

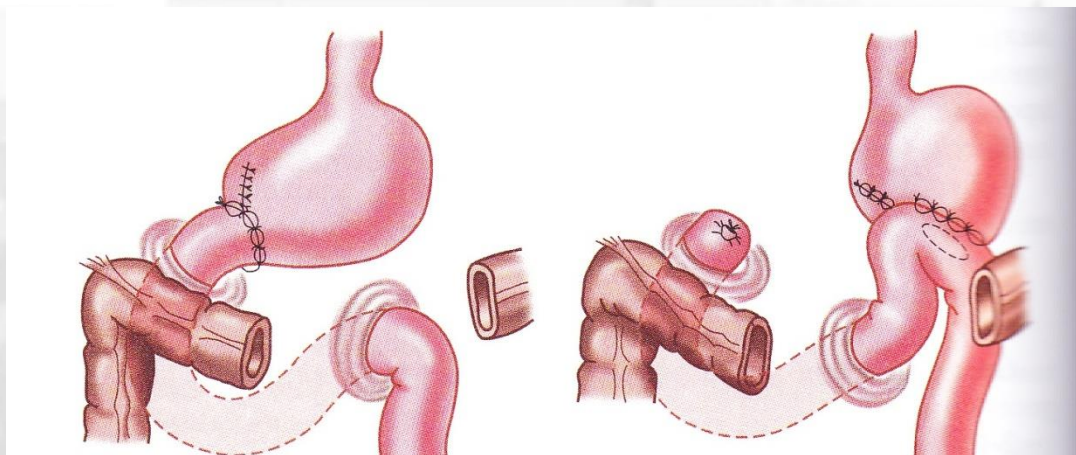


КРАСНОЯРСКИЙ
МЕДИЦИНСКИЙ
УНИВЕРСИТЕТ
1942/2022

Federal State Budgetary Educational Institution of Higher
Education «Prof. V.F. Voino-Yasenetsky Krasnoyarsk State
Medical University» of the Ministry of Healthcare of the Russian
Federation

Department of Operative Surgery and Topographic Anatomy

Surgical anatomy of the stomach, duodenum, pancreas and spleen.



*Lecturer: PhD, Associate Professor
Anna D. Shabokha*

Lecture plan:

History of gastric surgery

Topographic and anatomical features of the structure of the stomach

Gastric surgery

A.Palliative:

- a) Suturing of the stomach wound
- b) Gastrostomy
- c) Gastrotomy
- d) Gastroenteroanastomosis

B.Radical:

- a) Typical resection
- b) Subtotal resection
- c) Gastrectomy

B.Vagotomy:

- a) Total
- b) Selective
- c) Superselective (proximal)

Since the discovery of anesthesia and antiseptics (XIX century), the full-scale development of gastric surgery has begun. Attempts of operations in the XXVI-XXVI centuries (removal of foreign bodies from the stomach) ended in death due to the development of peritonitis.

Lister's antiseptics opened up unprecedented possibilities for surgery.

A major role in the development of gastric surgery belongs to Grekov, Fedorov, Spasokukotsky, Savinykh, Yudin, Berezov, Saposhkov, Petrovsky, Savelyev.

The most important discoveries in the history of gastric surgery:

1826 Lambert (France) -serous-muscular suture

1842 Basov (Russia), 1849 Seditio (France) - imposition of a fistula on the stomach

1878 Pean, 1881 Billroth (Austria) –gastric resection with restoration of gastrointestinal continuity,

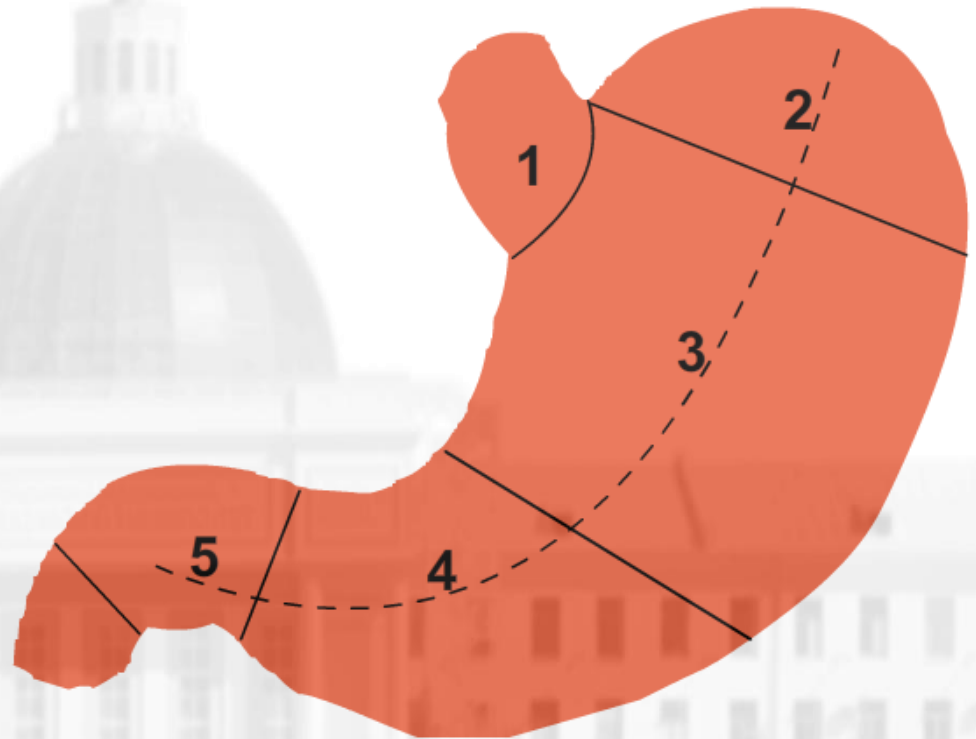
1881 Bellefleur (Austria) - anterior gastroenteroanastomosis,

1945 Dragsted (USA) -intersection of the right and left trunks of the valgis at the level of the abdominal esophagus.

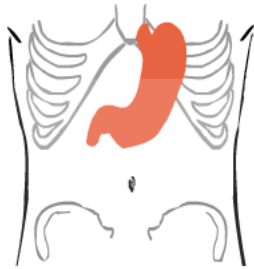
The stomach is an organ of the digestive system. It is a sac-like expansion of the digestive tract located between the esophagus and the duodenum. It is located in the upper floor of the abdominal cavity. There are 5 divisions of the stomach:

- 1) entrance part (cardiac)
- 2) bottom (fundal)
- 3) body (corporeal) prepiloric (antral)
- 4) pyloric (bulbous)
- 5) Functionally, the stomach has 3 divisions
- 6) 1)secretory (cardio, bottom, body)
- 7) 2) excretory (antrum)
- 8) 3)endocrine(gatekeeper limits)

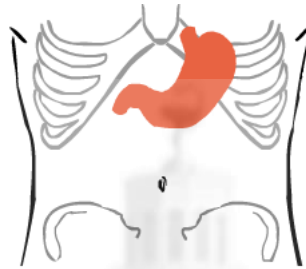
- 9) Stomach functions:
- 10) -Food tank
- 11) -Secretory
- 12) -Excretory
- 13) -Endocrine
- 14) -Suction
- 15) -Motor
- 16) -Barrier
- 17) -Vicar (vicarious)



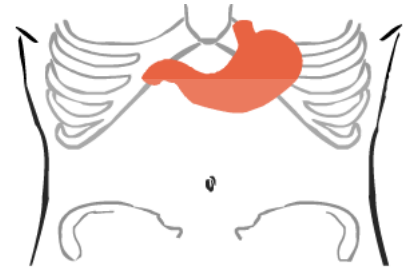
V.N. Shevkunenko identified 3 positions of the stomach depending on the type of physique



Vertical
(dolichomorphic type)



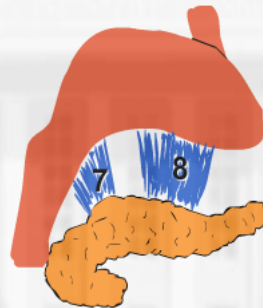
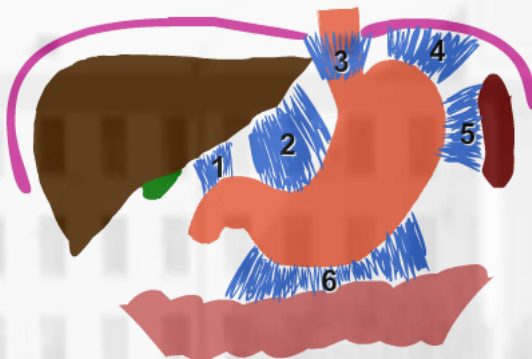
Oblique
(mesomorphic type)



