

## Immunohistochemical Fascin-1 expression correlate with lymph node and distant metastases in pancreatic ductal adenocarcinoma

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A- Conception and study design; B - Collection of data; C - Data analysis; D - Writing the paper; E- Review article; F - Approval of the final version of the article; G - Other (please specify)

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### ABSTRACT

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**Introduction:** Pancreatic cancer is characterized by its aggressiveness and poor prognosis. Furthermore, mortality is one of the highest among all types of cancers. It has been observed that the expression of Fascin-1 (the actin-bundling protein which enables the motility of cells) is higher in cancer cells and is correlated with invasiveness and metastasis.

**Purpose:** To investigate the expression of Fascin-1 in histopathological specimens from patients treated for pancreatic cancer and its relationship with histopathological parameters.

**Materials and methods:** The study was performed on a group of 52 patients diagnosed with pancreatic cancer in the Medical University of Bialystok Clinical Hospital. The expression of Fascin-1 was evaluated in tissue samples using the immunohistochemical method and was rated as “present” or “absent”. The analysis of histopathological parameters was performed in correlation with Fascin-1 expression.

**Results:** Fascin-1 expression was observed in the cytoplasm of cancer cells in 42/52 cases (80.8%). Fascin-1 expression occurred more frequently among patients with lymph node metastases (92.6%) than without this type of metastases (68%) ( $p=0.024$ ). Likewise, the expression of the investigated protein was observed more often with the presence of distant metastases (100%) than without those metastases (74.4%) ( $p=0.043$ ). There were no statistically significant differences about age, sex, histological type of cancer, grade of histological differentiation, desmoplasia, inflammatory infiltration, foci of hemorrhage, necrosis, and MVD.

**Conclusion:** The expression of Fascin-1 is correlated with the presence of metastases and can be a useful marker of pancreatic cancer involvement.

**Keywords:** Fascin-1, metastases, pancreatic ductal adenocarcinoma