

This document certifies that the manuscript

Mesenterico-portal vein invasion should be an important factor in TNM staging for pancreatic ductal adenocarcinoma: proposed modification of the 8th edition of the AJCC staging system

prepared by the authors

Hong-Yu Chen, Xing Wang, Hao Zhang, Xu-Bao Liu, Chun-Lu Tan

was edited for proper English language, grammar, punctuation, spelling, and overall style by one or more of the highly qualified native English speaking editors at AJE.

This certificate was issued on **September 27, 2019** and may be verified on the [AJE website](https://aje.com) using the verification code **31E2-881B-04A1-08F8-4316**.



Neither the research content nor the authors' intentions were altered in any way during the editing process. Documents receiving this certification should be English-ready for publication; however, the author has the ability to accept or reject our suggestions and changes. To verify the final AJE edited version, please visit our verification page at aje.com/certificate. If you have any questions or concerns about this edited document, please contact AJE at support@aje.com.