Horizontal
(brachymorphic type)

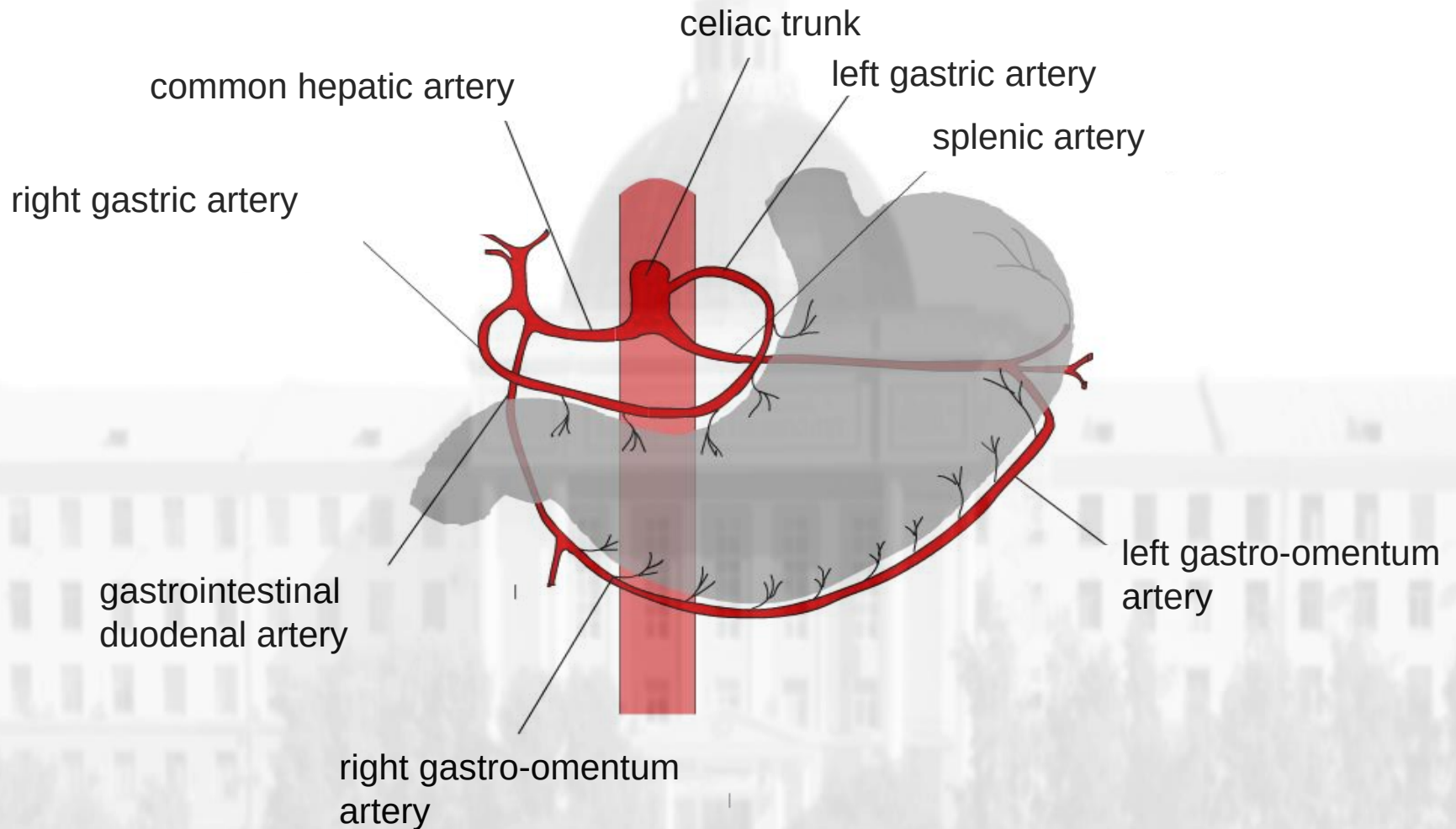
LIGAMENTOUS APPARATUS

Stomach ligaments:

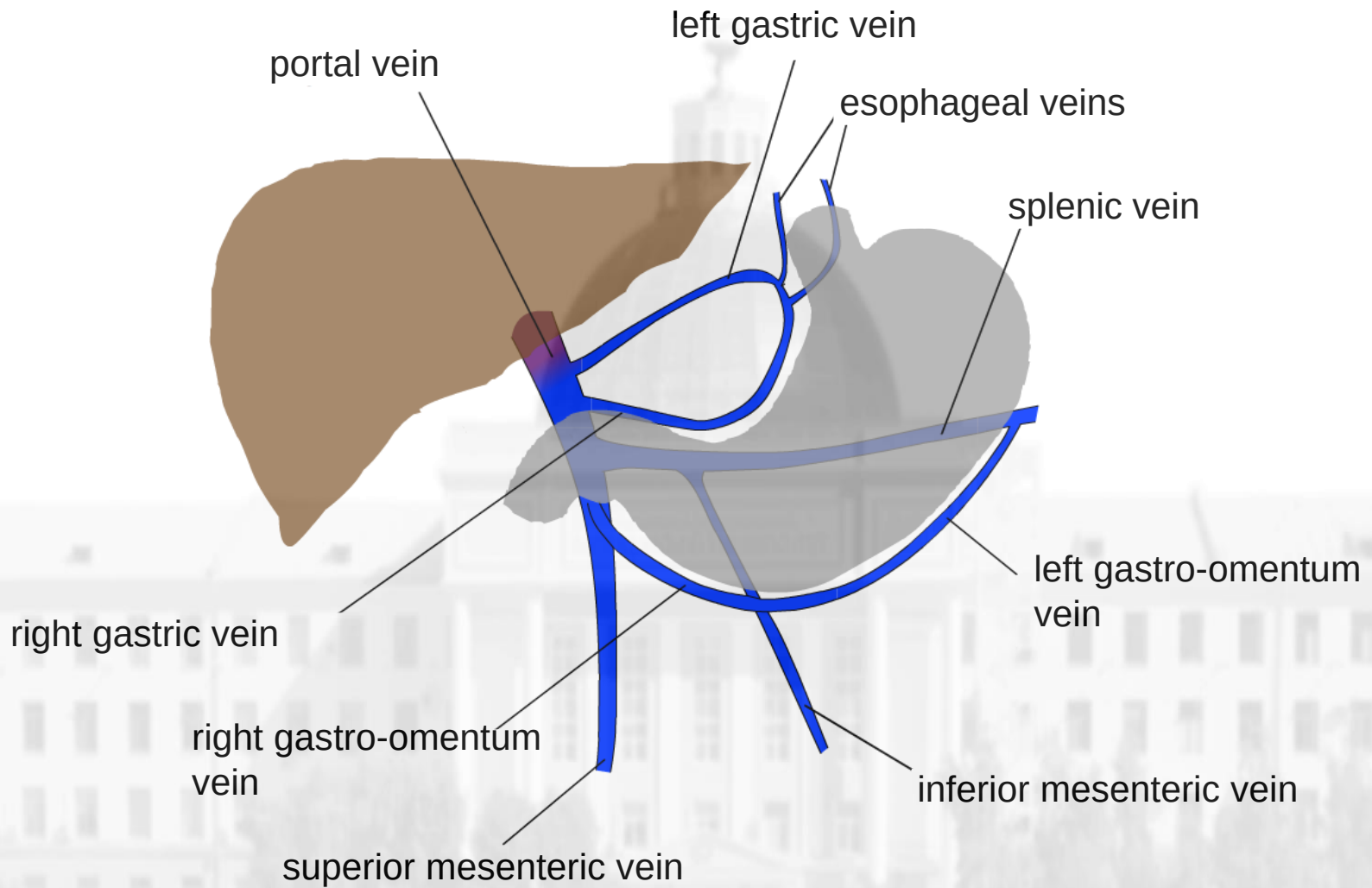


1. Hepatic-pyloric
2. Hepatic-gastric
3. Diaphragmatic-esophageal
4. Diaphragmatic-gastric
5. Gastro-splenic
6. Gastrointestinal
7. Pyloric pancreas
8. Gastrointestinal

