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A systematic review and meta-analysis of laparoscopic versus open distal pancreatectomy for benign and malignant lesions of the pancreas: It's time to randomize.

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Laparoscopic distal pancreatectomy is regarded as a feasible and safe surgical alternative to open distal pancreatectomy for lesions of the pancreatic tail and body. The aim of the present systematic review was to provide recommendations for clinical practice and research on the basis of surgical morbidities, such as pancreas fistula, delayed gastric emptying, safety, and clinical significance of laparoscopic distal pancreatectomy versus open distal pancreatectomy for malignant and nonmalignant diseases of the pancreas.

A systematic literature search (Medline) was performed to identify all types of studies comparing laparoscopic distal pancreatectomy and open distal pancreatectomy. Random effects meta-analyses were calculated after critical appraisal of the included studies and presented as ORs or mean differences each with corresponding 95% confidence intervals.

A total of 4,148 citations were initially retrieved and data from 29 observational studies (3,701 patients overall) were included in the meta-analyses. Five systematic reviews on the same topic were found and critically appraised. Meta-analyses showed superiority of laparoscopic distal pancreatectomy regarding blood loss, time to first oral intake, and hospital stay. All other parameters of operative morbidity and safety were not significantly different. There were limited data on oncological radicality and effectiveness.

Laparoscopic distal pancreatectomy seems to be a safe and effective alternative to open distal pancreatectomy. Further nonrandomized trials are no longer needed within this context. A large, randomized trial is warranted and should focus on oncologic effectiveness, defined end points, and cost-effectiveness.