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**DYNAMIC CHANGES IN BLOOD VOLUME, BLOOD FLOW, AND TIME-TO PEAK PARAMETERS TO IMPROVE DIFFERENTIATION OF PANCREATIC TUMORS: A COMPUTED TOMOGRAPHY PERFUSION STUDY**

**Nigora M. Djuraeva**, MD, PhD, DSc,  
**Ravshan A. Ibadov**, MD, PhD, DSc, Professor;  
**Sardor Kh. Ibragimov**, MD, PhD,  
**Gulnara Kh. Akilova** MD,  
**Khanum V. Abdukhalimova** MD, PhD.

MR and CT diagnostics department, Republican specialized scientific-practical medical center  
for surgery named after academician V.Vakhidov, Tashkent, Uzbekistan

Pancreatic tumors present a diagnostic challenge due to their varied histopathological characteristics. This study examines the utility of dynamic changes in computed tomography perfusion (CTP) parameters, specifically blood volume (BV), blood flow (BF), and time to peak (TTP), as discriminating factors for the accurate differentiation of pancreatic tumors.

Based on quantitative parameters such as blood volume, blood flow and temporal characteristics, our approach can improve the discrimination between pancreatic tumors of different nature and grade. The proposed method not only improves diagnostic accuracy, but can also be a useful tool for planning individualized treatment and assessing prognosis in patients with pancreatic tumors.

**Objective:** to evaluate the potential of dynamic changes in blood volume (BV), blood flow (BF), and time-to-peak (TTP) parameters to improve the differentiation of pancreatic tumors using perfusion computed tomography (PCT).

**Materials and methods:** A study with data was performed in MR and CT department of the Republican Specialized Center of Surgery named after academician V.Vakhidov (Tashkent, Uzbekistan) on 640 slice computed tomograph «Aquillion One» version Genesis between 2020-2023y. The age of the patients ranged from 6 to 60 years. Has been researched 70 patients with suspected pancreatic tumors underwent CTP imaging using BV, BF, TTP perfusion cards.

**Results:** Significant differences were observed in BV, BF, and TTP values among different pancreatic tumor subtypes. Adenocarcinomas in 65% cases exhibited distinct dynamic patterns characterized by increased BV and BF coupled with shortened TTP, BF of  $\leq 58\text{ml}/100\text{ml}/\text{min}$  and for BV of  $\leq 5.36\text{ml}/100\text{ml}$ , TTP-  $\leq 5.5\text{ s}$ . Neuroendocrine tumors in 72% cases exhibited unique hemodynamic characteristics with increased TTP  $\geq 17$ . ROC analysis showed that dynamic changes in perfusion parameters provide superior diagnostic accuracy compared with static measurements, increasing sensitivity and specificity in distinguishing between malignant and benign pancreatic lesions.

**Conclusion.** CT perfusion can be used for the differential diagnosis of pancreatic tumors, with different perfusion characteristics observed for different tumor types. Neuroendocrine tumors showed significantly increased perfusion compared to normal pancreatic tissue and adenocarcinoma, while pancreatic cancer had lower perfusion.