

XXVIII IFSO World Congress

9-12 September 2025 | Santiago, Chile



METABOLIC SURGERY IN HIGH GASTRIC CANCER INCIDENCE COUNTRIES

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IFSO 2025 Santiago

Combined Therapies, The Dawn of a New Era

ifso2025.org

Disclosure Slide



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Nothing to disclose

UNIQUE RISKS IN HIGH-INCIDENCE OF GA CANCER COUNTRIES

- H. pylori, genetics, environment
- Bypass surgery: excluded stomach not accessible by endoscopy
- Risk of missing early gastric cancer
- Challenges in long-term surveillance



ASIAN PARTICULARITY

GASTRIC CANCER WORLDWIDE

1,000,000

New case in a year

5th

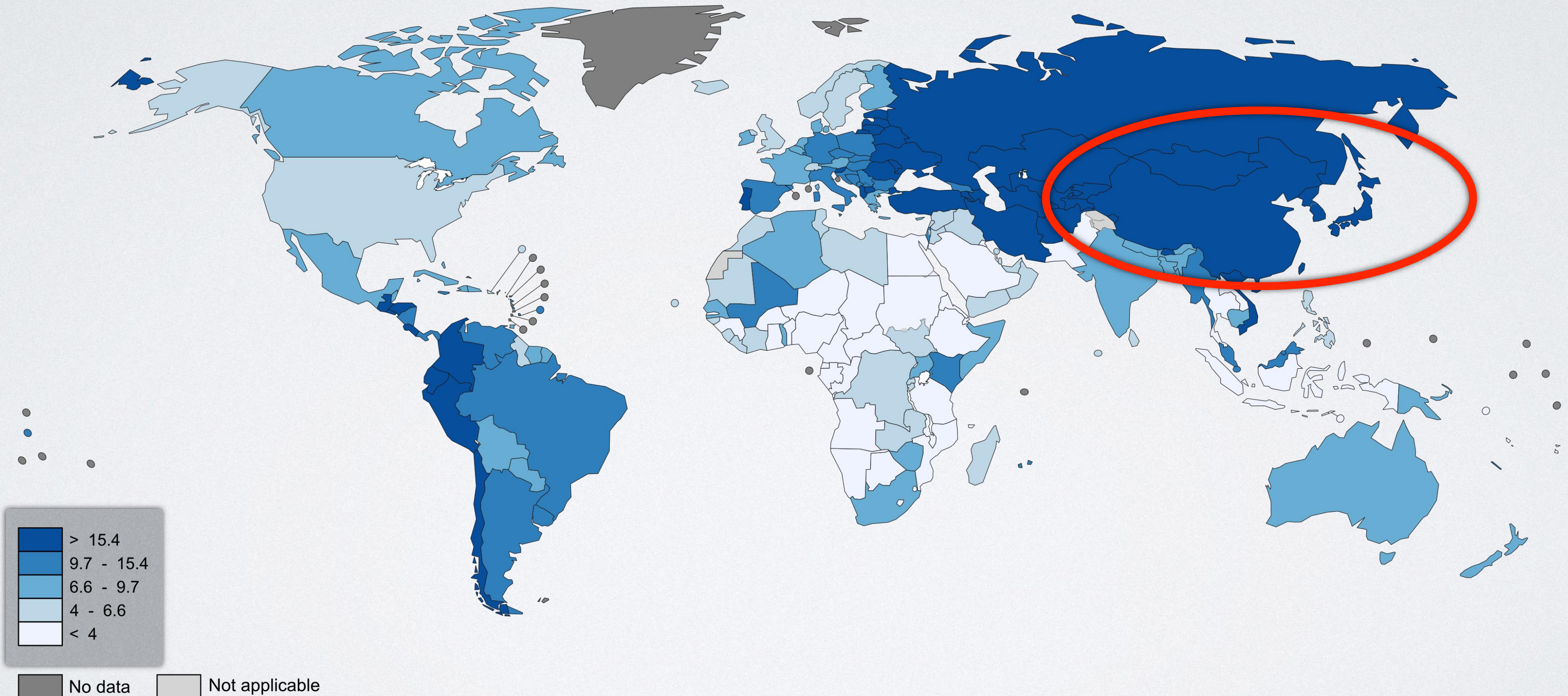
Most common malignancy
in the world

3rd

Leading cause of
cancer death

GASTRIC CANCER WORLDWIDE

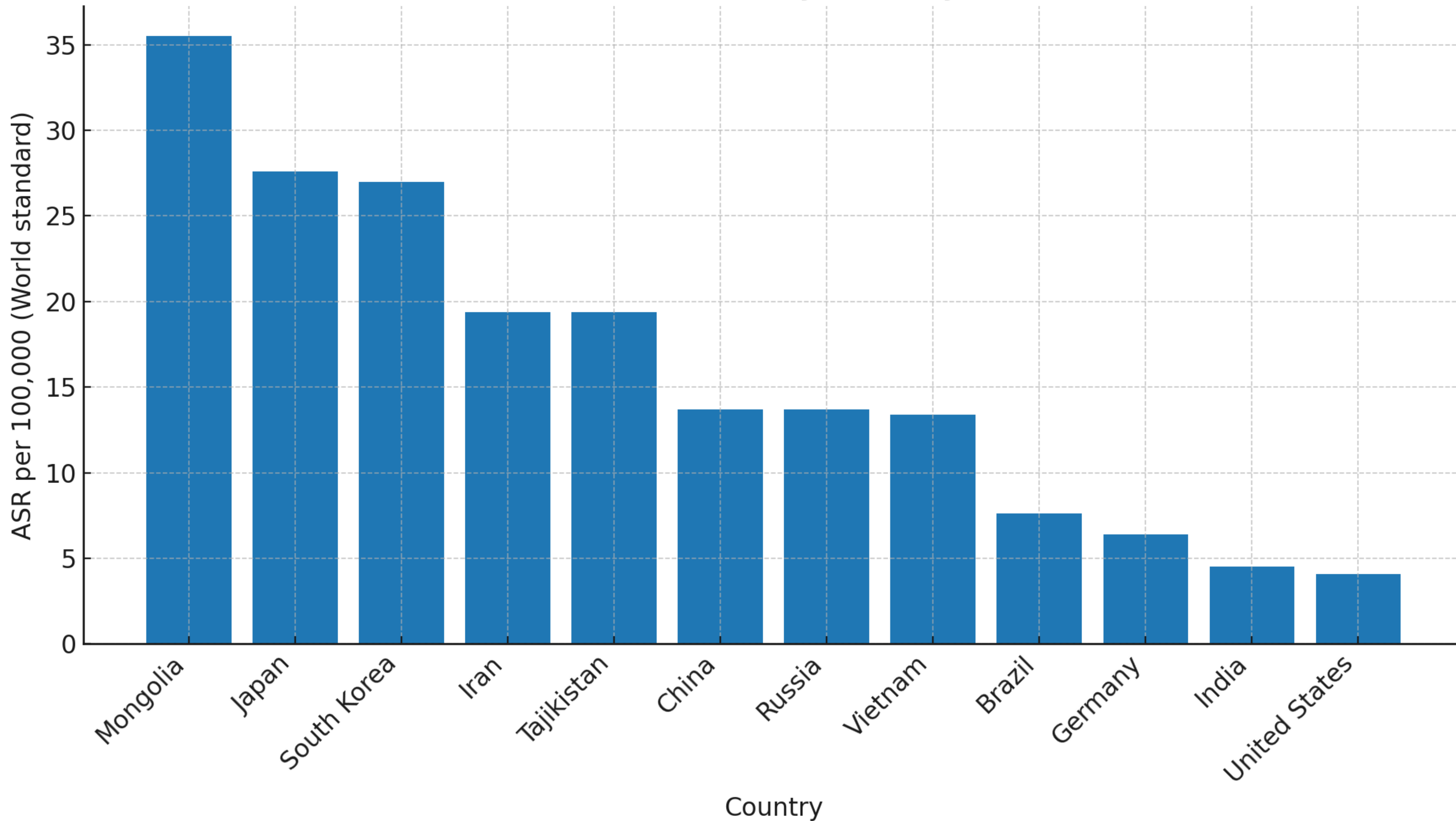
Incidence in Male



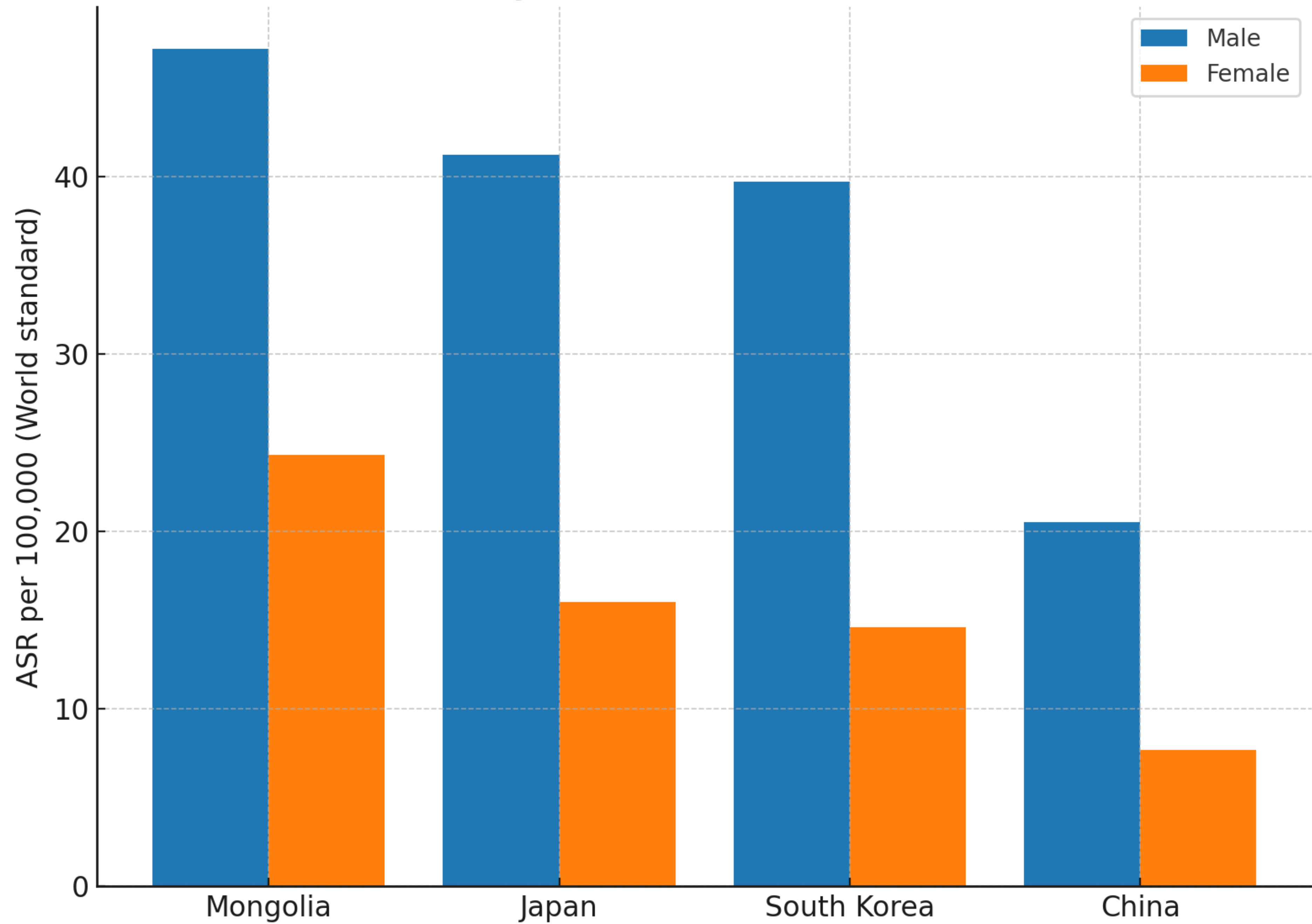
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data source: GLOBOCAN 2012
Map production: IARC
World Health Organization

Gastric (Stomach) Cancer Incidence by Country (ASR, Both Sexes, 2022)

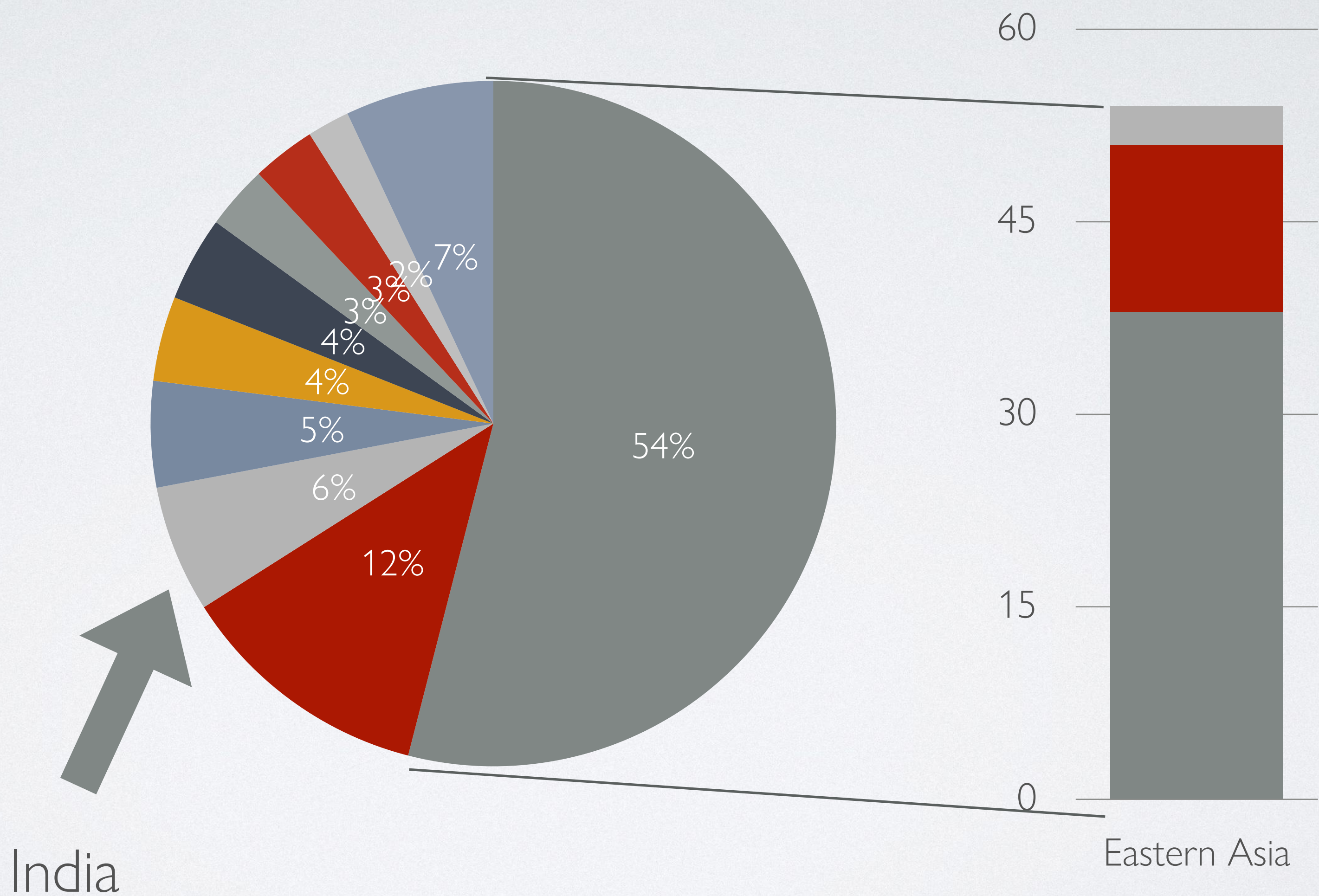


Gastric Cancer Incidence by Sex in Selected Countries (2022, GLOBOCAN)