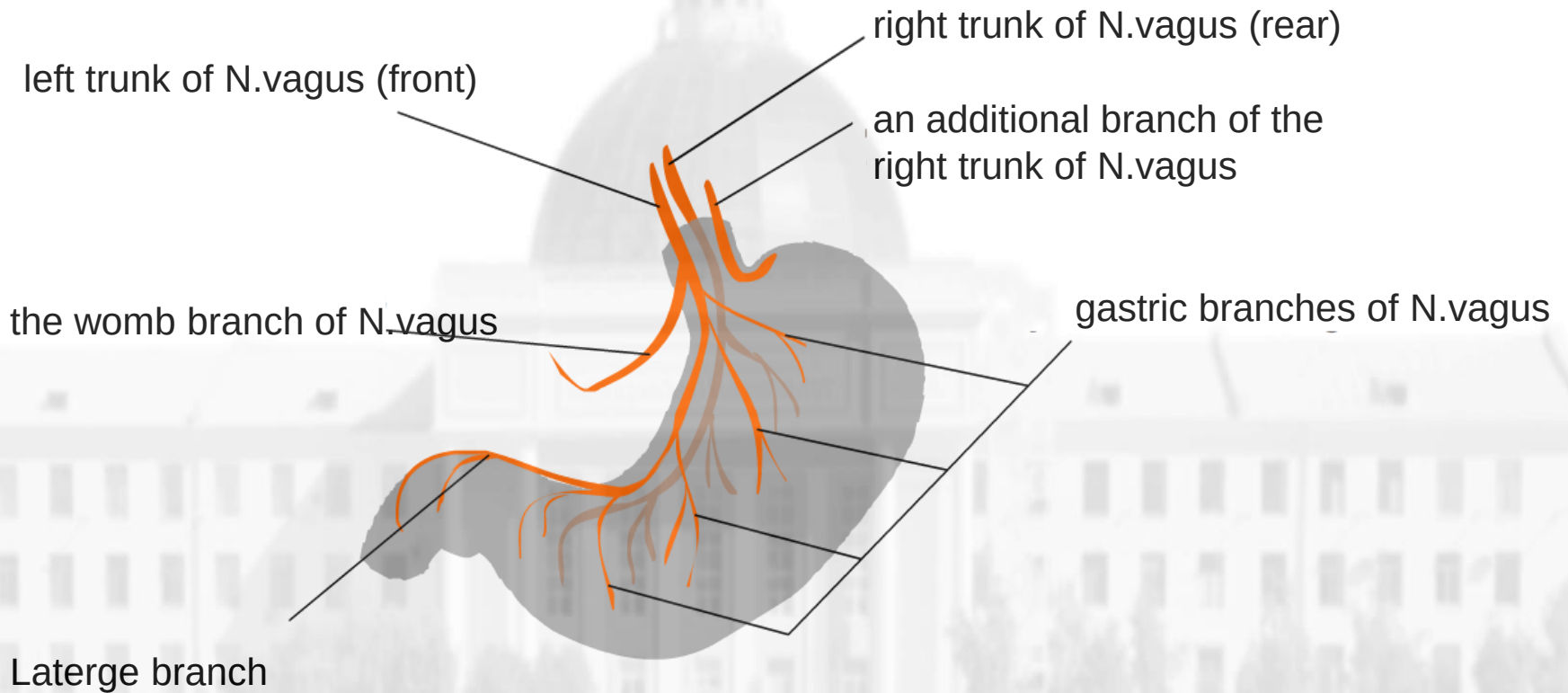
BLOOD SUPPLY TO THE STOMACH



VENOUS OUTFLOW



INNERVATION OF THE STOMACH



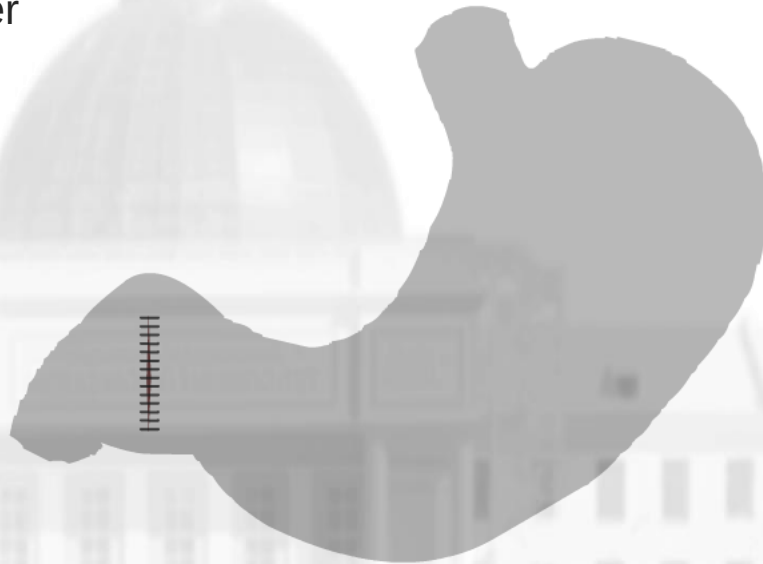


GASTRIC SURGERY

Pyloroplasty is an operation to widen the opening between the stomach and duodenum with its pathological narrowing (pylorospasm, pylorostenosis, cicatricial constriction of the pylorus), the operation is performed in order to ensure the normal passage of food through the gastrointestinal tract.

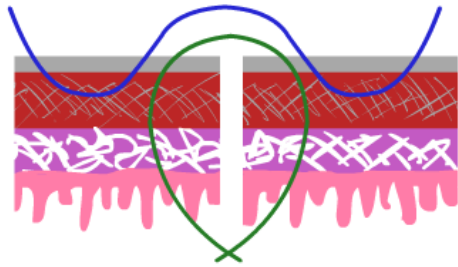
Pyloroplasty by Heineke-Mikulicz:

1. Longitudinal dissection along the axis of the stomach
The front wall of the gatekeeper
2. Transverse suturing of the hole
Double row seam

