



E-007

Impact Of Preoperative Osteopenia On Survival Outcomes After Pancreatic Cancer Surgery: Analyses With Propensity Score-Based Inverse Probability Of Treatment Weighting

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Background : Osteopenia has been reported to impact survival in cancer patients; however, evidence in pancreatic cancer is scarce. This study evaluated the impact of preoperative osteopenia measured by computed tomography (CT) on survival outcomes in pancreatic cancer patients who underwent curative resection.

Methods : A retrospective analysis was performed on 485 consecutive patients who underwent pancreatectomy between January 2018 and December 2021 at a tertiary referral center. Finally, 283 patients who underwent pancreaticoduodenectomy (PD) or distal pancreatectomy for pancreatic cancer were included. Preoperative bone marrow density (BMD) was measured by CT with a cutoff of 135 Hounsfield units (HU) to divide patients into low and normal BMD groups.

Results : As the low BMD group (n = 151) was associated with older age, female sex, more underlying diseases, and higher American Society of Anesthesiologists score, inverse probability treatment weighting (IPTW) was performed to balance differences in these factors. After IPTW, the low BMD group and the normal BMD group (n = 132) were well balanced. Operative parameters and pathological features showed no difference between the groups. The low BMD group was associated with poorer five-year disease-free survival (37.6% vs. 49.6%, P = 0.0068) and overall survival (39.8% vs. 79.2%, P = 0.0041). Subgroup analysis showed that survival outcomes were affected by BMD only in patients who underwent PD.

Conclusions : Preoperative osteopenia is an independent predictor of recurrence and survival in pancreatic cancer patients. BMD screening and proper intervention should be regularly performed during preoperative evaluation and postoperative follow-up.

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