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ASO AUTHOR REFLECTIONS

ASO Author Reflections: A New Prognostic Factor for Pancreatic Cancer

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PAST

Pancreatic cancer (PC) is one of the most lethal malignant neoplasms, with a 5-year survival rate of approximately 9%. The prognosis for PC patients remains poor despite the advancements in diagnosis and treatment strategies, and the various studies of major pathways, epithelial-mesenchymal transition (EMT), and the tumor microenvironment.[1,2] Therefore, the biology and molecular mechanisms that drive the rapid and aggressive progression should be further elucidated. Thus, we focused on capicua (CIC), an important RAS/MAPK downstream molecule that acts as a tumor suppressor.[3]

PRESENT

The current study [4] showed that low CIC expression was associated with a poor prognosis in PC patients and suggested that the CIC–ETV4–MMP-9 axis might control PC progression. Low CIC expression was significantly associated with lymphatic invasion, intrapancreatic neural invasion, extrapancreatic plexus invasion, and worse postoperative outcomes. In PC cells, CIC knockdown increased ETV4 and MMP-9 expression, cell motility, and cell cycle progression. Moreover, CIC knockdown increased EMT marker expression and activated the transforming growth factor (TGF)-β pathway. MMP-9 was reported to directly promote EMT and stimulate TGFβ activity, which induces EMT. Therefore, this study indicated that the CIC–ETV4–MMP-9 axis could directly and indirectly control EMT.

FUTURE

Although this study showed that low CIC expression led to a poor prognosis, our results are preliminary and need to be validated in a larger cohort. CIC was reported to have a positive impact on the chemotherapy effect,[5] therefore investigation of CIC expression in preoperative endoscopic ultrasound fine-needle aspiration samples could help to select treatment options in multidisciplinary therapy. These further studies would strengthen our findings and CIC expression could be a new prognostic factor for PC. Moreover, determining the molecular mechanisms of CIC in PC could also lead to the development of a novel therapeutic option.

DISCLOSURES The authors have no conflict of interests to declare.

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