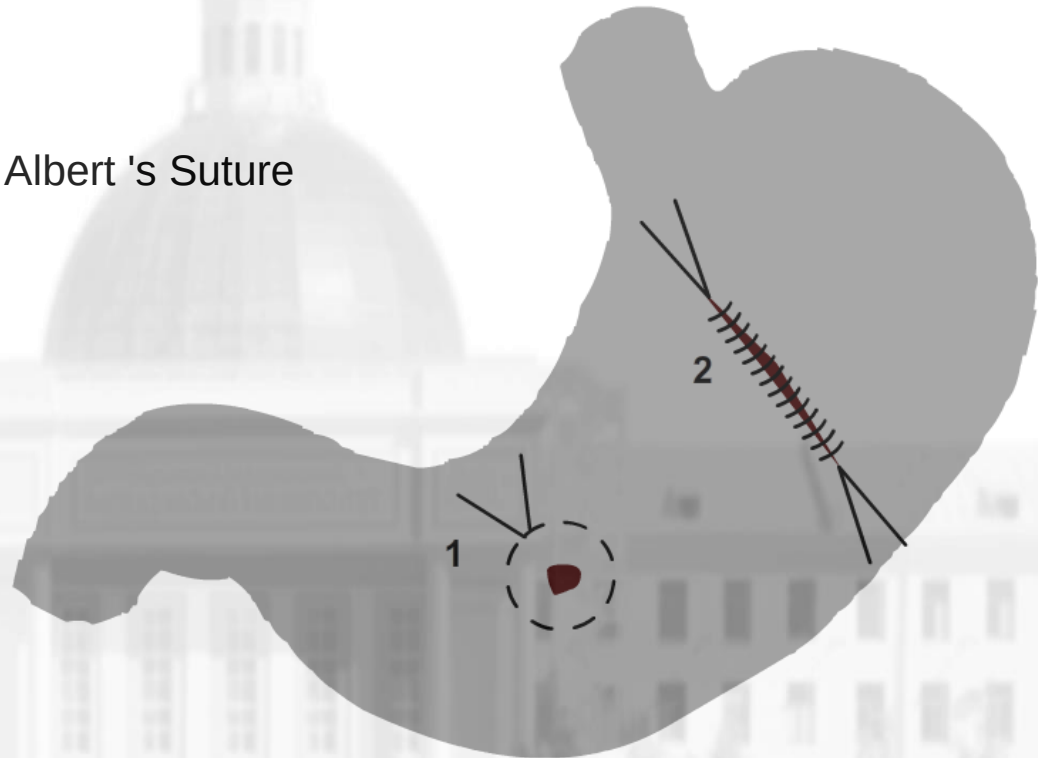


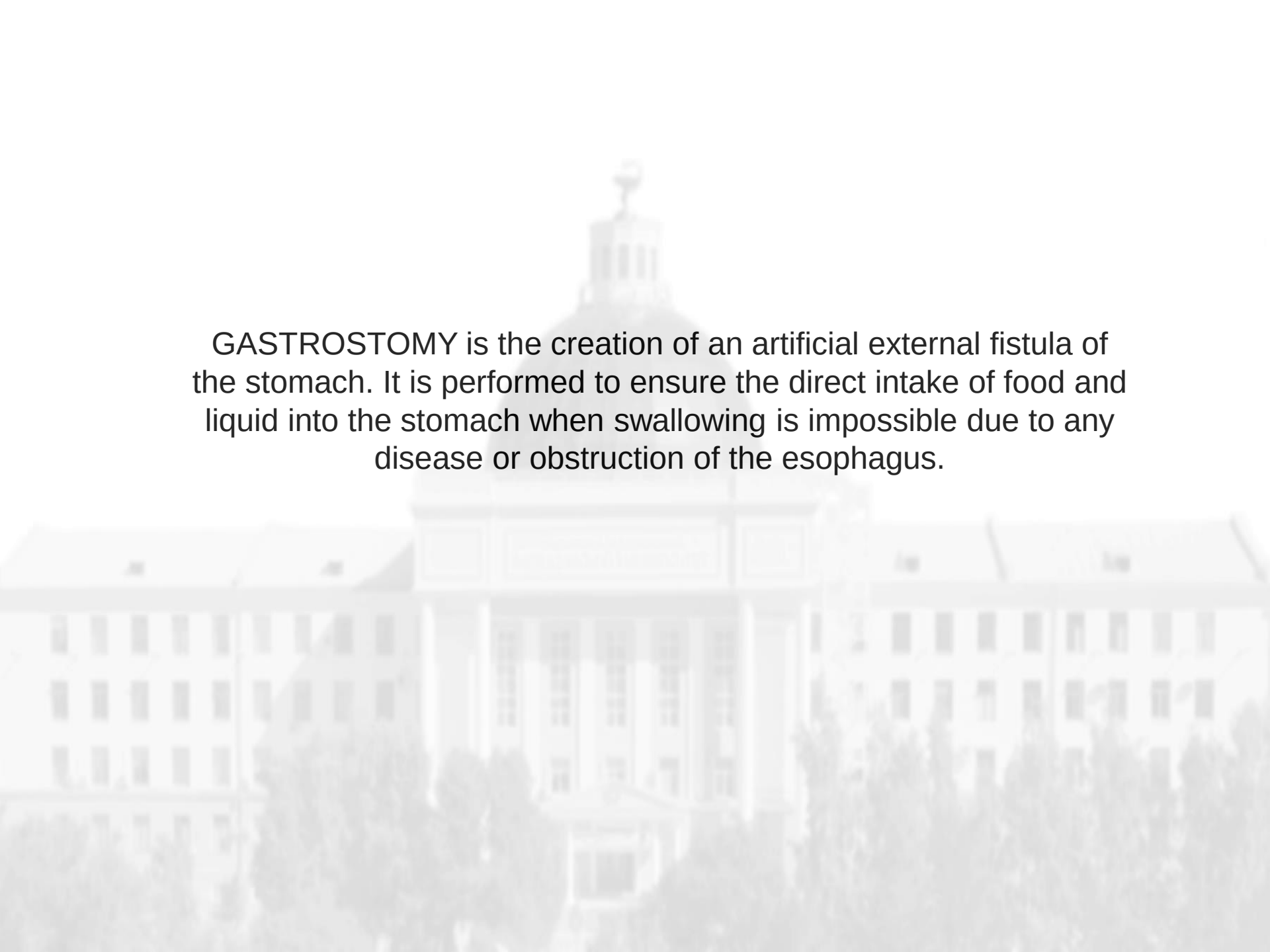
SUTURING OF THE STOMACH WOUND (wounds, perforations in ulcers)

1. For point wounds -pouch suture for long wounds - double row intestinal suture



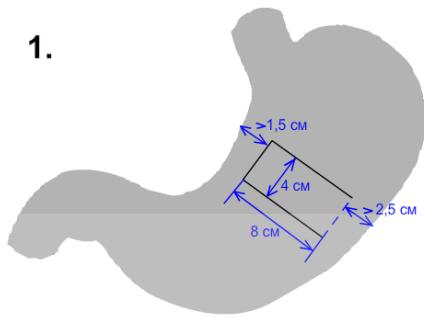
Albert 's Suture



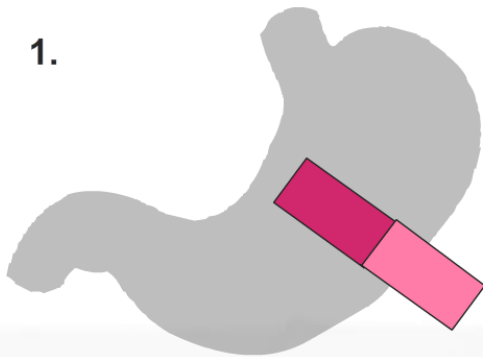


GASTROSTOMY is the creation of an artificial external fistula of the stomach. It is performed to ensure the direct intake of food and liquid into the stomach when swallowing is impossible due to any disease or obstruction of the esophagus.

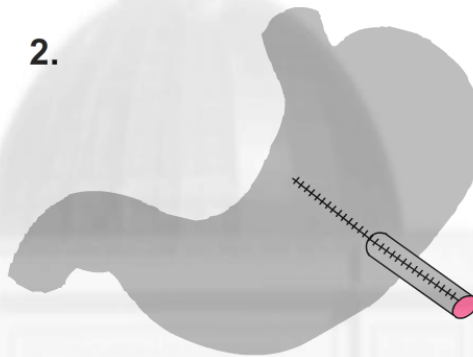
1.



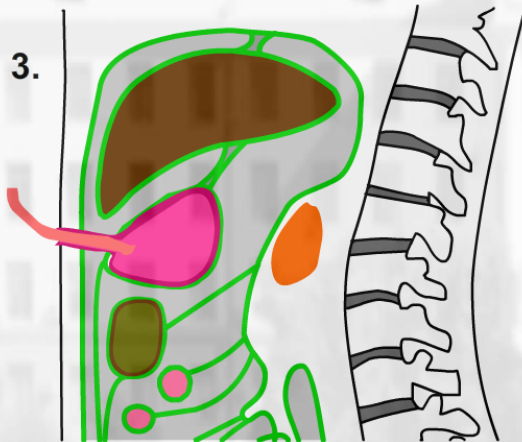
1.



2.