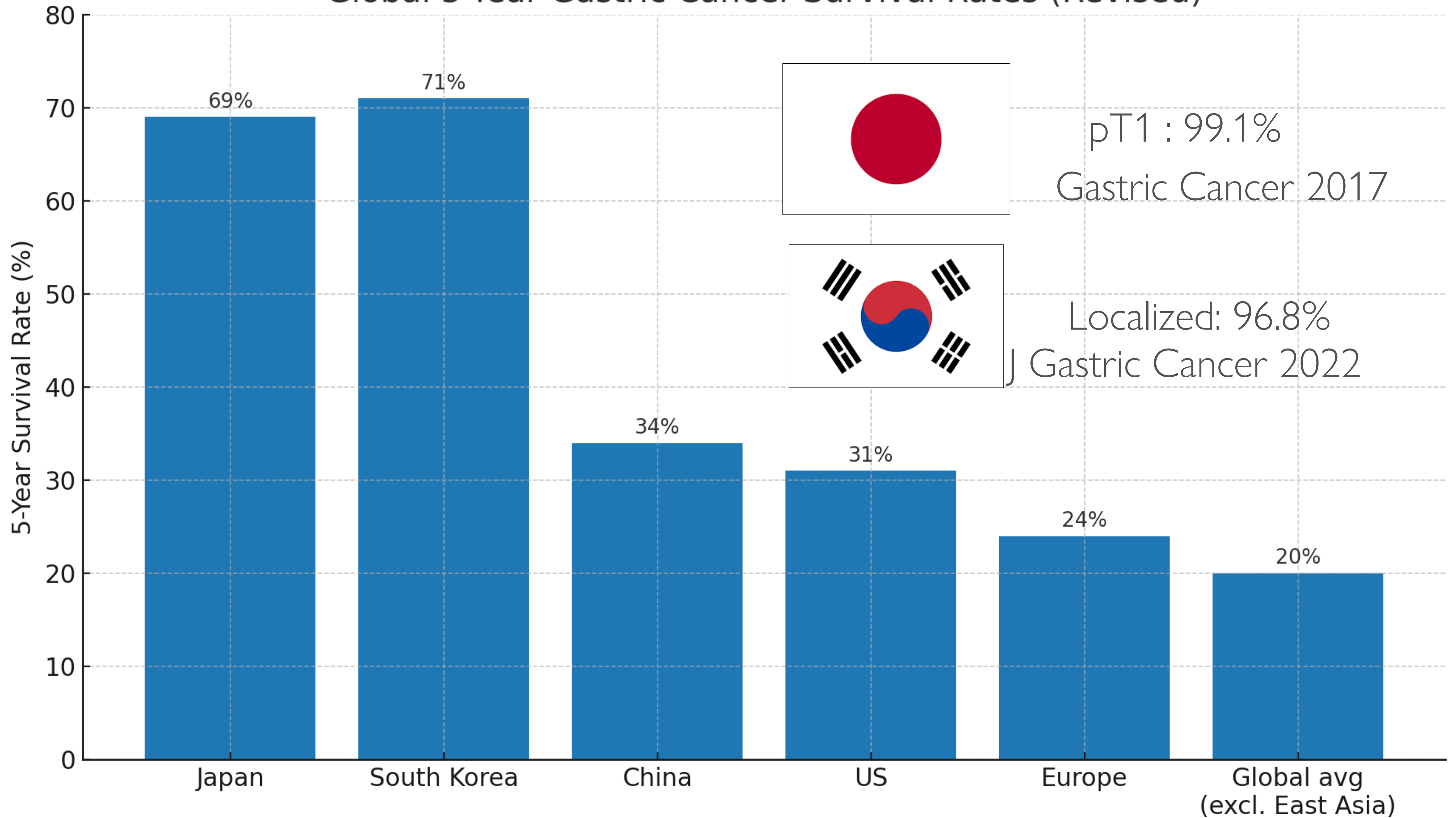


GASTRIC CANCER WORLDWIDE

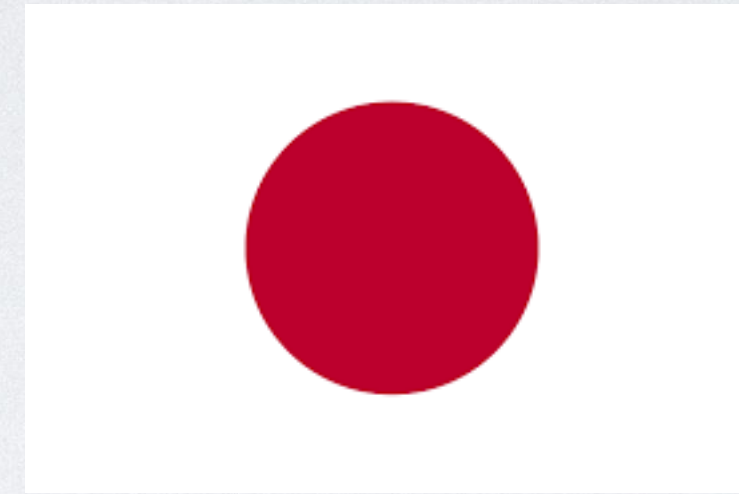
- Eastern Asia
- Eastern Europe
- South central asia
- South America
- Southern Europe
- Western Europe
- North America
- South Eastern Asia
- Northern Europe
- Others



Global 5-Year Gastric Cancer Survival Rates (Revised)



NATIONAL GASTRIC CANCER SCREENING



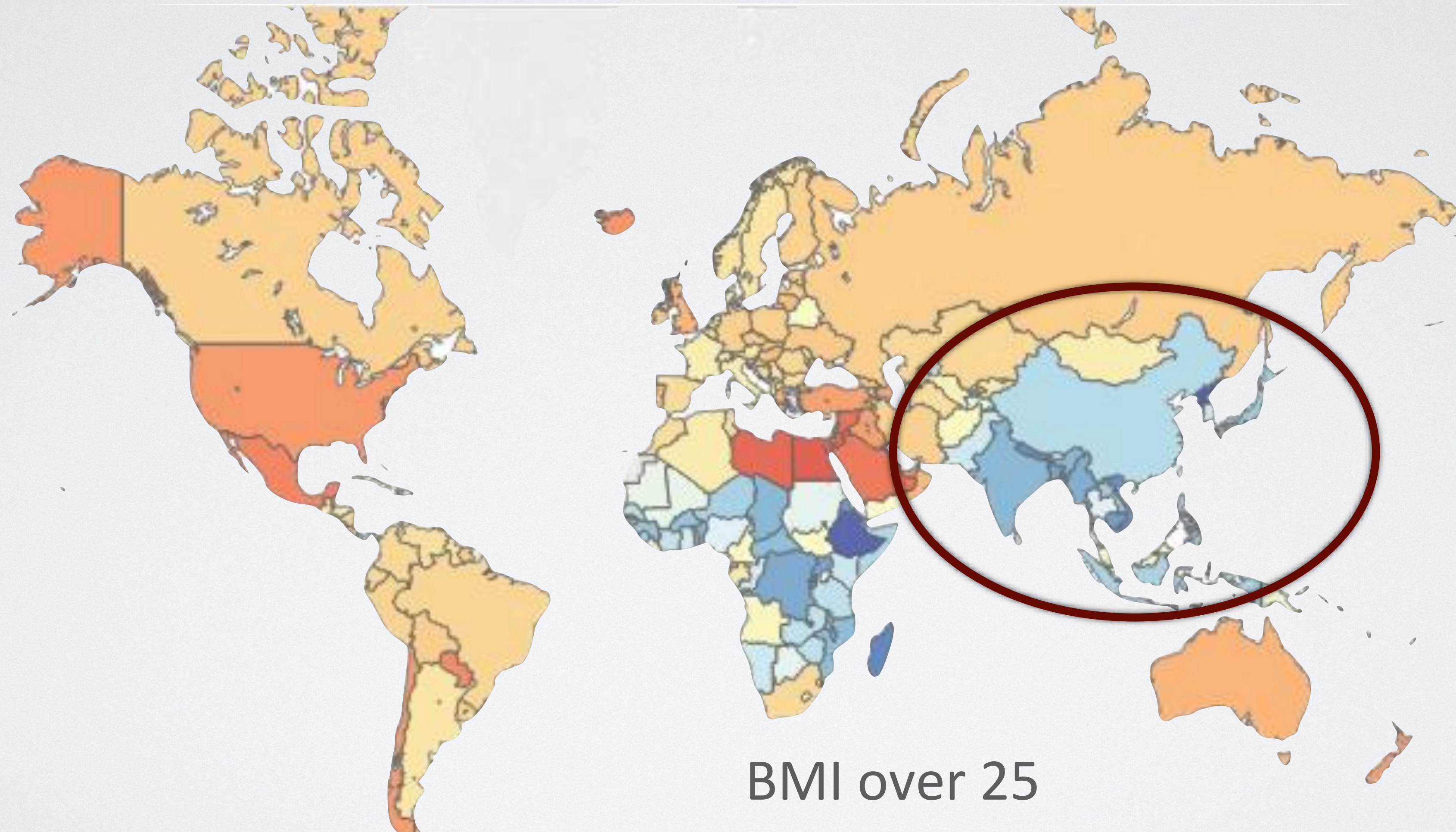
- Only 2 countries in the world
- Japan started 1983 , Korea 2002
- Screening endoscopy (elder than 40yrs) is covered by the public costs.
e.g. 0-10 USD ; personal pay

KOREA AND JAPAN

Majority of Gastric cancer pts in Japan and Korea is in the early stage
Gastric cancer is curable in our area.

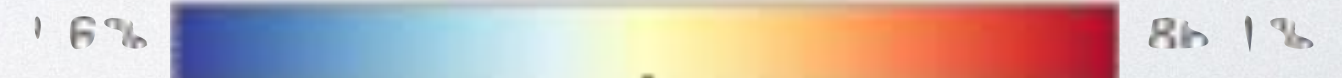
Can not miss early gastric cancers

OBESITY WORLDWIDE

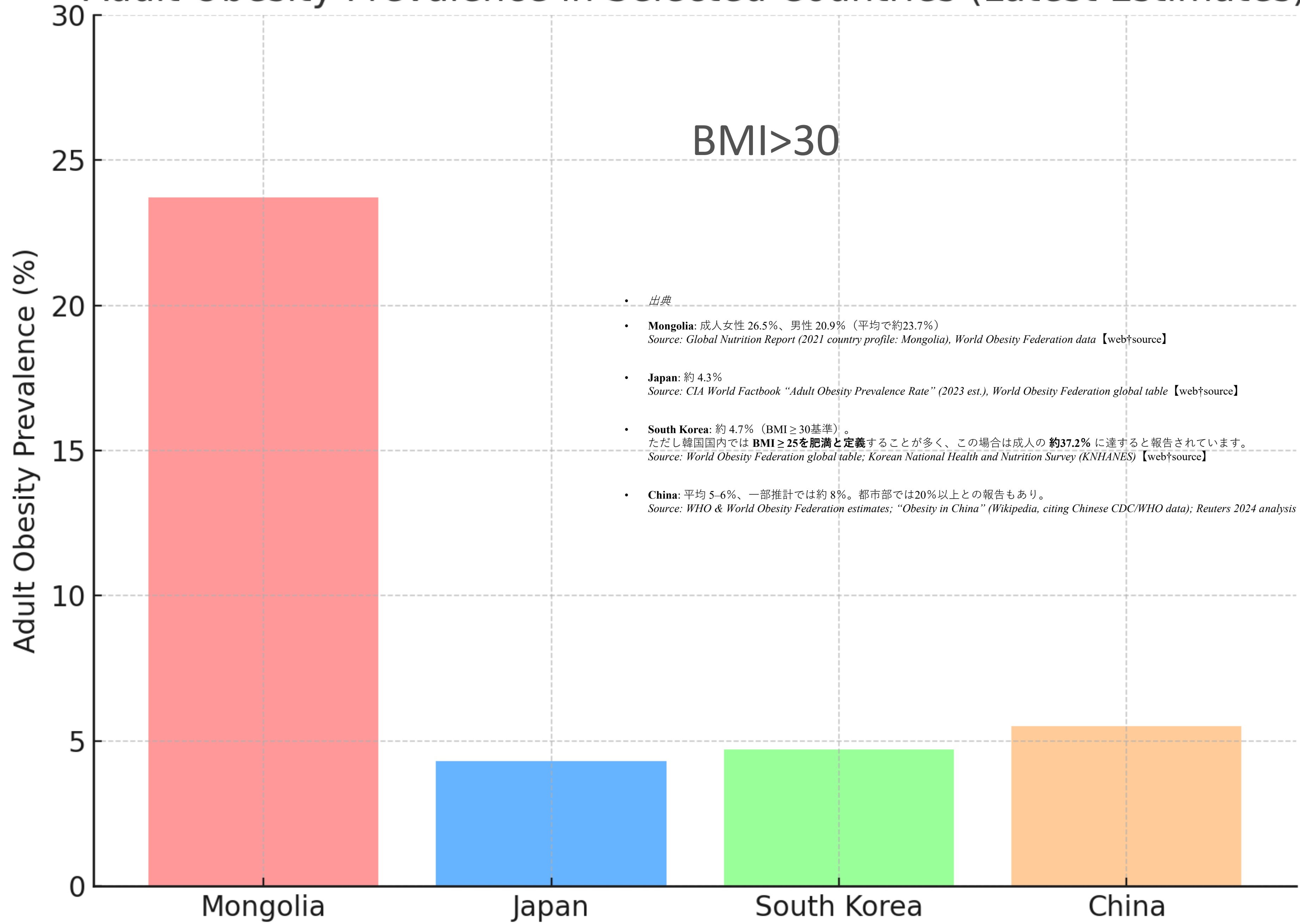


BMI over 25

Source: Global Burden of Disease Study 2013. Global Burden of Disease Study 2013 (GBD 2013) Obesity Prevalence 1990-2013. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2014.



