

E44

Clinical validation of scoring systems of postoperative pancreatic fistula after pancreatoduodenectomy : Applicability to Eastern cohorts?

Jae Seung Kang¹, Jin-Young Jang¹, Youngmin Han¹, Jae Ri Kim¹, Hongbeom Kim¹, Wooil Kwon¹, Sun-She Kim¹, Jin Seok Heo², Seong Ho Choi², Dong Wook Choi², Song Cheol Kim³, Tae Ho Hong⁴, Dong Sup Yoon⁵, Joon Seong Park⁵, Sang Jae Park⁶, Sung-Sik Han⁶, Sae-Byeol Choi⁷, Joo Seop Kim⁸, and Chang-Sup Lim⁹

¹Department of Surgery, Seoul National University College of Medicine, Seoul, Korea

²Department of Surgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea

³Division of Hepatobiliary and Pancreatic Surgery, Department of Surgery, Ulsan University College of Medicine and Asan Medical Center, Seoul, Korea

⁴Department of Surgery, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

⁵Pancreatobiliary Cancer Clinic, Department of Surgery, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Korea

⁶Center for Liver Cancer, National Cancer Center, Gyeonggi-do, Korea

⁷Korea University Guro Hospital, Korea University College of Medicine, Seoul, Korea

⁸Department of Surgery, Kangdong Sacred Heart Hospital, Hallym University College of Medicine, Seoul, Korea

⁹Department of Surgery, Seoul Metropolitan Government – Seoul National University Boramae Medical Center, Seoul National University College of Medicine, Seoul, Korea

Purpose:

Although several prediction models for the occurrence of postoperative pancreatic fistula (POPF) after pancreatoduodenectomy exist, all were established using Western cohorts. Large-scale external validation studies in Eastern cohorts are scarce. This study was to externally validate POPF prediction models using nationwide large-scale Korean cohorts.

Methods:

Nine tertiary university hospitals in Korea participated. POPF grades were determined according to the 2016 International Study Group on Pancreatic Surgery definition. Three POPF risk models (Callery, Roberts, and Munro) were selected for external validation.

Results:

A total of 1898 PD patients were enrolled. A non-pancreatic disease diagnosis (hazard ratio [HR], 1.856; 95% confidence interval [CI], 1.223–2.817; $P = 0.004$), higher preoperative body mass index (HR, 1.069; 95% CI, 1.019–1.121; $P = 0.006$), and soft pancreatic texture (HR, 1.859; 95% CI, 1.264–2.735; $P = 0.002$) were independent risk factors for clinically relevant POPF. The areas under the receiver operating characteristic curve were 0.61, 0.64, and 0.63 on the Callery, Roberts, and Mungroop models, respectively; all were lower than those published in each external validation study.

Conclusion:

Western POPF prediction models performed poorly when applied to Korean cohorts. Thus, a large-scale Eastern-specific and externally validated POPF prediction model is needed.