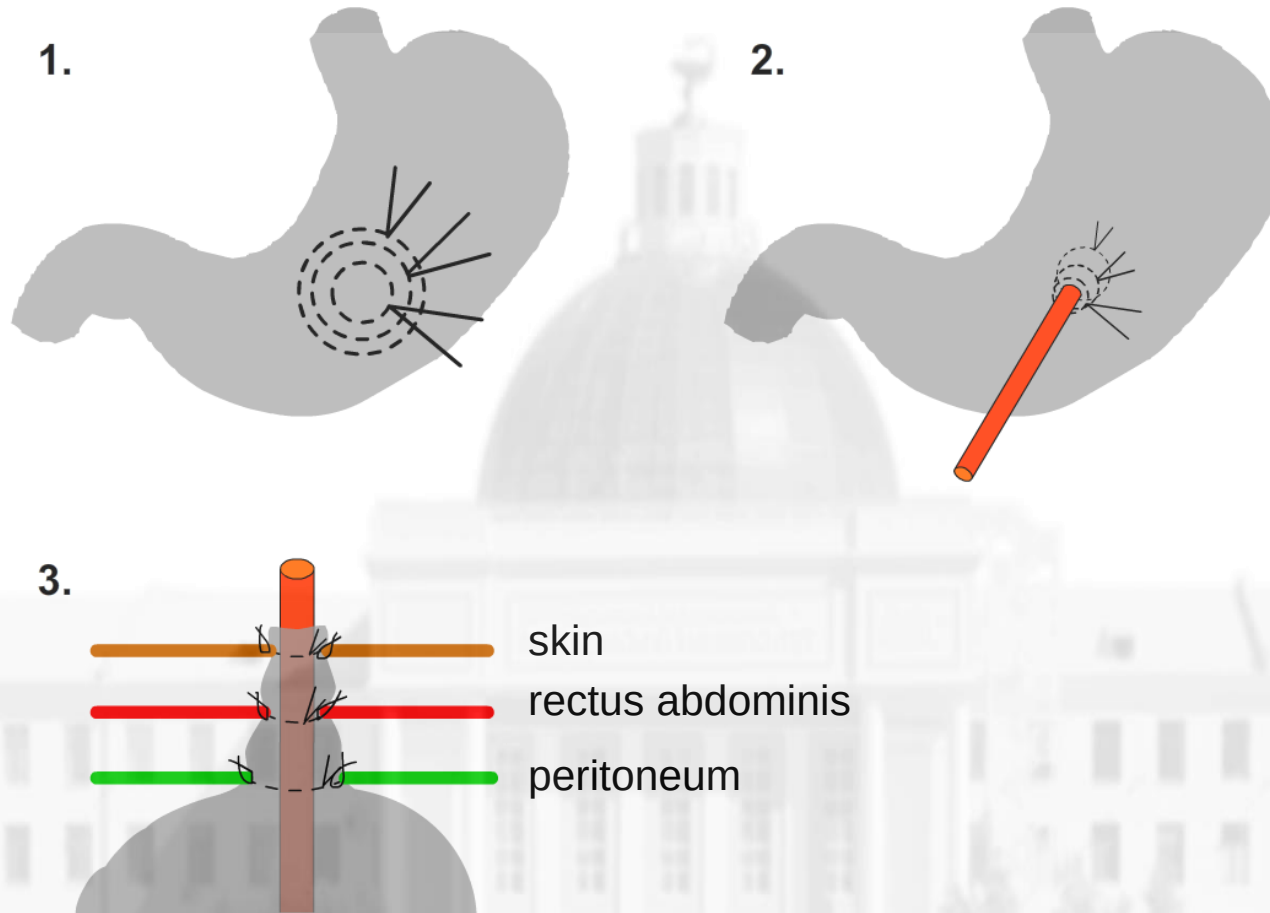


3.

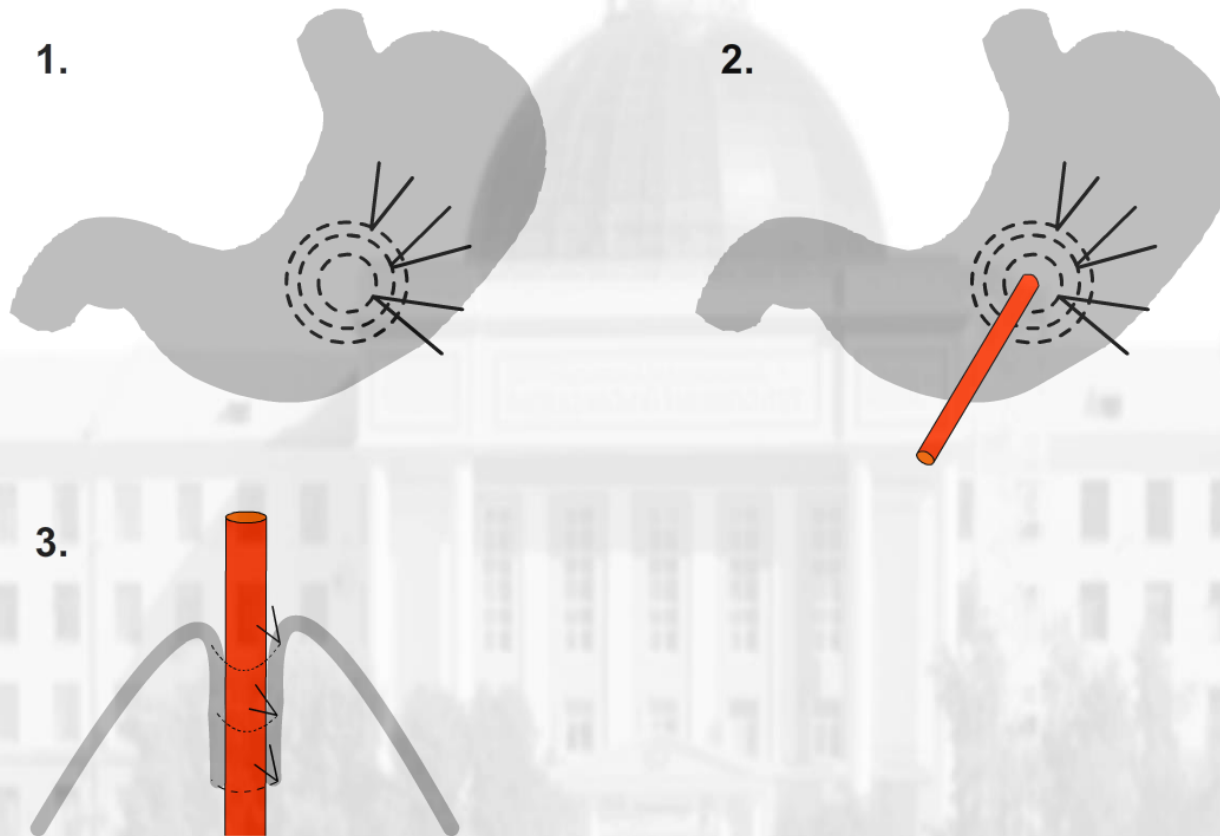


Gastrostomy by Depage-Janeway-
valvular tubular fistula

Gastrostomy according to G.S.Toprover- lip-shaped fistula

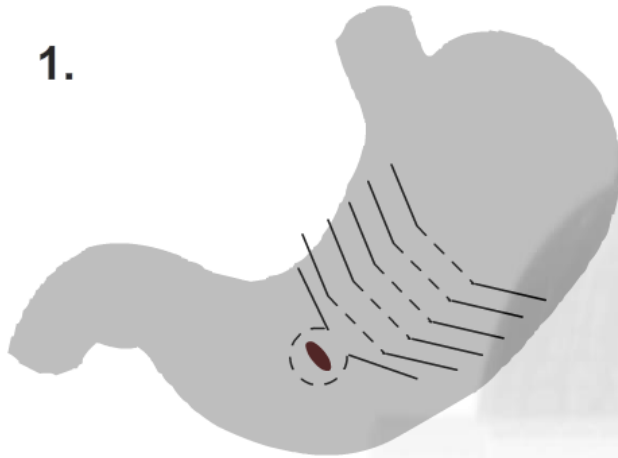


Gastrostomy by Strain-Kader- tubular fistula

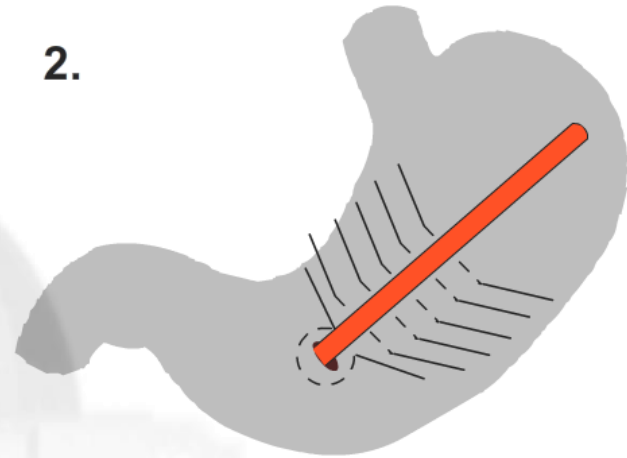


Witzel gastrostomy- tubular fistula

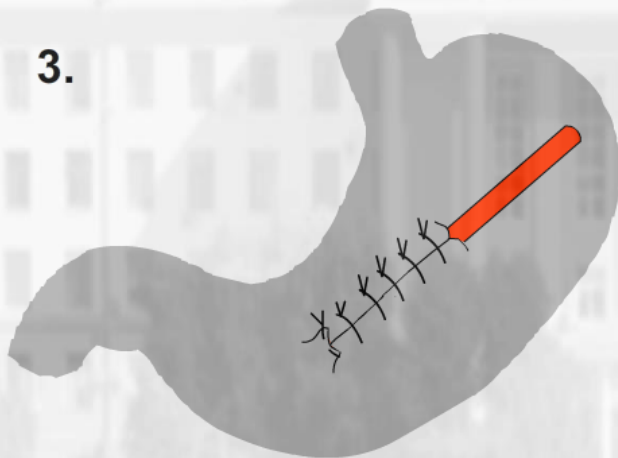
1.



2.