Adult Obesity Prevalence in Selected Countries (Latest Estimates)



- 出典
- **Mongolia:** 成人女性 26.5%、男性 20.9% (平均で約23.7%)
Source: *Global Nutrition Report (2021 country profile: Mongolia), World Obesity Federation data* 【web†source】
- **Japan:** 約 4.3%
Source: *CIA World Factbook "Adult Obesity Prevalence Rate" (2023 est.), World Obesity Federation global table* 【web†source】
- **South Korea:** 約 4.7% (BMI ≥ 30基準)。
ただし韓国国内では **BMI ≥ 25**を肥満と定義することが多く、この場合は成人の **約37.2%** に達すると報告されています。
Source: *World Obesity Federation global table; Korean National Health and Nutrition Survey (KNHANES)* 【web†source】
- **China:** 平均 5-6%、一部推計では約 8%。都市部では20%以上との報告もあり。
Source: *WHO & World Obesity Federation estimates; "Obesity in China" (Wikipedia, citing Chinese CDC/WHO data); Reuters 2024 analysis* 【web†source】

MONGOLIA

- No Bariatric Metabolic Surgery society

- There is a surgical society but no endo-laparoscopic society

- No Governor of ELSA

- **No MBS statistics**



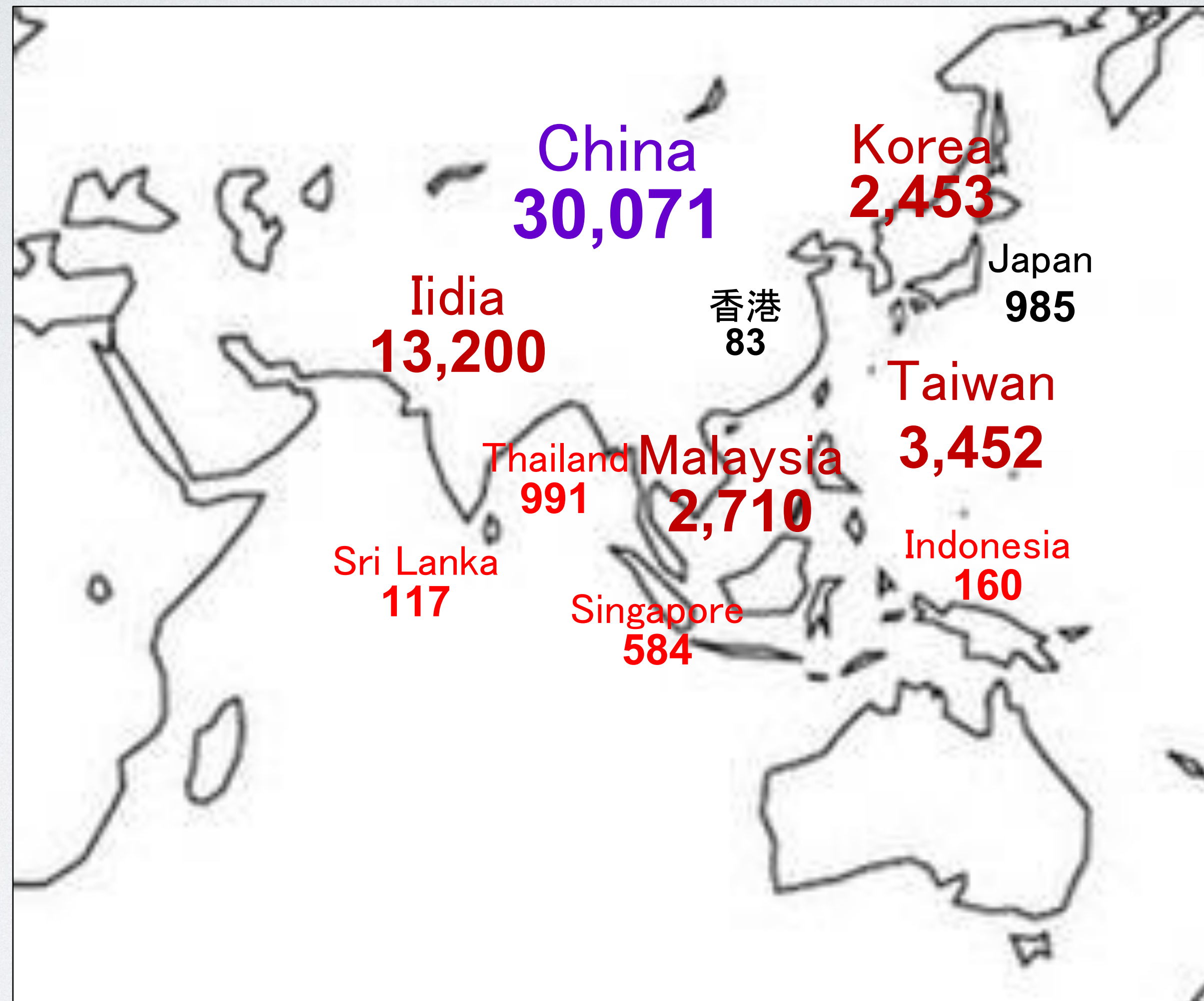
Annual No. of bariatric/metabolic surgery 2003-2004

Total in Asia 534 cases/yr (Without AU)

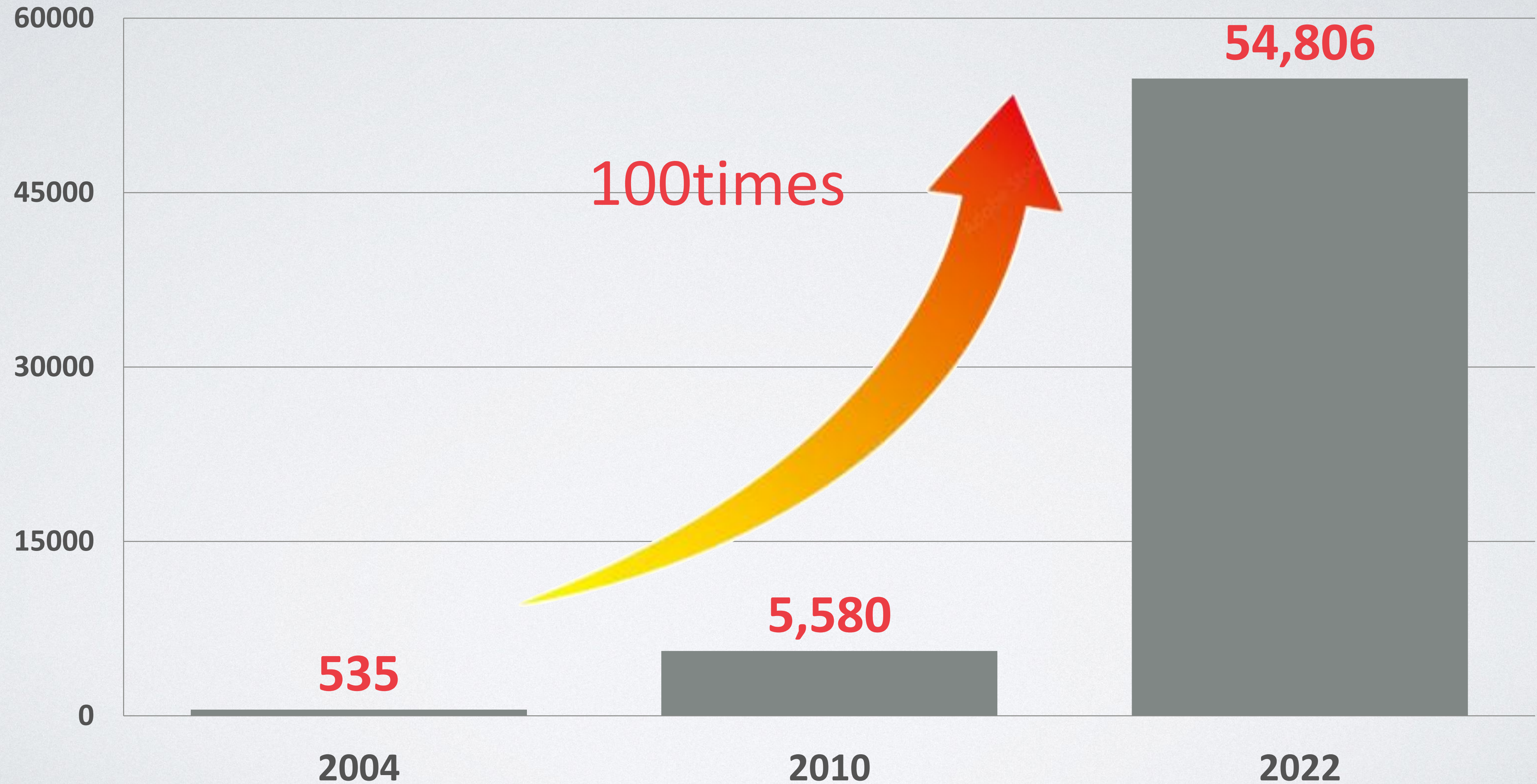


Obes Surg 2004;14:1157
Obes Surg 2005;15:751

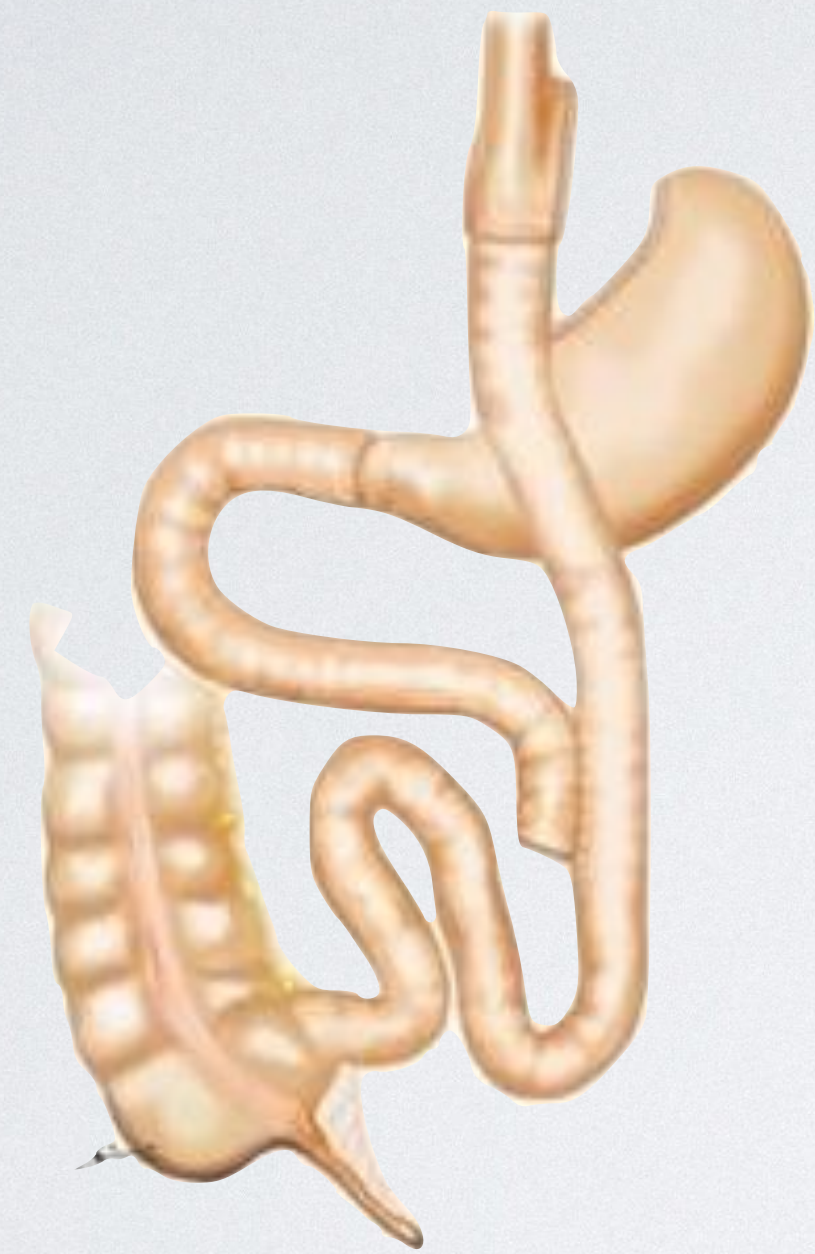
Numbers of MBS in Asia (2022, n=54,806)



Change of MBS Numbers in Asia



G CANCER AFTER BARIATRIC PROCEDURES

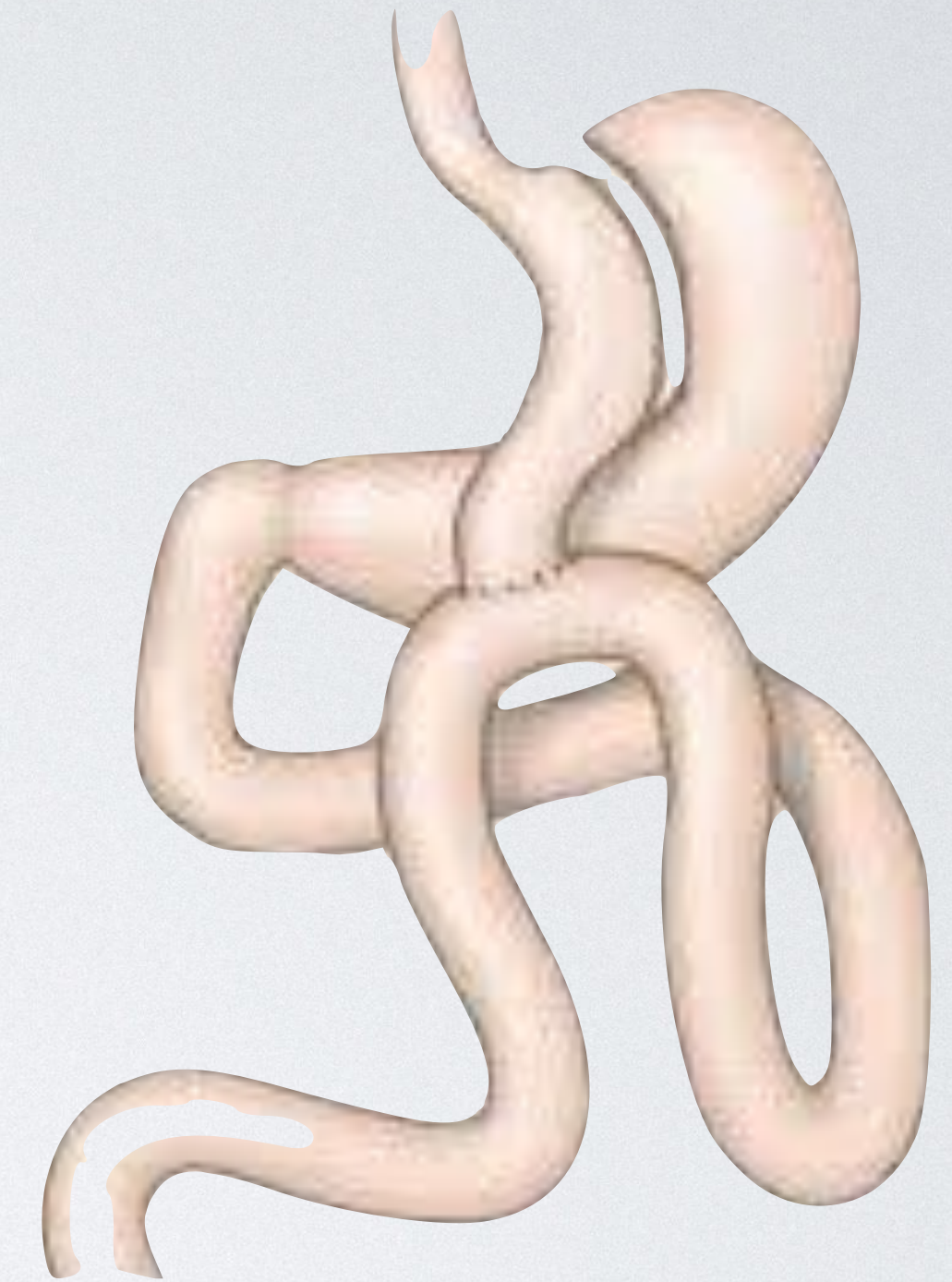


18 patients

6 after RYGB : 5 in excluded stomach

Ave: 9.3years after RYGB

Some after eradication of H Pylori



Maybe underestimated

Controversy – Gastric ca after gastric bypass

Taiwan

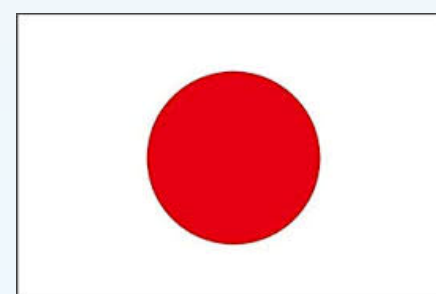
- ◇ 2 patients up to now (out of 2600 cases)
- ◇ All from excluded stomach
- ◇ No patients from anastomosis or gastric tube
- ◇ Both are smoker, without *H.p.* screening

1 in 1,300

Bigger than we thought

Past President, Taiwan Society for Metabolic and Bariatric Surgery
Past President, IFSO Asia-Pacific Chapter
Founding President, APMBSS

