

Pancreatic surgery: Lower mortality with larger case volumes

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For certain surgical procedures, is there a correlation between the volume of services provided per hospital and the quality of treatment

results? This is the question addressed in eight commissions that the Federal Joint Committee (G-BA) awarded to the Institute for Quality and Efficiency in Health Care (IQWiG) in Germany. An IQWiG rapid report is now available for complex pancreatic surgery, the seventh intervention to be tested.

The findings indicate a positive correlation between the volume of services and the quality of treatment results in complex pancreatic surgery: In hospitals with larger case volumes, the survival probabilities for patients are higher overall, fewer fatal complications occur and [hospital](#) stays are mostly shorter.

High-risk procedures usually performed as elective surgery

The pancreas produces digestive secretions and hormones such as insulin, glucagon and somatostatin, which have a regulating effect on carbohydrate metabolism and digestion.

Surgical procedures of the pancreas are considered complex and thus high-risk, and are usually performed as elective, i.e., planned surgery. These procedures are largely performed due to complications caused by chronic inflammation or due to malignant neoplasms.

Between 2009 and 2014, about 35,000 complex surgical procedures of the pancreas were performed overall in Germany due to malignant neoplasms. The hospital mortality rates for patients who underwent complex pancreatic surgery in Germany between 2009 and 2013 were around 10%. The G-BA has set a minimum volume for complex pancreatic surgery in Germany, which currently stands at 10 procedures per year and hospital location.

Positive correlation between volume of services and survival probability

The IQWiG project team identified 42 retrospective observational studies investigating the correlation between the volume of services and the quality of treatment results in complex pancreatic surgery. Of these studies, 36 contained usable data.

The [data analysis](#) showed that the overall survival probabilities for patients who undergo pancreatic surgery are higher when they are treated in hospitals with larger case volumes and by surgeons with more experience in this type of [surgery](#).

Regarding treatment-related complications and length of hospital stay, the study found a correlation between the volume of services and the quality of treatment results at both the hospital and surgeon level, to the benefit of hospitals and surgeons with a high volume of services.

The study found a positive correlation between the [volume](#) of services and the quality of treatment results at the hospital level for fatal complications and tumor-free resection margin. For other outcomes, either no such correlation was found or no usable data are available.

IQWiG found no meaningful studies examining the effects of specific minimum case volumes introduced into the [health care](#) system for complex [pancreatic surgery](#) on the quality of treatment results.

Provided by Institute for Quality and Efficiency in Health Care

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