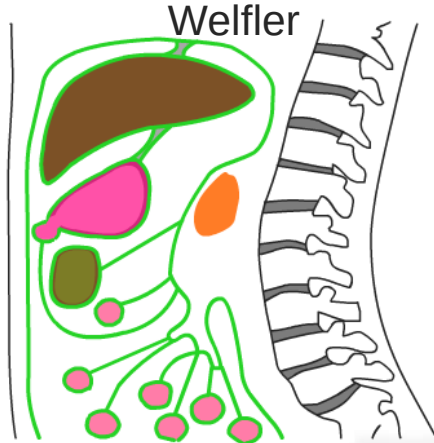


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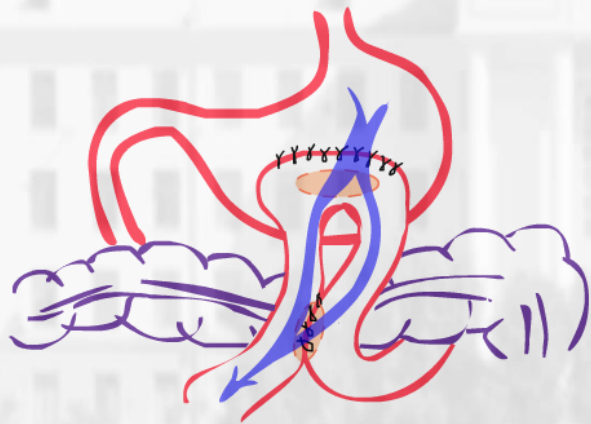


GASTROENTEROANASTOMOSIS - gastrointestinal anastomosis

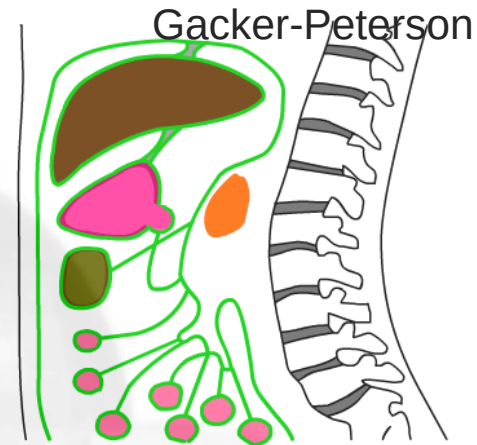
Anterior
gastroenteroanastomosis according to



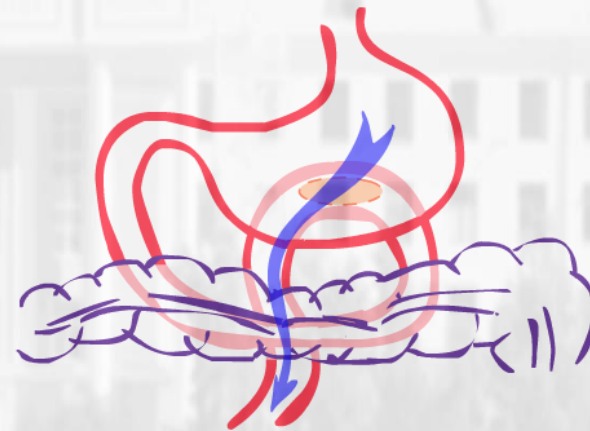
long loop + Brown
enteroenteroanastomosis



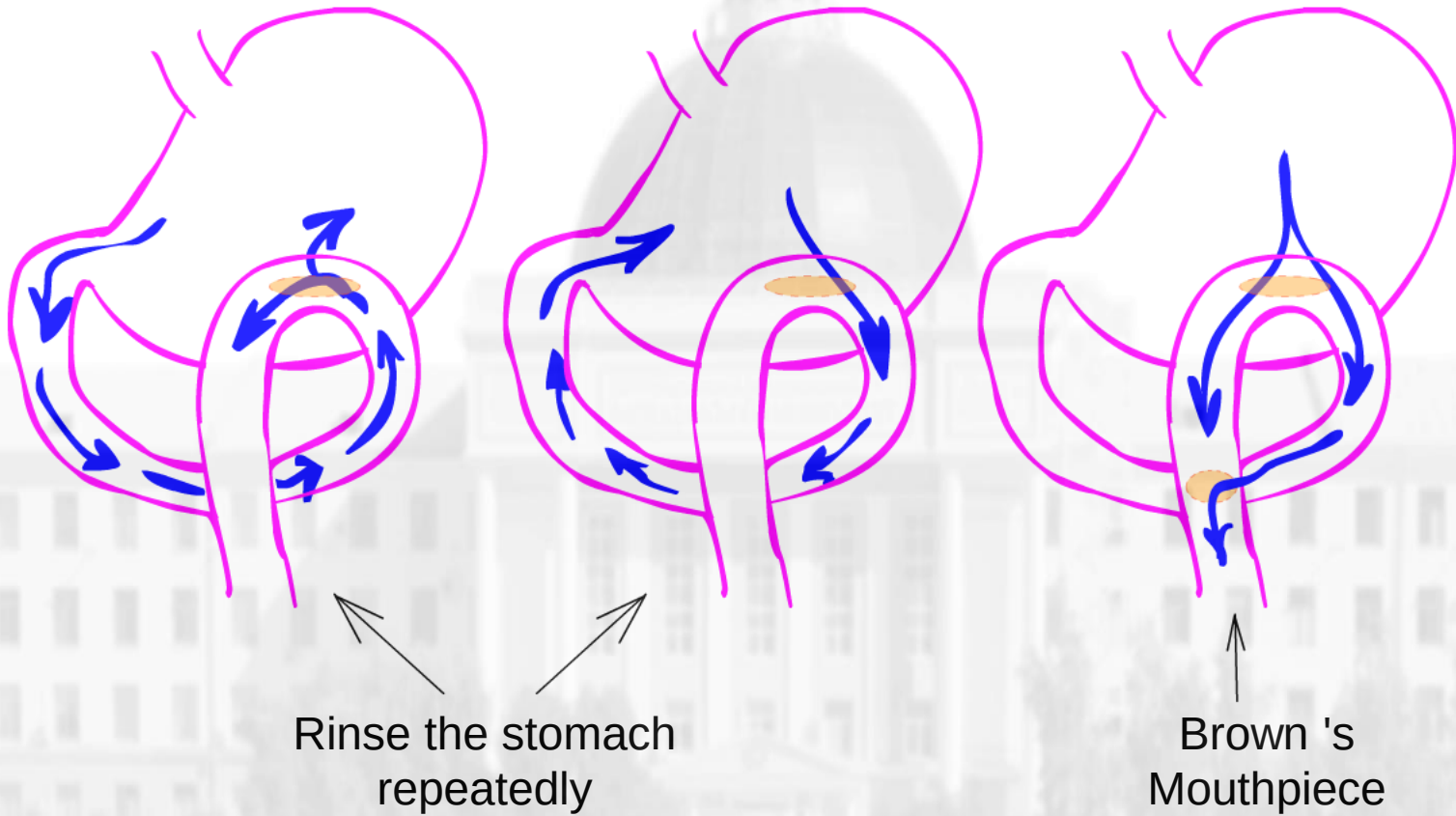
Posterior
gastroenteroanastomosis according to



short loop



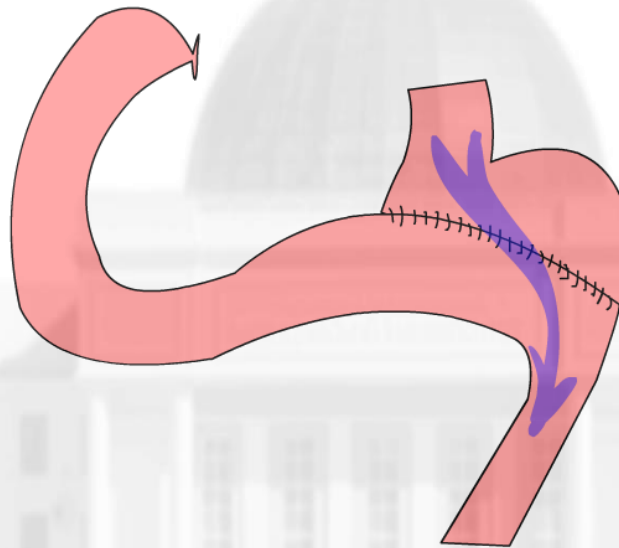
A VICIOUS CIRCLE



what to do?