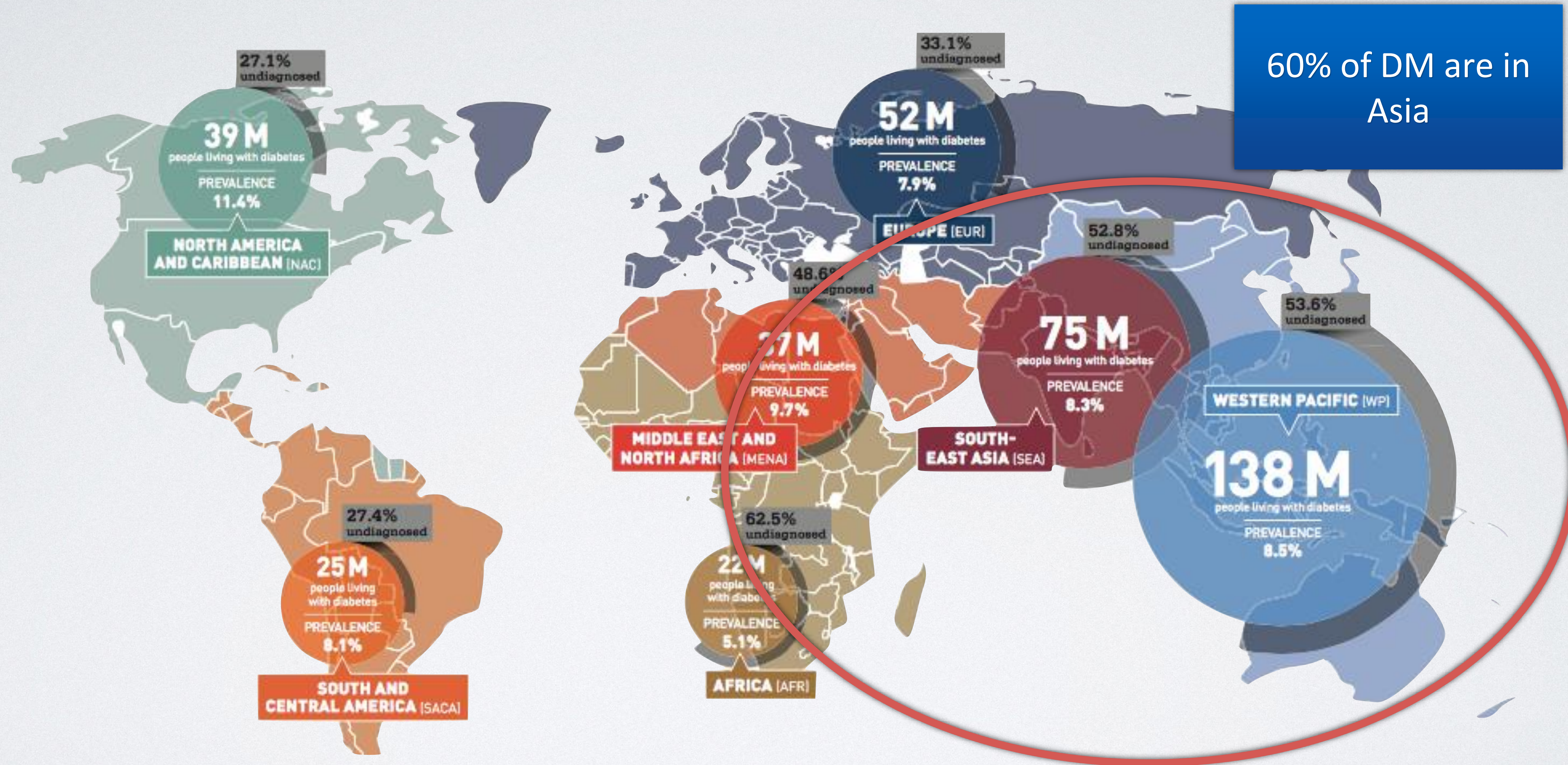
h Ser M.D.
Taiwan



G Ca:4~5 times higher than Taiwan

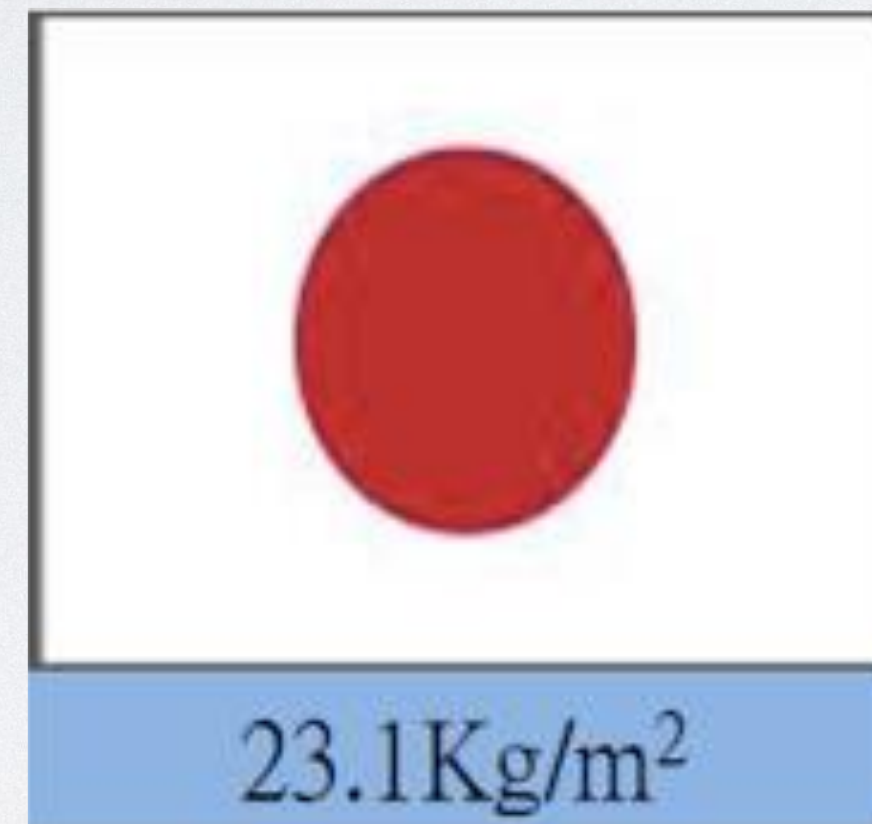
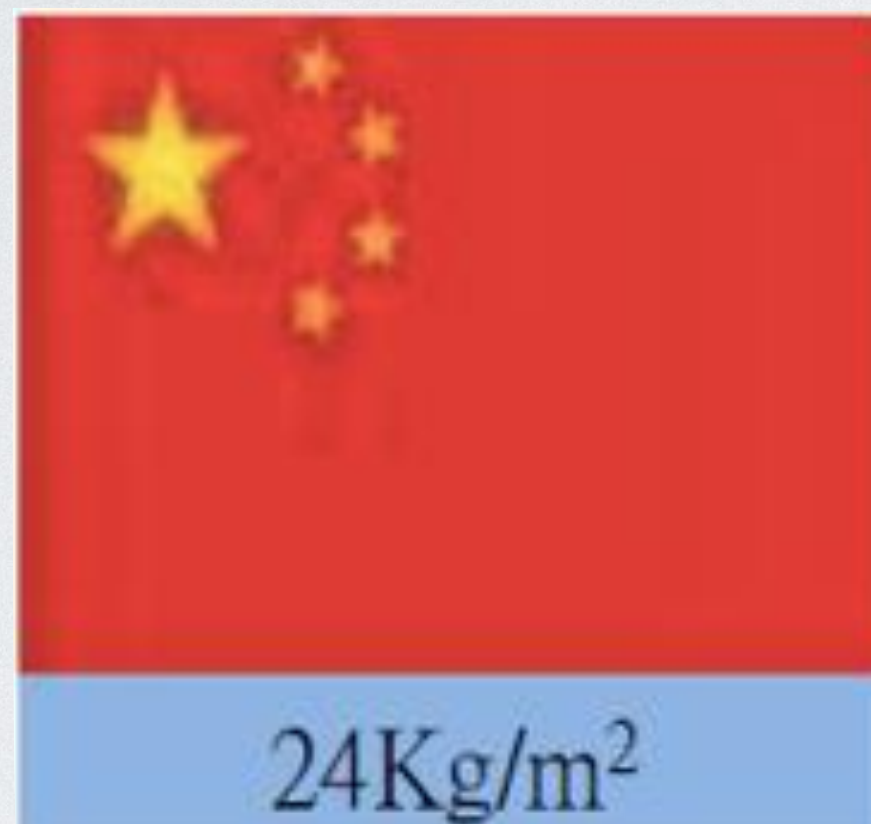


DIABETES WORLDWIDE



Mean BMI among T2DM patients, baseline characteristics

(2010)



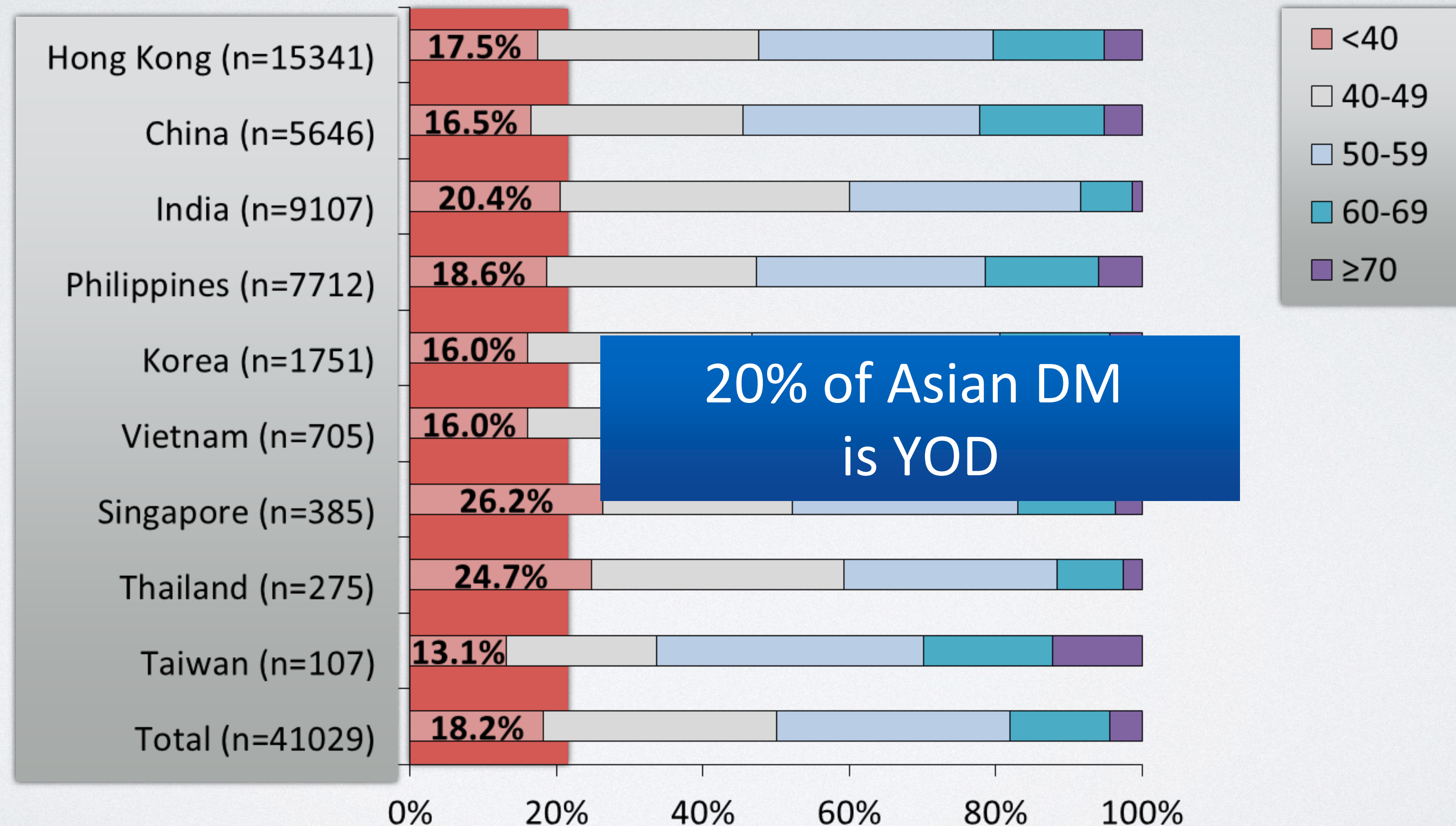
Chinese Diabetes Society: China guideline for type2 diabetes. Chin J Diabetes Mellitus 2010, 2(suppl 2):6-56.

Kramer H, Cao G, Dugas L, Increasing BMI and waist circumference and prevalence of obesity among adults with Type 2 diabetes: the National Health and Nutrition Examination Surveys. J Diabetes Complications. 2010 Nov-Dec;24(6):368-74

Mean baseline characteristics from the Japan Diabetes Complication Study (JDCS)
Averaged year-9 data for white individuals from the UK Prospective Diabetes Study (UKPDS)

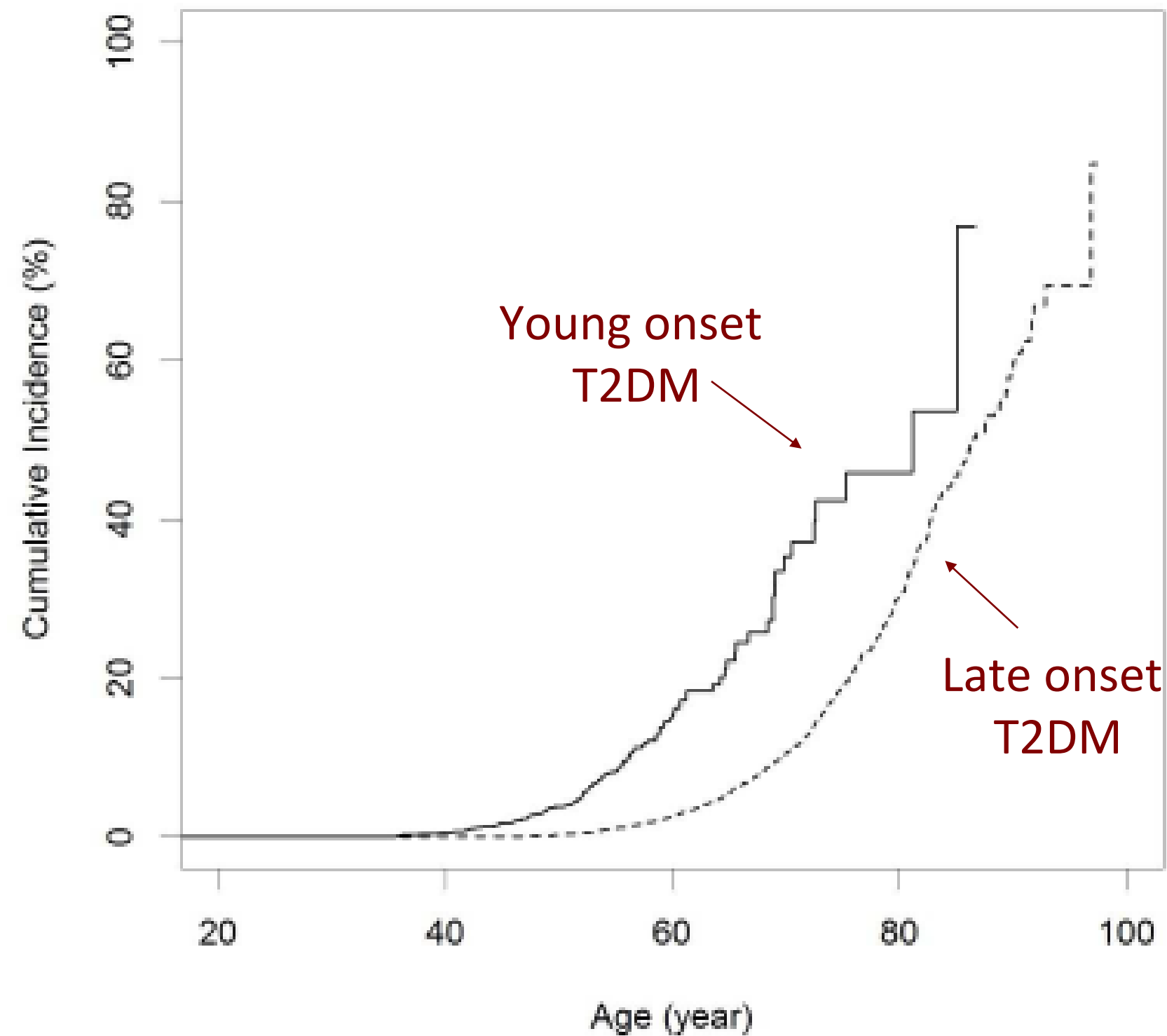
Joint Asia Diabetes Evaluation (JADE) Program 1

in 5 Asia T2D patients have YOD (age of diagnosis <40)



