

LEVELS OF NEUROFILAMENT LIGHT CHAIN IN PANCREATIC CANCER, TYPE 2 DIABETES MELLITUS AND CHRONIC PANCREATITIS

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Poster

Pancreas

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Serum neurofilament light chain levels are significantly elevated in pancreatic ductal adenocarcinoma and chronic pancreatitis compared to healthy controls after controlling for age, suggesting potential as a biomarker reflecting neuronal damage in these conditions.

KEY POINTS

- This is the first study to measure serum neurofilament light chain (NfL) in pancreatic ductal adenocarcinoma (PDAC) and chronic pancreatitis (ChP), using Single Molecule Array technology in 168 participants across four groups.
- NfL concentrations were highest in PDAC (30.31 ± 39.79 pg/ml) and ChP (16.64 ± 13.78 pg/ml) compared to type 2 diabetes mellitus (12.59 ± 10.19 pg/ml) and healthy controls (7.93 ± 4.18 pg/ml).
- After controlling for age, which significantly predicts NfL levels (increasing 0.48 pg/ml per year), both PDAC and ChP showed significantly higher NfL levels than T2DM and healthy controls ($p < 0.01$), while T2DM did not differ from controls.
- Glycemic control and body mass index did not significantly impact NfL concentrations.
- The findings support NfL as a potential biomarker for neuronal damage in pancreatic diseases, particularly relevant given that perineural invasion is a hallmark of PDAC even in early disease stages.

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