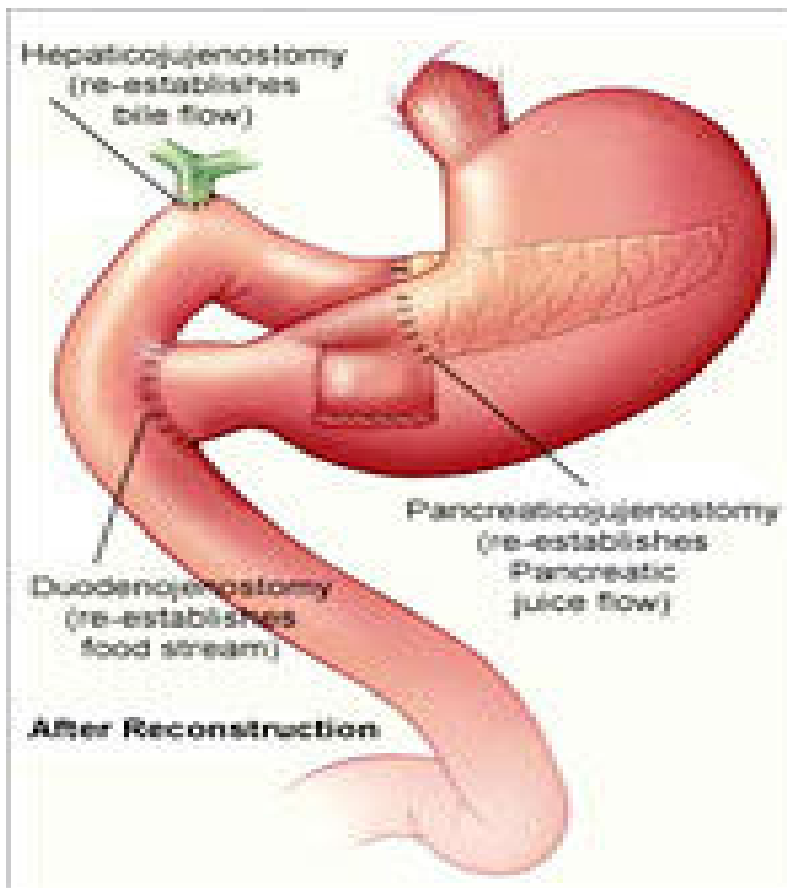


Whipple Procedure

The Whipple procedure (pancreatoduodenectomy) is the most common operation performed for pancreatic cancer and may be used to treat other cancers such as small bowel cancer. Surgeons remove the head of the pancreas, most of the duodenum (a part of the small intestine), a portion of the bile duct and sometimes a portion of the stomach. After the pancreatoduodenectomy, the surgeon reconstructs the digestive tract. Patients leave the hospital in an average of 14 days.



Surgery

Surgery is the best option for people whose cancer can be safely and effectively removed. This usually means that the tumor has not grown into any of the major blood vessels located near the pancreas or spread to the liver, abdominal cavity or lungs.

Unfortunately, only about 20 percent of pancreatic cancer patients have tumors that can be surgically removed (resected). Although improvements in diagnosis, staging, surgical techniques and postoperative care have led to much better outcomes after surgery, pancreatic resection is still one of the most difficult and demanding operations for both surgeons and patients.

Whipple procedure

Also known as pancreateoduodenectomy, the Whipple procedure is the most common surgery for pancreatic cancer.

The surgery involves removing the ‘head’ of the pancreas — the wide part of the pancreas next to the duodenum, the first part of the small intestine. To do that, surgeons must remove the duodenum, the gallbladder, the end of the common bile duct and sometimes part of the stomach. The intestine, bile duct and remaining part of the pancreas are then reconnected.

One not uncommon complication of this surgery is leaking of pancreatic juices from the suture line. The leaking usually stops over time with no additional treatment.

Weight loss is another frequent complication of the Whipple procedure. On average, patients lose about 7 percent of their pre-operative bodyweight after surgery. Because the pancreas contains insulin-producing cells, diabetes is also a potential complication.

Yet most people who have normal blood sugar before surgery do not develop diabetes and those with recently developed diabetes actually

improve after surgery. In general, although many people do very well after the Whipple procedure, up to a third may develop immediate complications that affect their quality of life.

After pancreatic surgery, it will take some time before you can eat normally, and you may need long-term treatment with pancreatic enzymes to help you digest food properly.

Minimally invasive surgery

In select cases, the Whipple procedure can be performed using a minimally invasive (laparoscopic) procedure. Although very successful in the right hands, this technique requires great skill because the surgery is performed through a few small incisions rather than a single large incision. This type of Whipple procedures can provide important benefits to patients, including less blood loss, a shorter hospital stay, a faster return to normal activities and a reduced risk of complications.

Central pancreatectomy

In certain cases, some surgeons perform a highly specialized surgery called central pancreatectomy, which removes the center portion or body of the pancreas, while retaining both ends (the head and tail). This procedure is performed in very few medical centers and is generally used for early-stage benign tumors in the neck of the pancreas — a difficult area to treat without removing a large portion of the gland. By preserving more of the pancreas — and thus more of the cells that produce insulin and digestive enzymes — central pancreatectomy reduces the risk of diabetes and severe digestive problems.

Other surgical procedures

Other options for pancreatic cancer, including total pancreatectomy, which removes the entire pancreas, along with the gallbladder, part of the stomach and small intestine, the bile duct, spleen, and nearby

lymph nodes; and distal pancreatectomy, in which the body and tail of the pancreas are removed.