Vulnerability and phenotypic heterogeneity of young-onset diabetes (YOD)

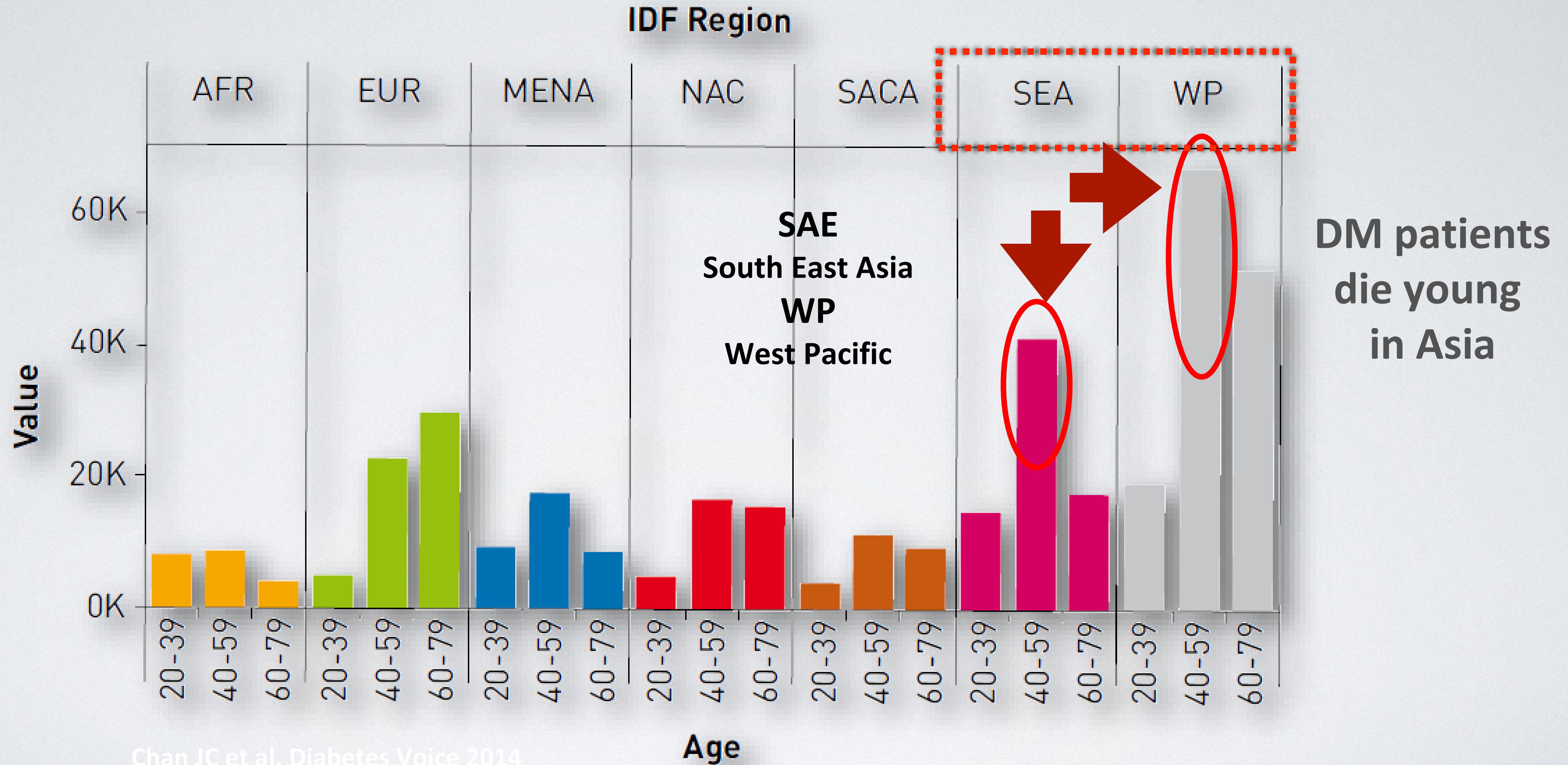
1 in 3 YOD had died or suffered a major event by the age of 60



T1DM=type 1 diabetes mellitus
T2DM=type 2 diabetes mellitus

Chan JC et al Am J Med 2014
Luk AO et al Diabetes Care 2014

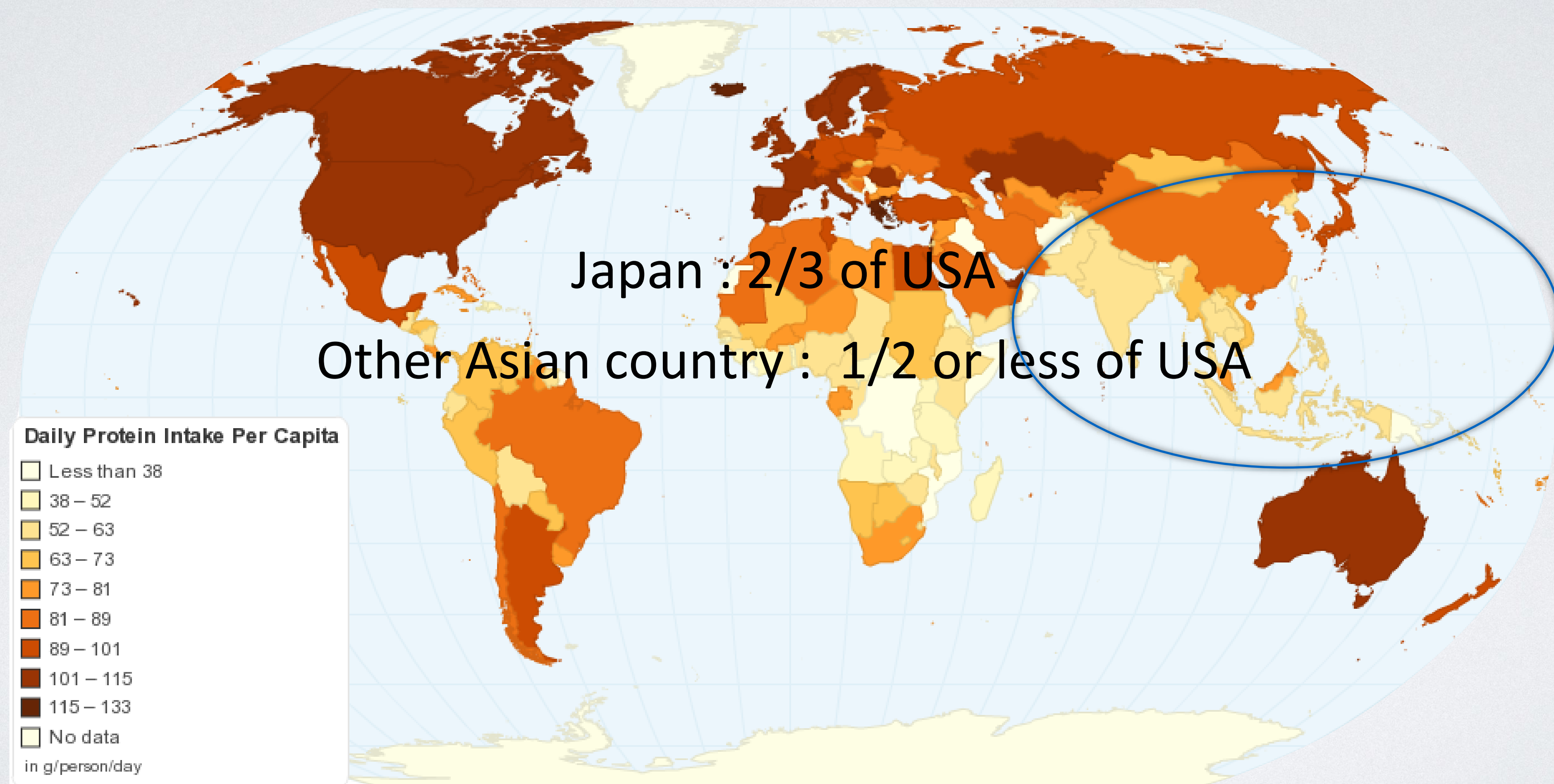
Number of DM patient ; age of death



Chan JC et al. Diabetes Voice 2014

Source: *IDF Diabetes Atlas, 6th edn.* International Diabetes Federation. Brussels, 2013. www.idf.org/diabetesatlas