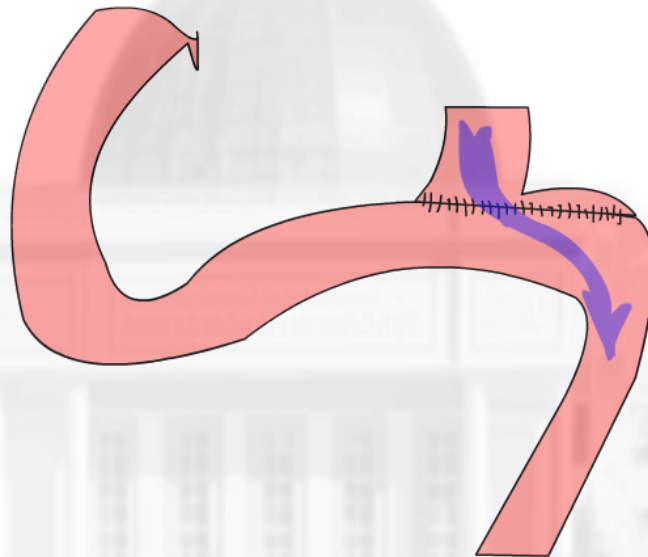
GASTRIC RESECTION

Subtotal resections. 3, 4/5, 5/6 of the stomach is removed, followed by the imposition of a joint between the outlet of the stomach and the supplied jejunum. The drainage function of the duodenum is turned off.



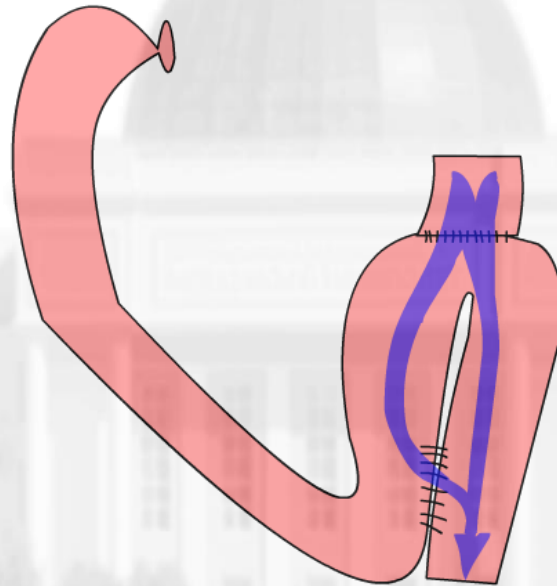
GASTRIC RESECTION

Total-subtotal resections. Almost complete removal of the stomach. The entire pyloroantral region, the cardiac department, the body, and most of the bottom are excised. There remains a narrow strip of the bottom of the stomach, which facilitates the imposition of the anastomosis.



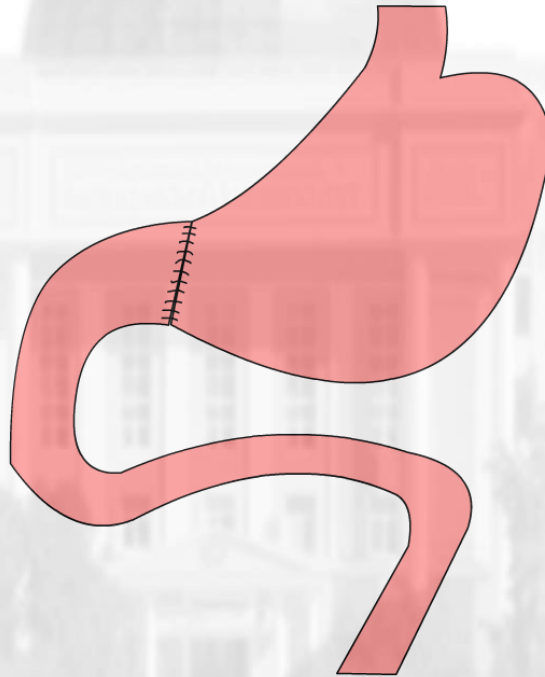
GASTRIC RESECTION

Total resections. Complete removal of the stomach, imposition of esophageal-jejunal anastomosis and Brown's mouth.



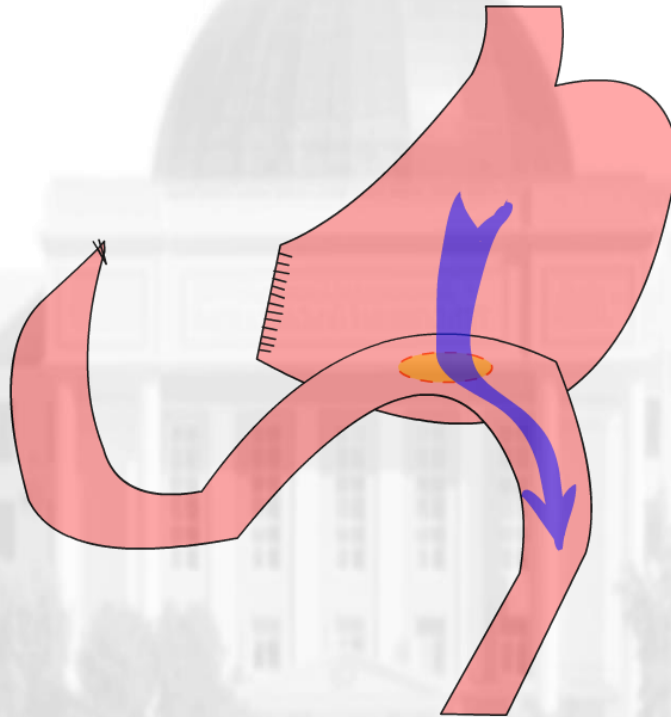
GASTRIC RESECTION

Small resections. Pyloroantrumectomy with the imposition of the anastomosis according to the type of Billroth-I.



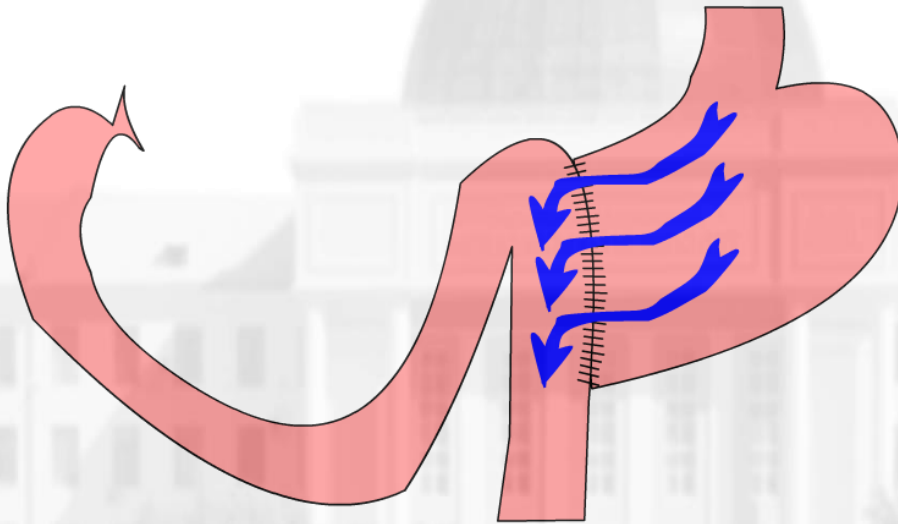
GASTRIC RESECTION

Small resections. Pyloroantrumectomy with the imposition of the anastomosis according to the type of Bilrot-I.



