



## AB064. P036. Fat tissue and pancreatic parenchyma play different roles in pancreatic cancer invasion

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**Background:** Although the formation of desmoplasia in the local invasion of pancreatic cancer is one of the important common histological changes during invasion to surrounding tissues including adipose tissues and pancreatic parenchyma. However, the differences and the underlying mechanism in surrounding tissue-specific invasion remain unclear. This study aims to investigate the differences in the mechanisms of local invasion to peripancreatic adipose tissues and pancreatic parenchyma.

**Methods:** We used organotypic fat invasion model and visceral fat transplantation model to investigate the local invasion to peripancreatic adipose tissues. We also

analyzed pancreatic tissues from patients and KPC mice with pancreatic cancer and used orthotopic transplantation model to investigate the mechanism of the local invasion to pancreatic parenchyma.

**Results:** In organotypic model, we found that GFP positive adipose tissue-derived stromal cells (ASCs) infiltrated toward cancer cells. In visceral fat transplantation model with cancer cells, the weight of tumors with visceral fat was significantly heavier than the groups without visceral fat ( $P < 0.001$ ). In the analyses of resected samples, we found that cancer-associated atrophy (CAA) area was significantly associated with acinar-to-ductal metaplasia (ADM)-like lesion ( $P < 0.01$ ). KC mouse orthotopic models formed ADM-like lesion around tumors and induced desmoplasia in the invasive front and the progression of the tumors was accelerated ( $P < 0.01$ ).

**Conclusions:** Our data provide the new insight that fat tissue and pancreatic parenchyma play different roles in pancreatic cancer invasion.

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