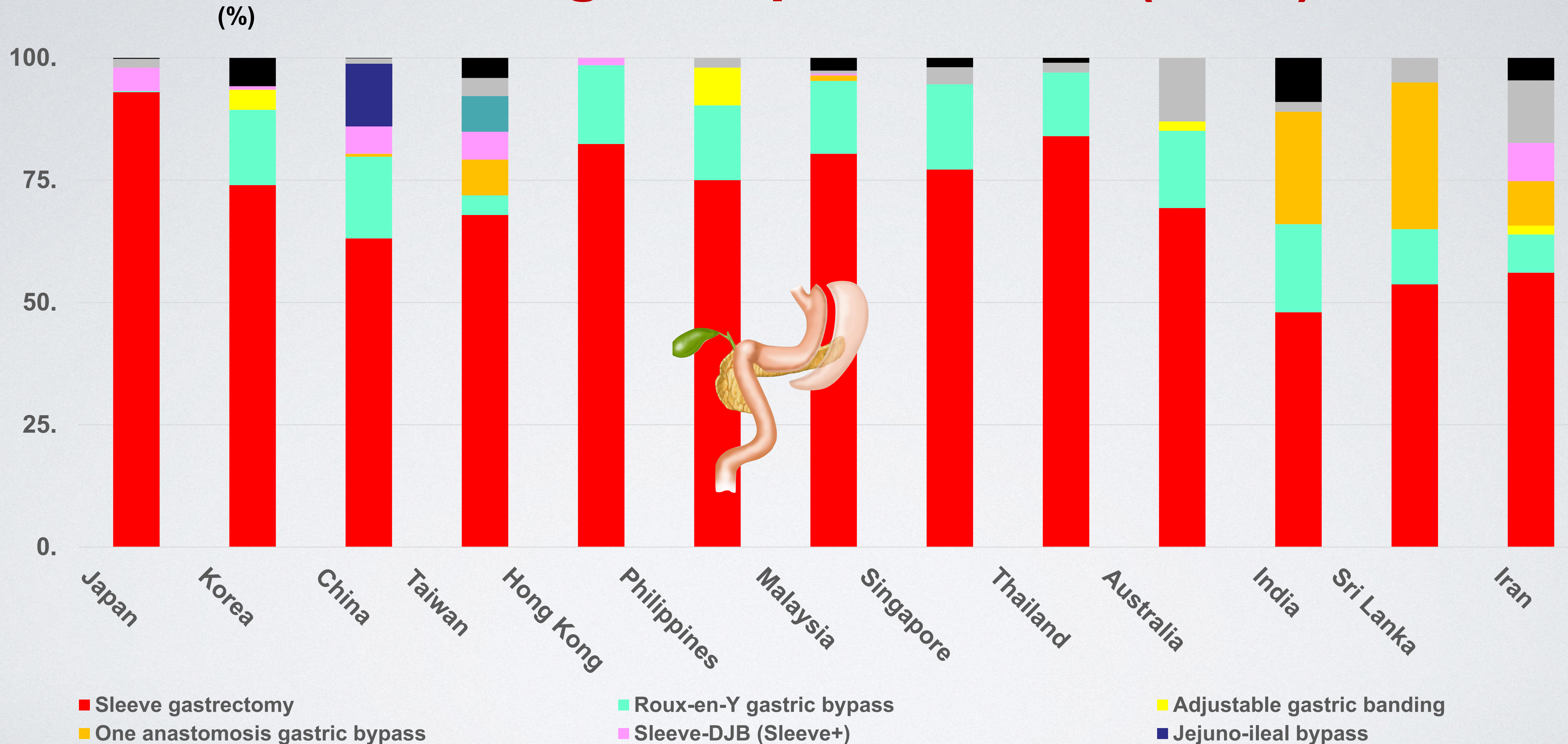
PROTEIN INTAKE PER DAY



TOO MUCH HYPO-ABSORPTIVE PROCEDURES ARE
NOT RECOMMENDED IN ASIA



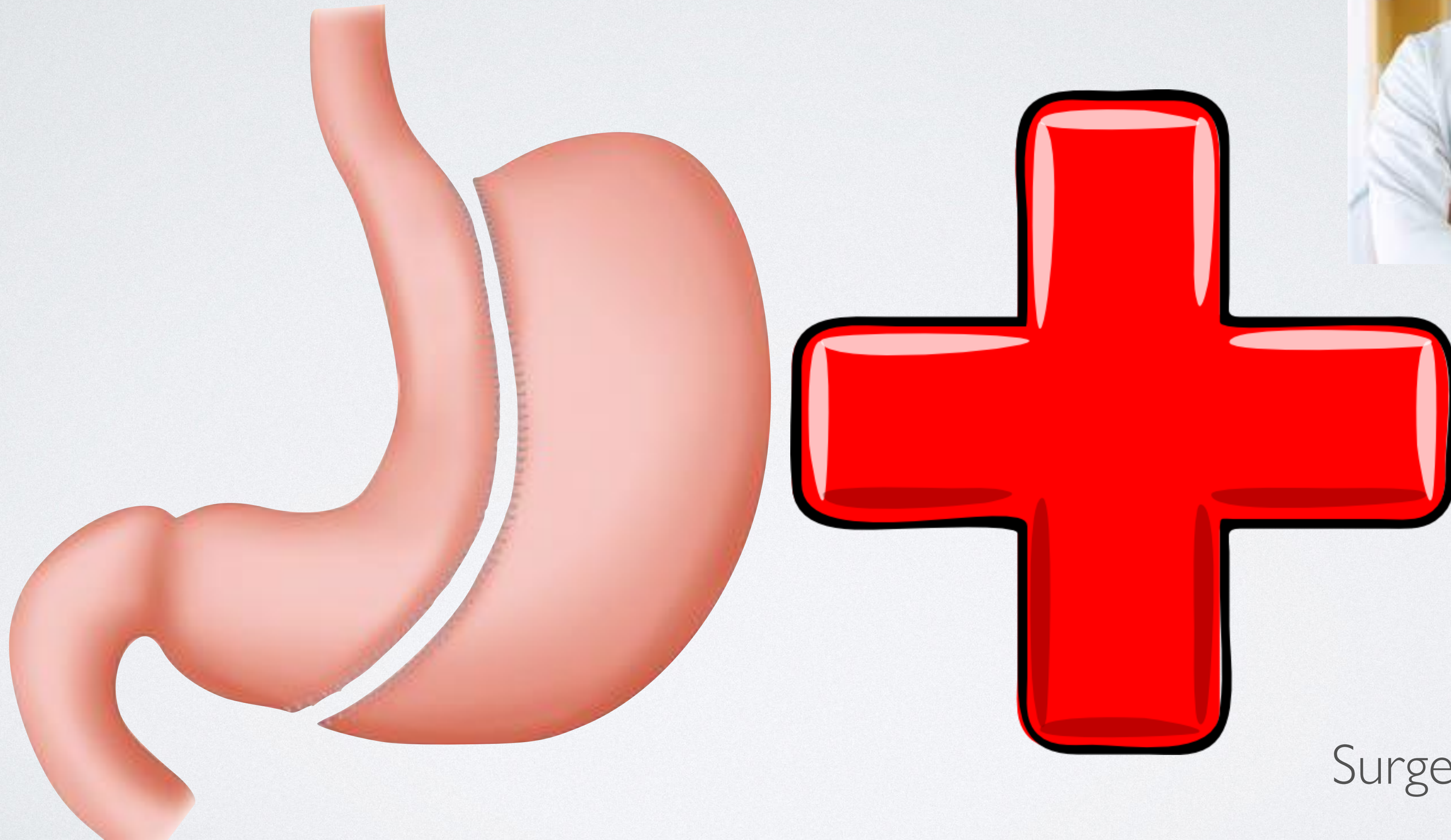
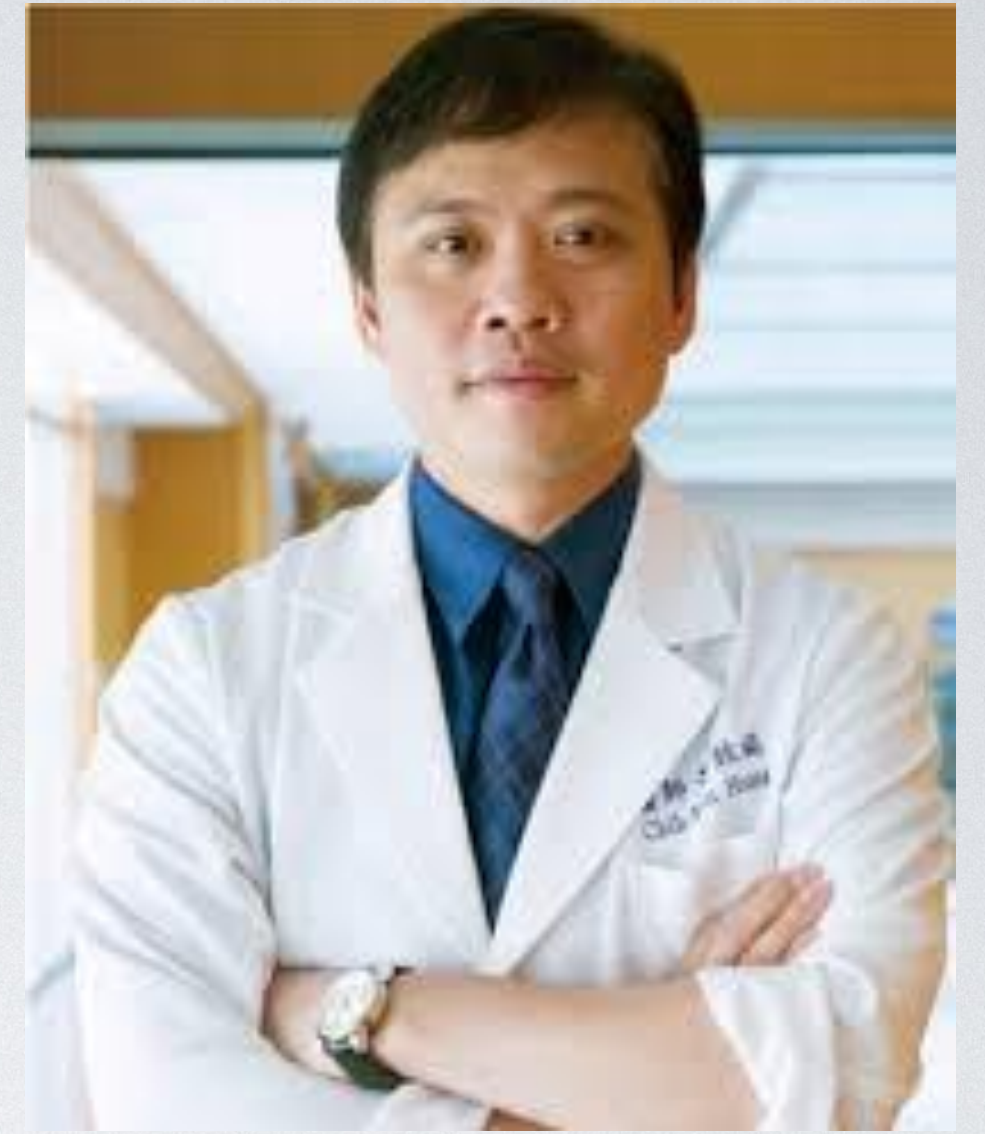
Percentages of procedures (2019)



National or Regional Reports, the 7th Annual Conference of CSMBS

Ohta et al 2020

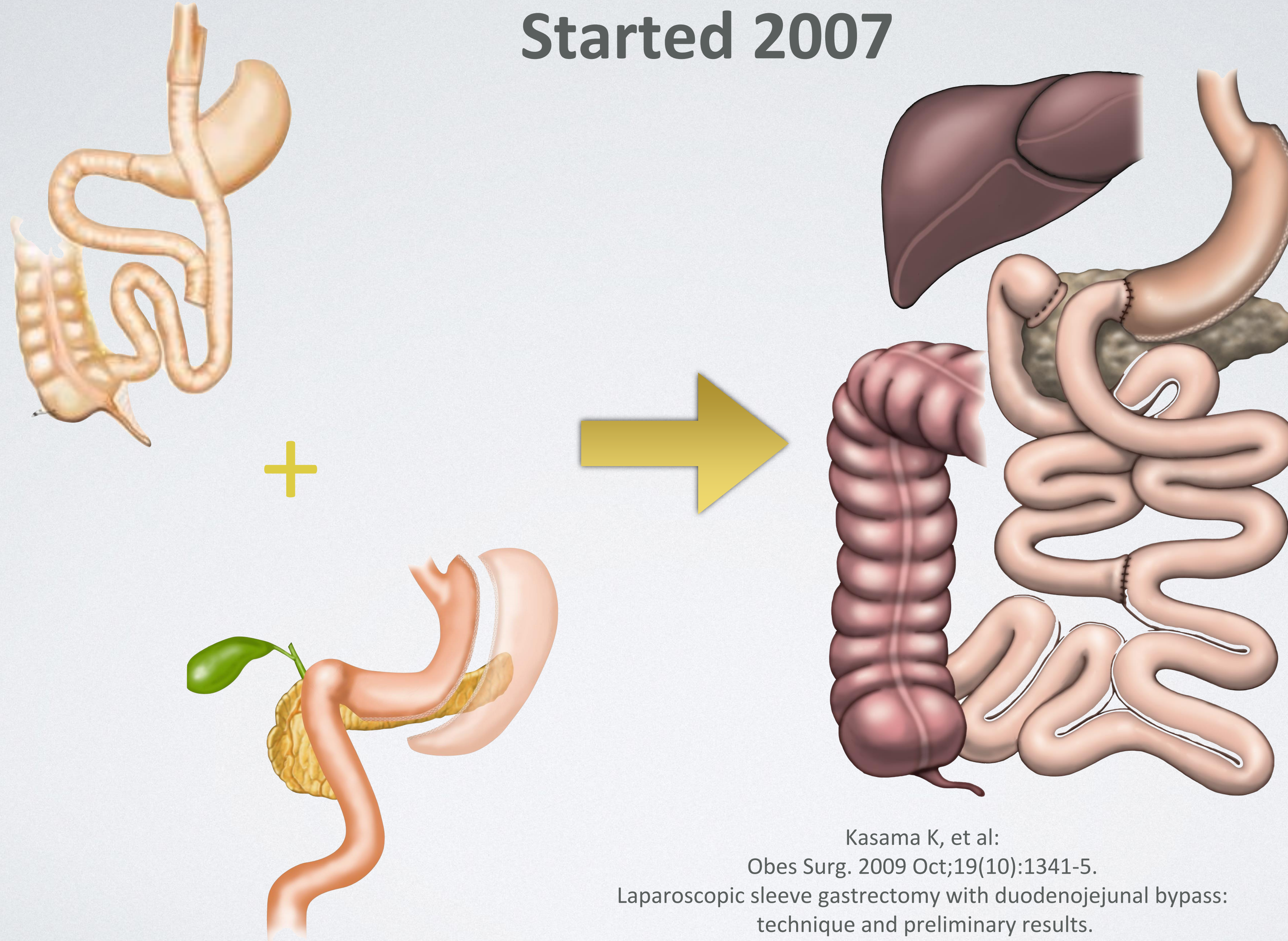
SLEEVE PLUS PROCEDURES



Surgery Today

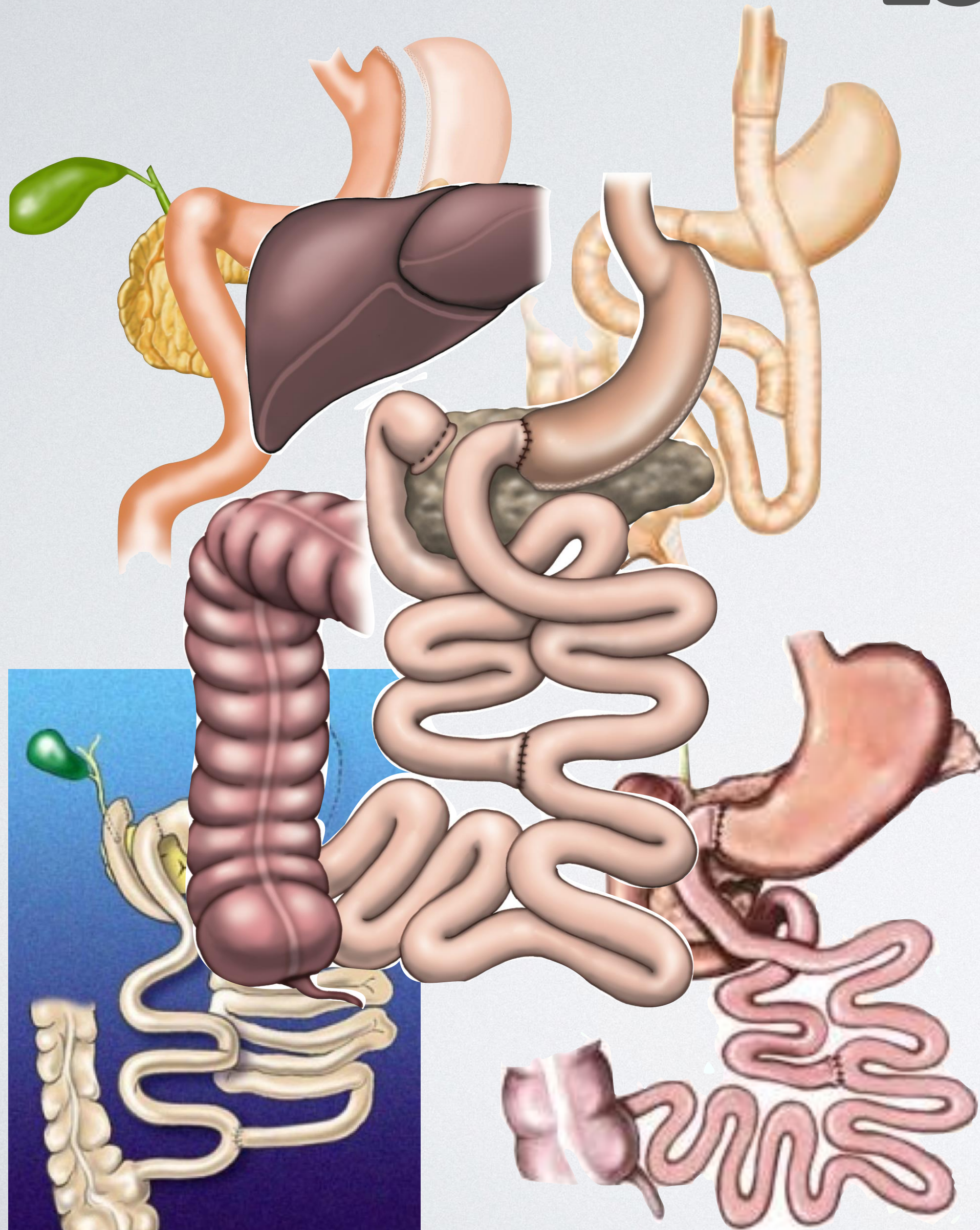
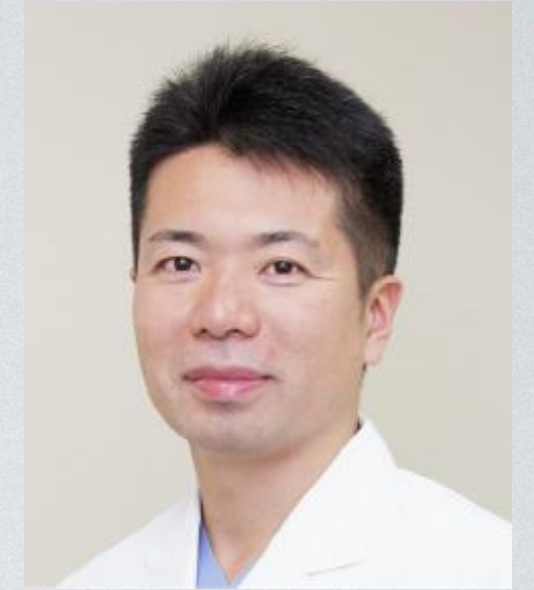
Sleeve+DJB

Started 2007



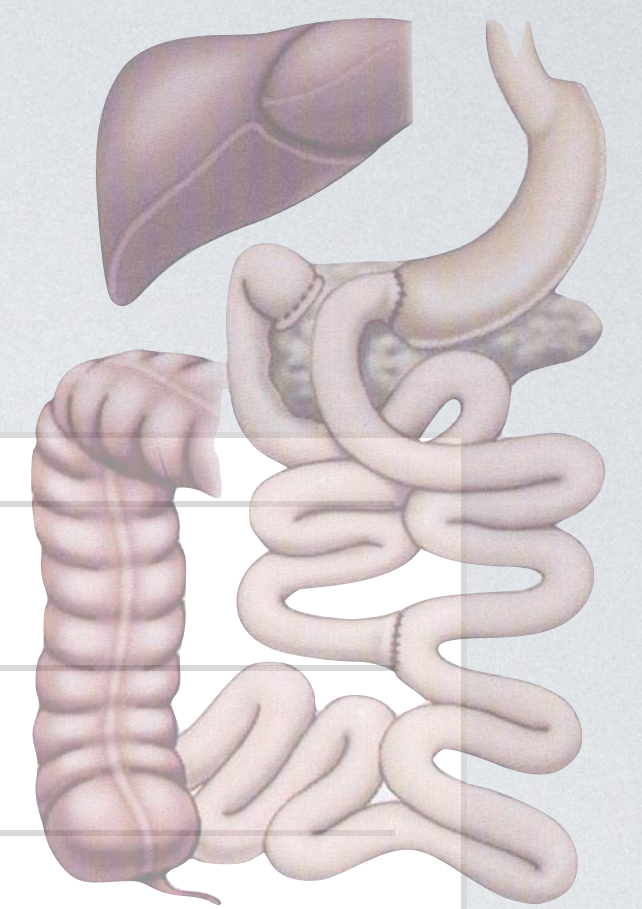
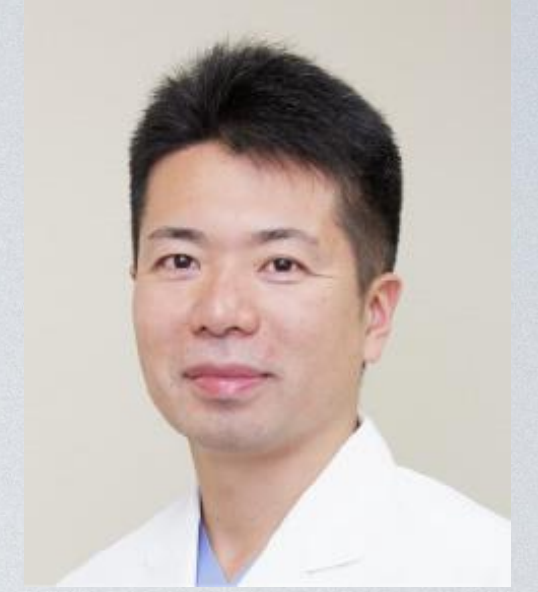
Kasama K, et al:
Obes Surg. 2009 Oct;19(10):1341-5.
Laparoscopic sleeve gastrectomy with duodenojejunal bypass:
technique and preliminary results.

