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# Differential diagnosis of pancreatic diseases: new approaches in laboratory and radiologic diagnosis

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**Aim.** To assess significance of serum fibronectin (FN) and new approaches of processing computed tomography results for pancreatic cancer (PC) and chronic pancreatitis (CP) differential diagnosis.
**Materials and methods.** Data of 49 patients with pancreatic lesions who underwent multislice computed tomography (MSCT) with intravenous contrast enhancement and FN evaluation in 2018 were analyzed. There were 29 (59.2%) males and 20 (40.8%) females, mean age 51.9±13.9 (30–82). All patients were divided in 3 groups: 1 — PC (17 patients, 34.6%) — morphologically verified, 2 — chronic pancreatitis with previous pancreonecrosis (CPPN) — 16 patients, 32.7%, 3 — chronic calcifying pancreatitis (CCP) — 16 patients, 32.7%. We calculated median of enhancement gradient between region of interest and intact parenchyma ($M_{grad}$) based on MSCT results. Pearson's correlation coefficient ($r_p$) was calculated for correlation assessment.
**Results.** We assessed mean $M_{grad}$ and mean serum FN rate in all three groups: PC — 28.1±2.6, p=0.0001, CPPN — 14.9±2.4, p=0.07, CCP — 13.3±0.7, p=0.08 for $M_{grad}$, and 239.8±30.1, p=0.8, 243.5±33.8, p=0.7, 227.2±34.3, p=0.8 for serum FN rate, respectively. There was statistically significant strong correlation of $M_{grad}$ in patients with PC ($r_p$=0.63, p=0.0001). We revealed cut-off point of $M_{grad}$ value for PC that was 20 (p=0.001). There were no statistically significant correlations of serum FN rate in all groups (PC $r_p$=0.04, p=0.8; CPPN $r_p$=0.06, p=0.7; CCP $r_p$=-0.03, p=0.8).
**Conclusions**. $M_{grad}$ evaluation based on MSCT is an informative marker for differential diagnosis between PC and chronic pancreatitis, high rates of $M_{grad}$ positively correlate with PC existence. There was no correlation between serum FN rate and existence of PC, CPPN or CCP.