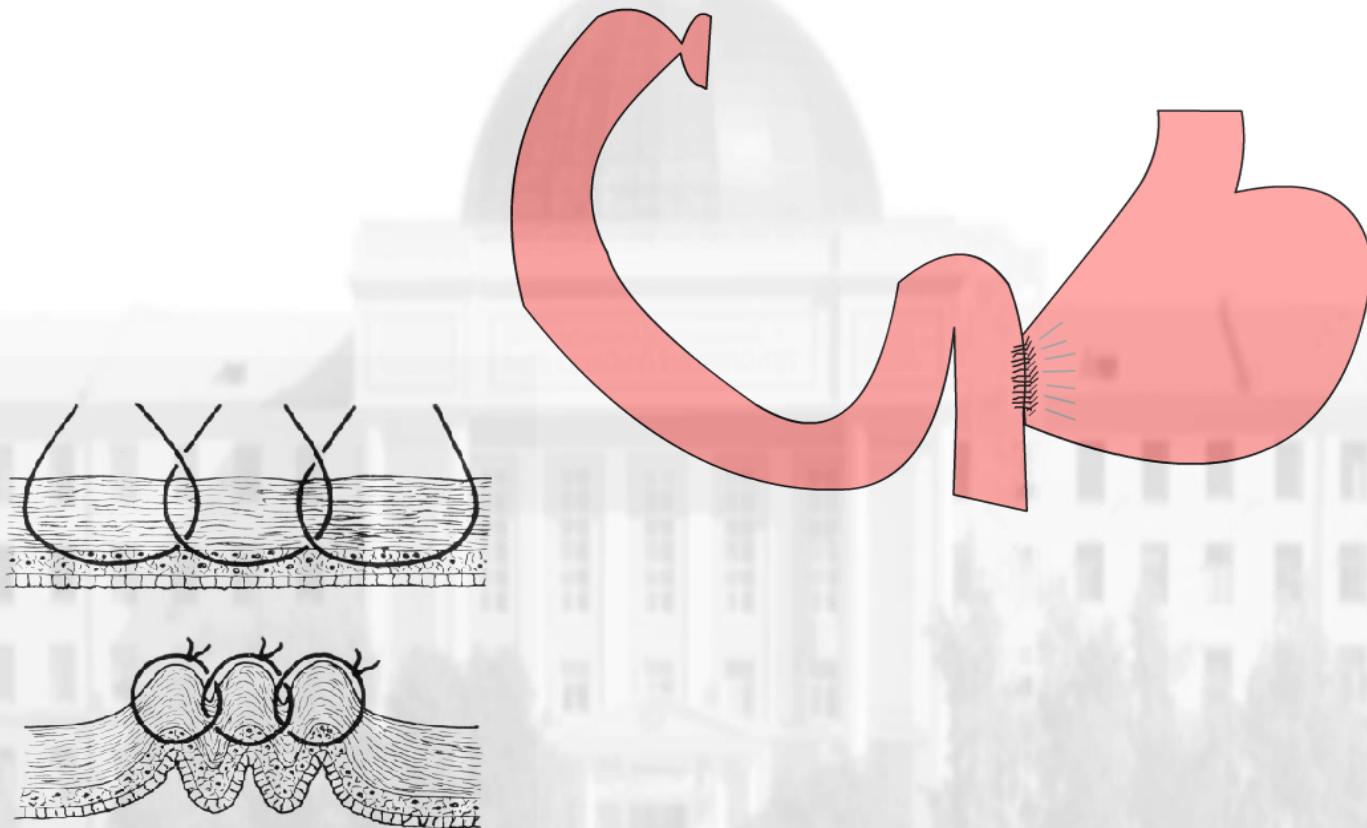
GASTRIC RESECTION

The Watering Method Is Reichel. The jejunum is sewn into the entire lumen of the stomach. The method is physiologically not allowed, because the stomach is instantly emptied.



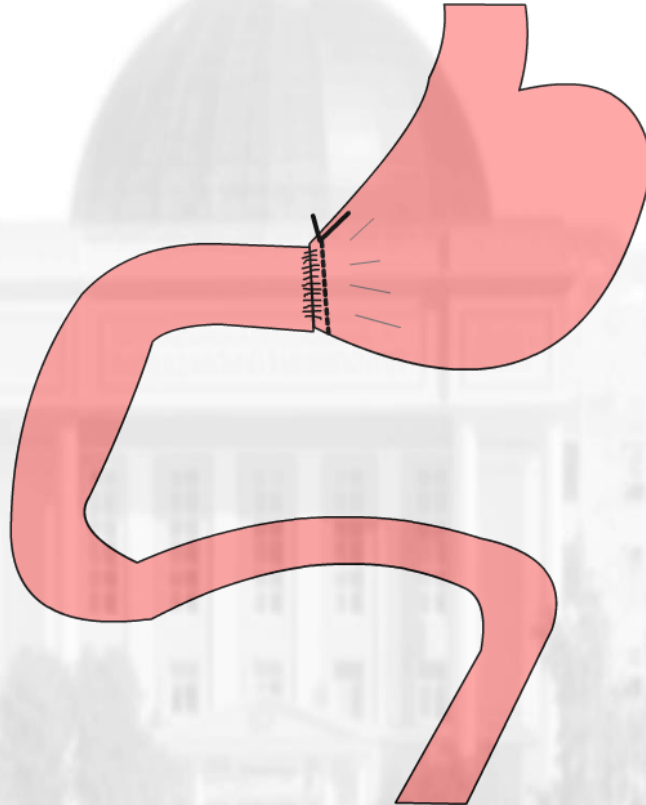
GASTRIC RESECTION

The Irrigation Method Is Reichel-Dykhno. Corrugation of the stomach stump to the diameter of the lumen of the duodenum with the imposition of an end-to-side anastomosis.



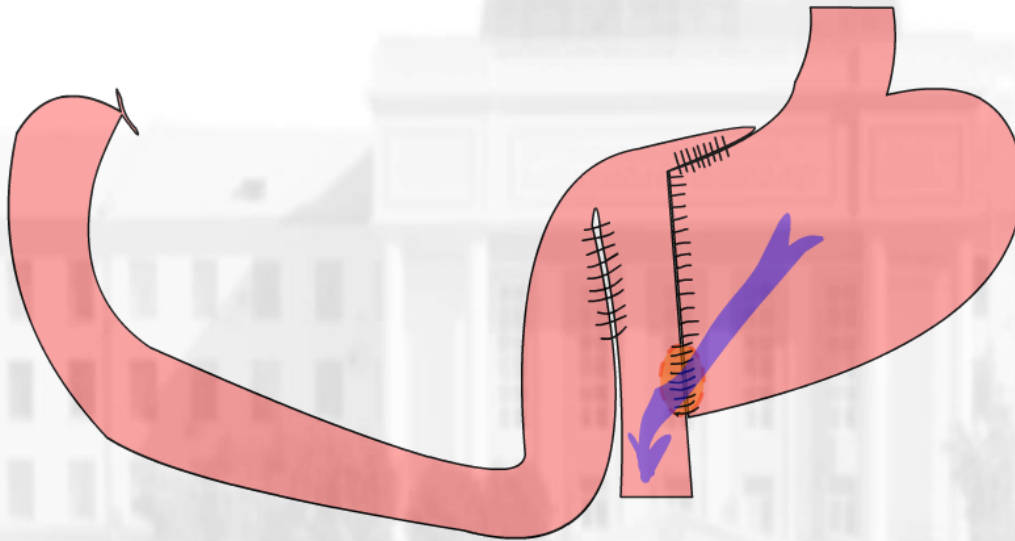
GASTRIC RESECTION

The Billroth-I-Haberer method. The lumen of the resected stomach is narrowed with corrugating sutures to the diameter of the lumen of the duodenum, the anastomosis is superimposed according to the type of Billroth- I.



GASTRIC RESECTION

The Billroth-I method is modified by the Chamberlain-Finsterer. The stomach stump is partially sutured from the small curvature, an anastomosis with the jejunum is applied to the remaining stump and the skinny is sewn to the small curvature of the stomach, which prevents food from being thrown into the leading loop.



ORGAN-PRESERVING OPERATIONS ON THE STOMACH FOR PEPTIC ULCER DISEASE

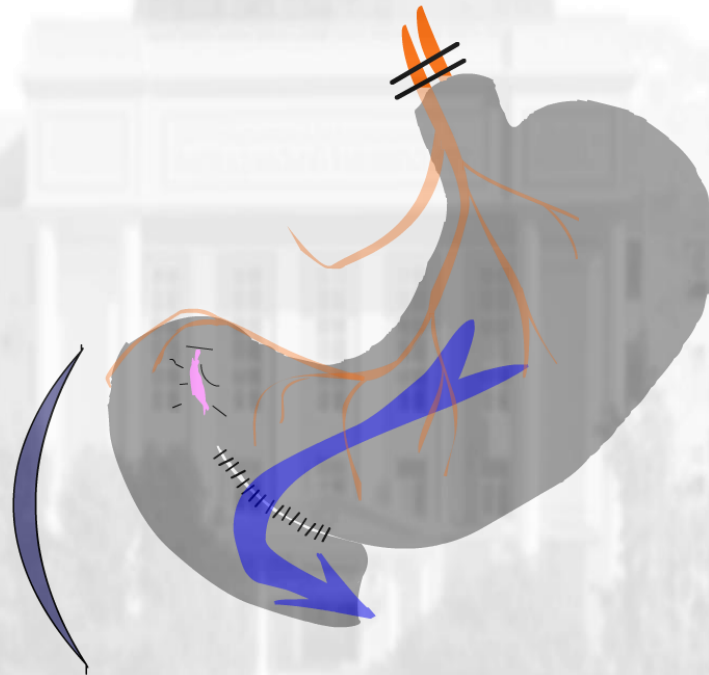
Vagotomy is a surgical operation involving the intersection of the main trunk or branch of the vagus nerve. It is performed in the treatment of peptic ulcer of the stomach to reduce the secretion of hydrochloric acid and pepsin.

Total vagotomy+ pyloroplasty by Heineke-Mikulich



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Subtotal



Superselective





Thank you for your attention!