LSD/DJB (RY)

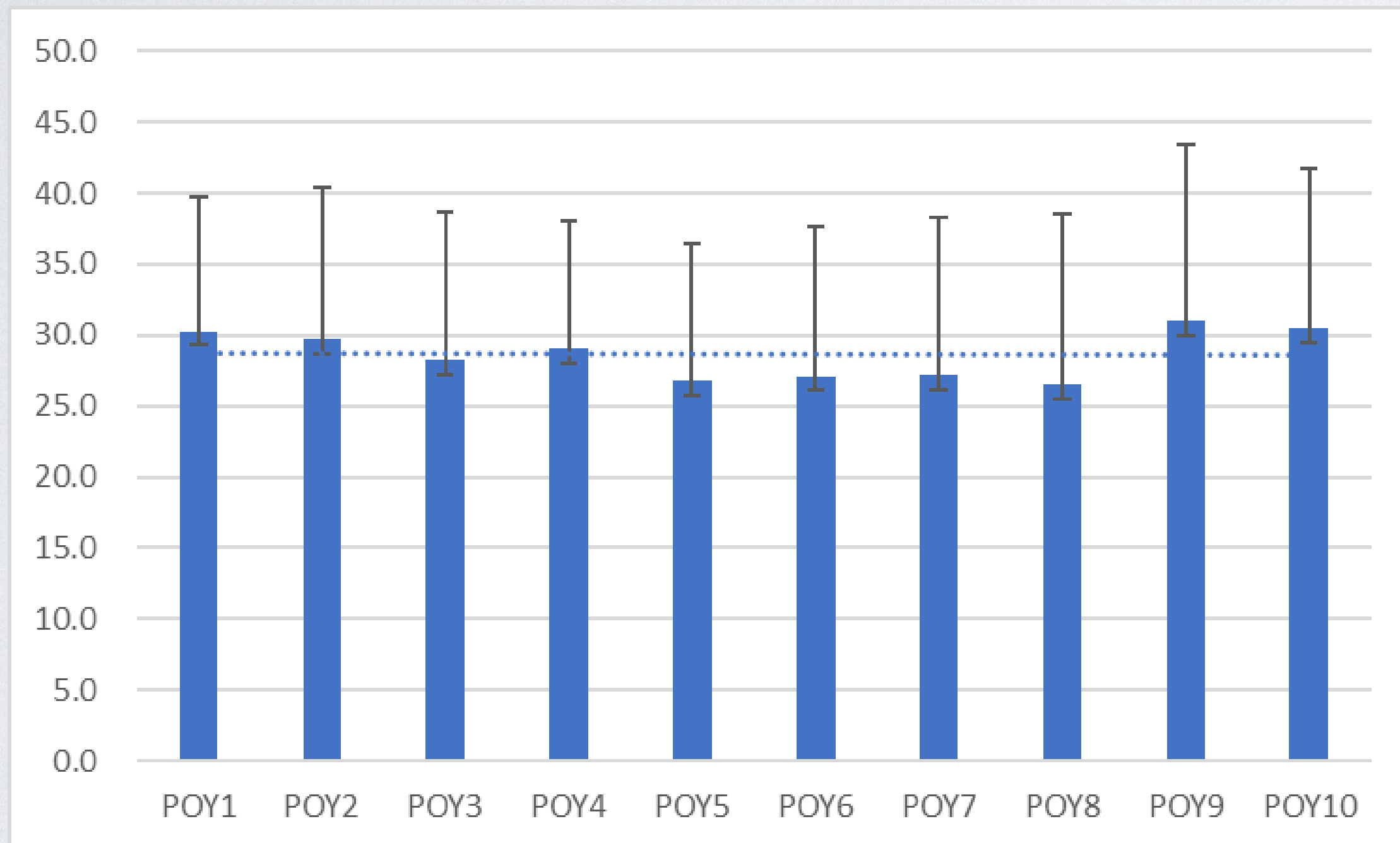


- 2007 (Published 2009)
- Adding the bypass effects to Sleeve
- No bypassed stomach RYGB
- Less Mal nutrions BPD/DS
- Sleeve added Original DJB
- Original was the same limb length with RYGB

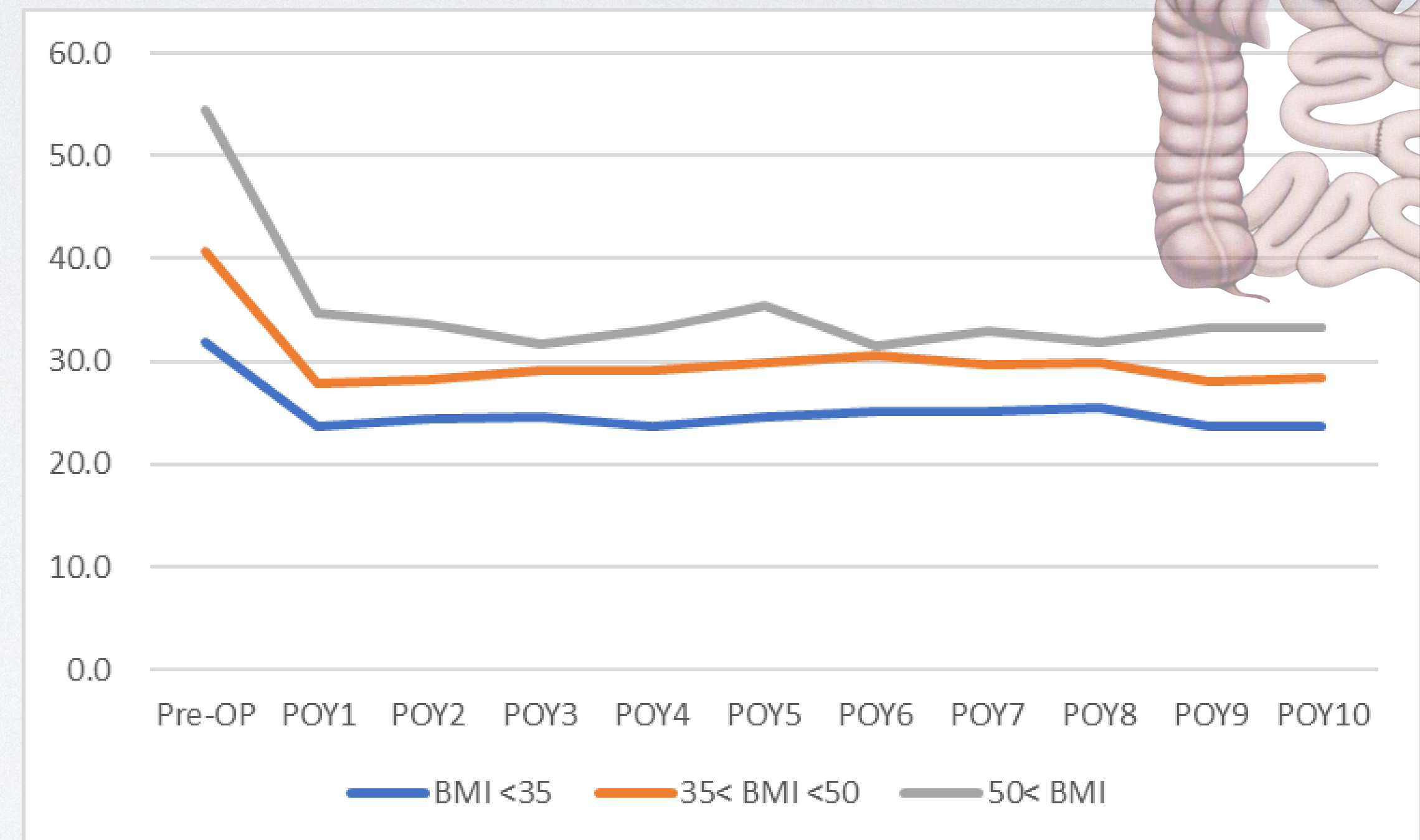
SLEEVE DJB(RY) 10YRS@YMC



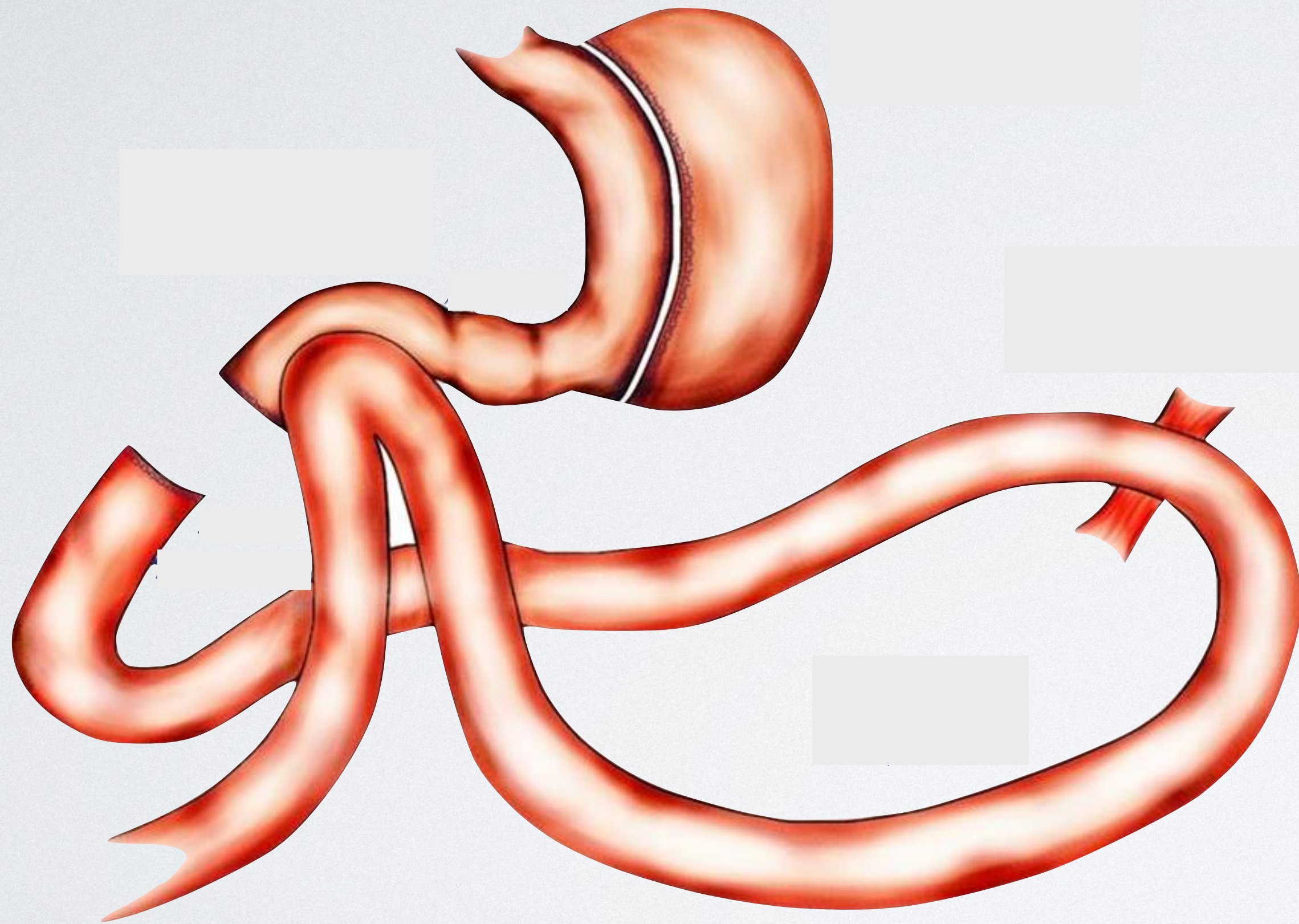
%TWL



BMI (stratified)



SLEEVE DJB (LOOP)

