune cell populations (Pan-inflammatory cells, B-cells, Th-cell, CTL, Treg, DC, NK, macrophages and granulocyte), Th1 related cytokines (IL-6, IFN-γ, TNF-α), Th2 related cytokines (IL-10, TGF-β, IL-4, IL-17), M-CSF, MG-CSF, microvascular density (MVD) and micro lymphatic vessel density (MLVD), pancreatic cancer stem cells and the immune checkpoints (PD-L1 and CTLA-4) were immunohistologically stained. The correlations between the different patterns of tumor microenvironment and the efficacy of gemcitabine and the clinicopathological traits were analyzed. The results indicated that the tumor microenvironment was significantly correlated with the clinicopathological characteristics and the efficacy of gemcitabine. The tumor microenvironment could be a practical indicator for personal and precision adjuvant gemcitabine chemotherapy in pancreatic cancer patients after curative resection.

Biography
Qiaofei Liu is an Attending Surgeon of General Surgery at Peking Union Medical College Hospital in China. He have been focusing on the integrated treatment of pancreatic cancer after curative resection, especially new treatment based on the tumor microenvironment, for more than 10 years. He has received three national grants to support his research and published papers in prestigious academic journals, including Cancer Research, International Journal of Cancer, Journal of Immunology and Cancer Immunology Immunotherapy, etc.

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