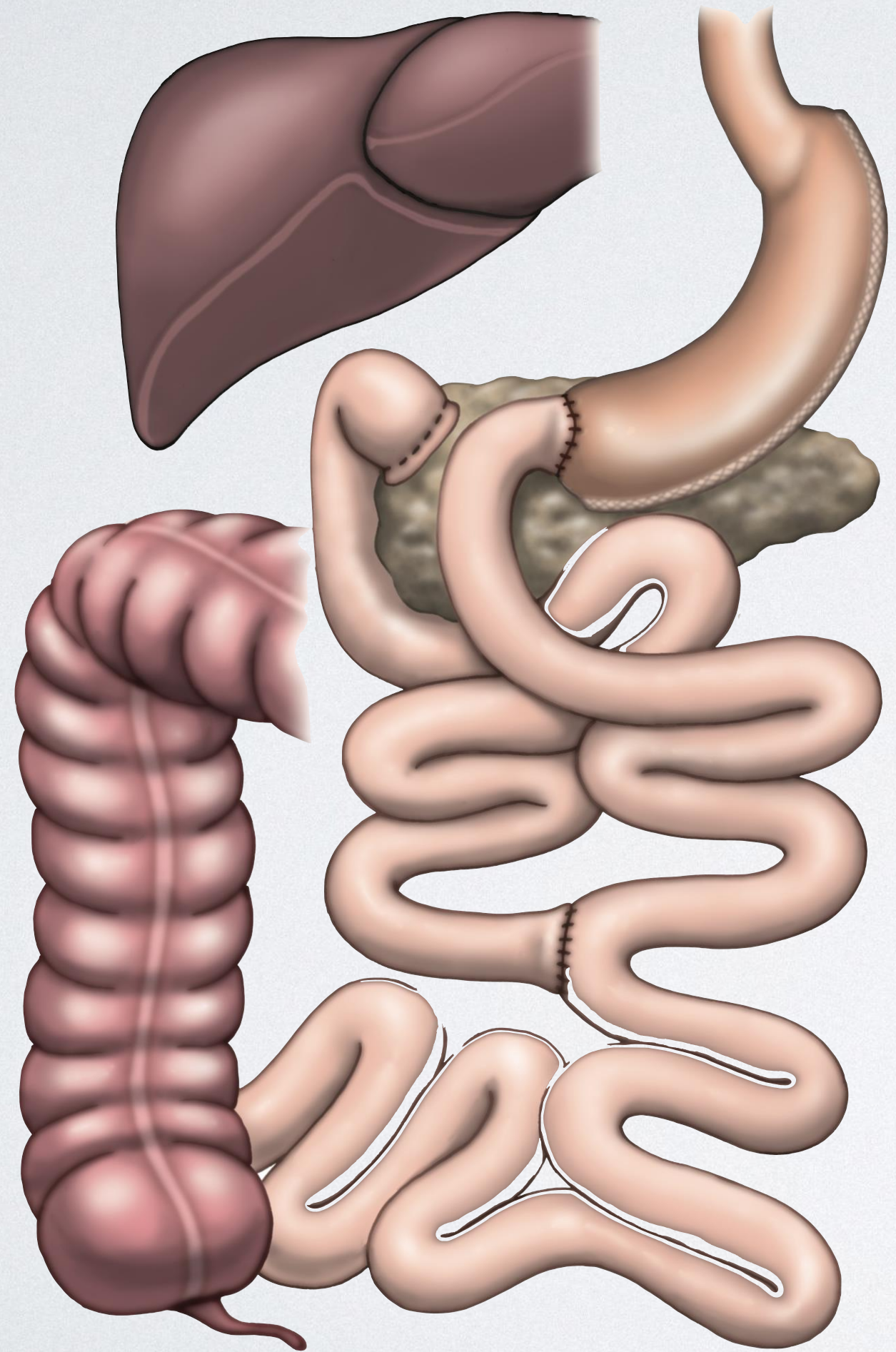


Loop DJB

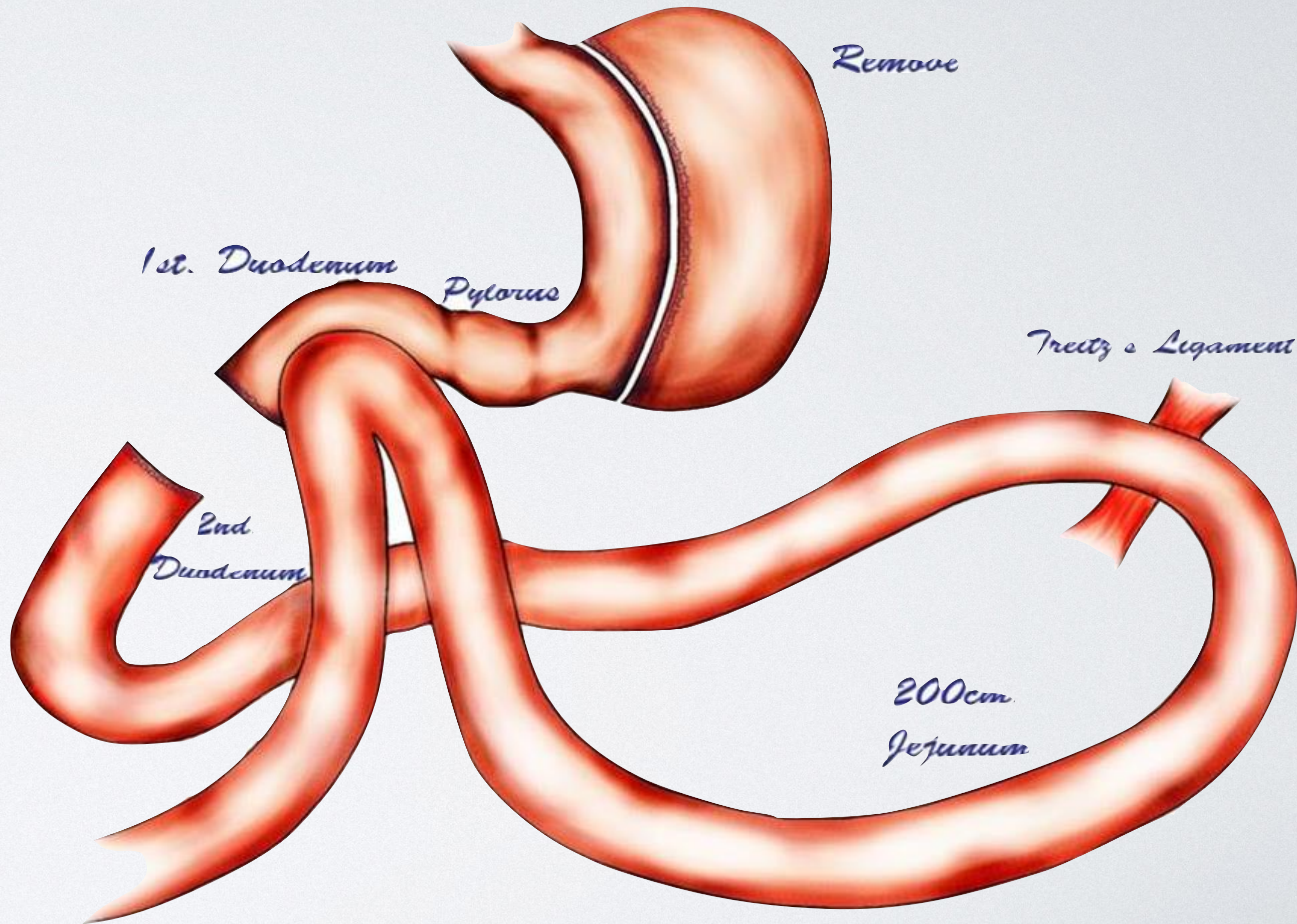
- Same concept
- CK Huang et al
- “Asian SADI”
- Less anastomosis than RY

DJB with Sleeve

Roux en Y



Loop (One anastomosis)

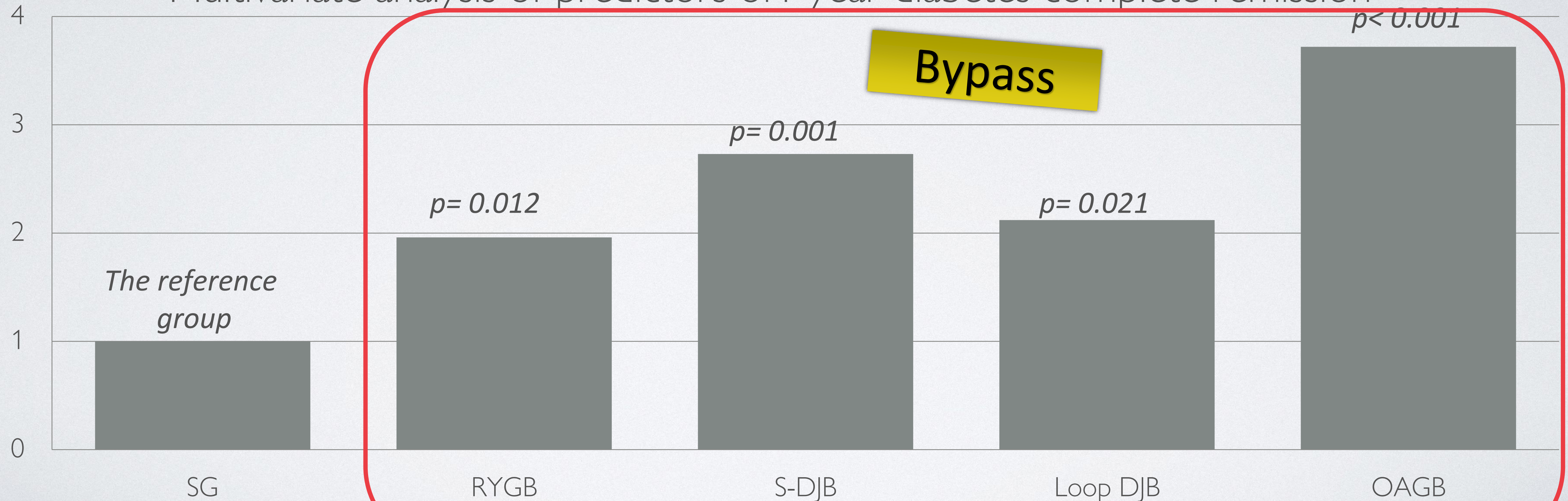




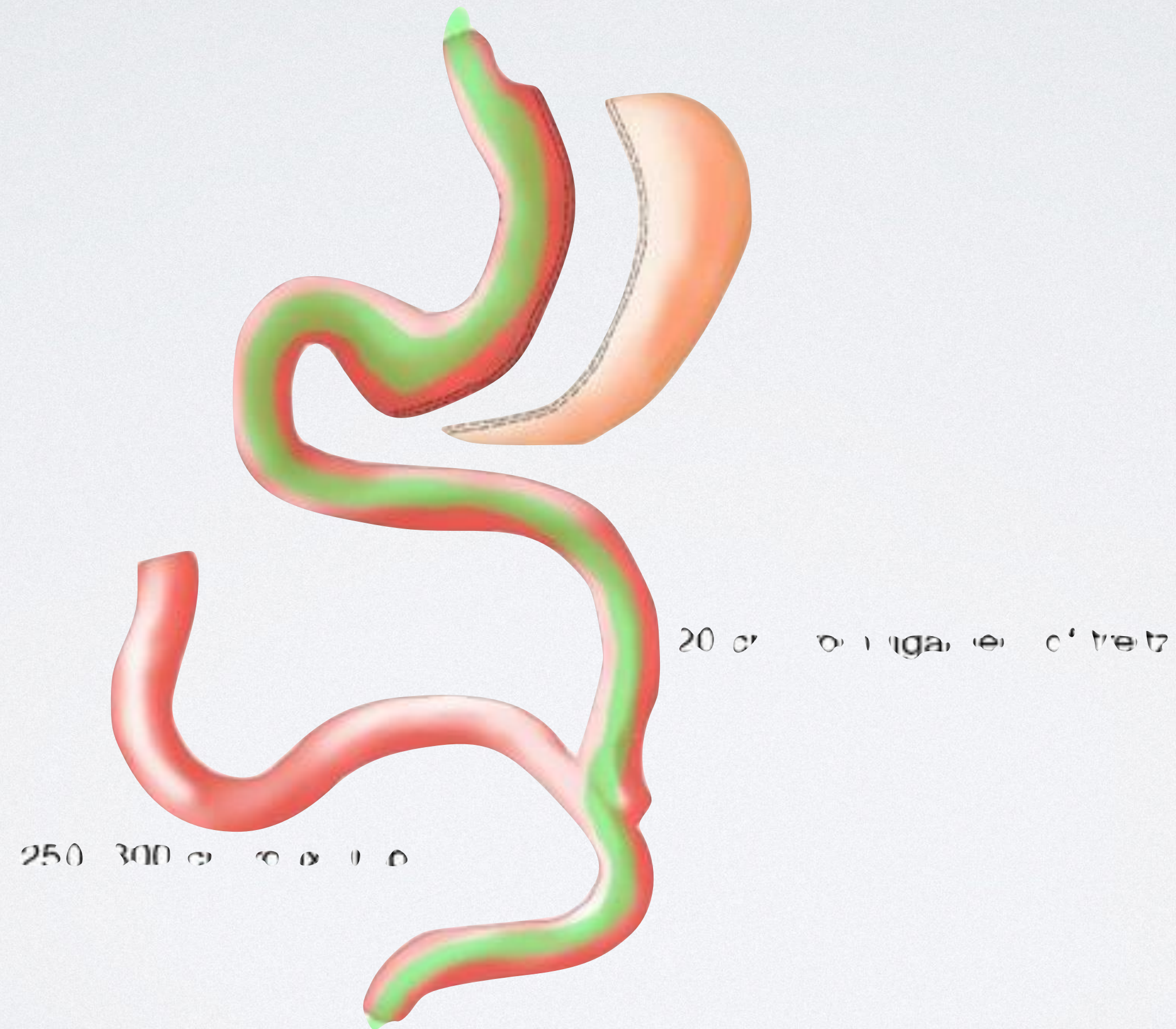
Efficacy of Different Procedures of Metabolic Surgery for Type 2 Diabetes in Asia: a Multinational and Multicenter Exploratory Study

Shih-Chiang Shen^{1,2}  • Wei-Jei Lee³ • Kazunori Kasama⁴ • Yosuke Seki⁴ • Yen-Hao Su^{1,2} • Simon Kin-Hung Wong⁵ • Yu Min Huang^{2,6} • Weu Wang^{2,6}

Multivariate analysis of predictors of 1-year diabetes complete remission



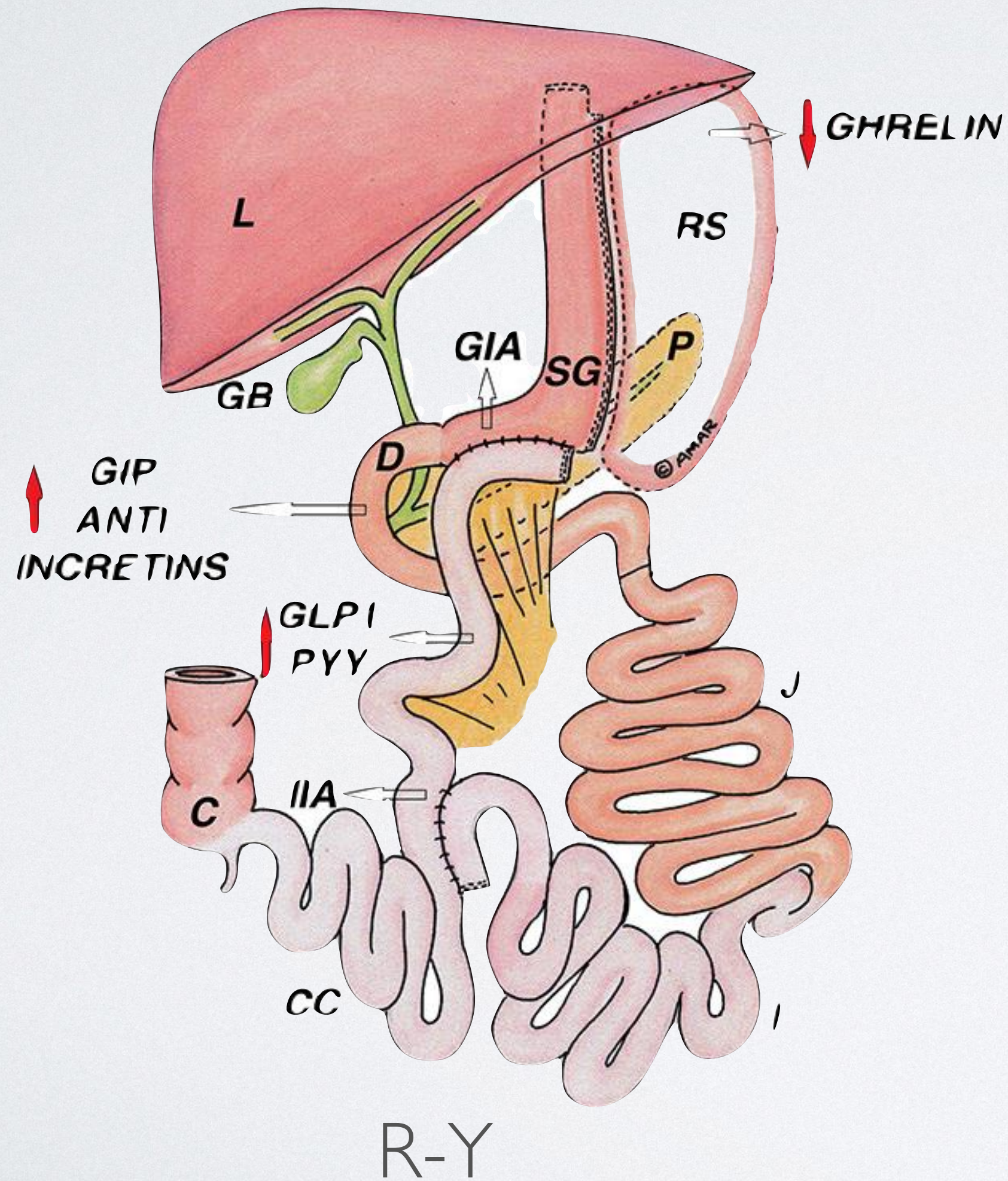
Sleeve + proximal jejunal bypass (PJB)



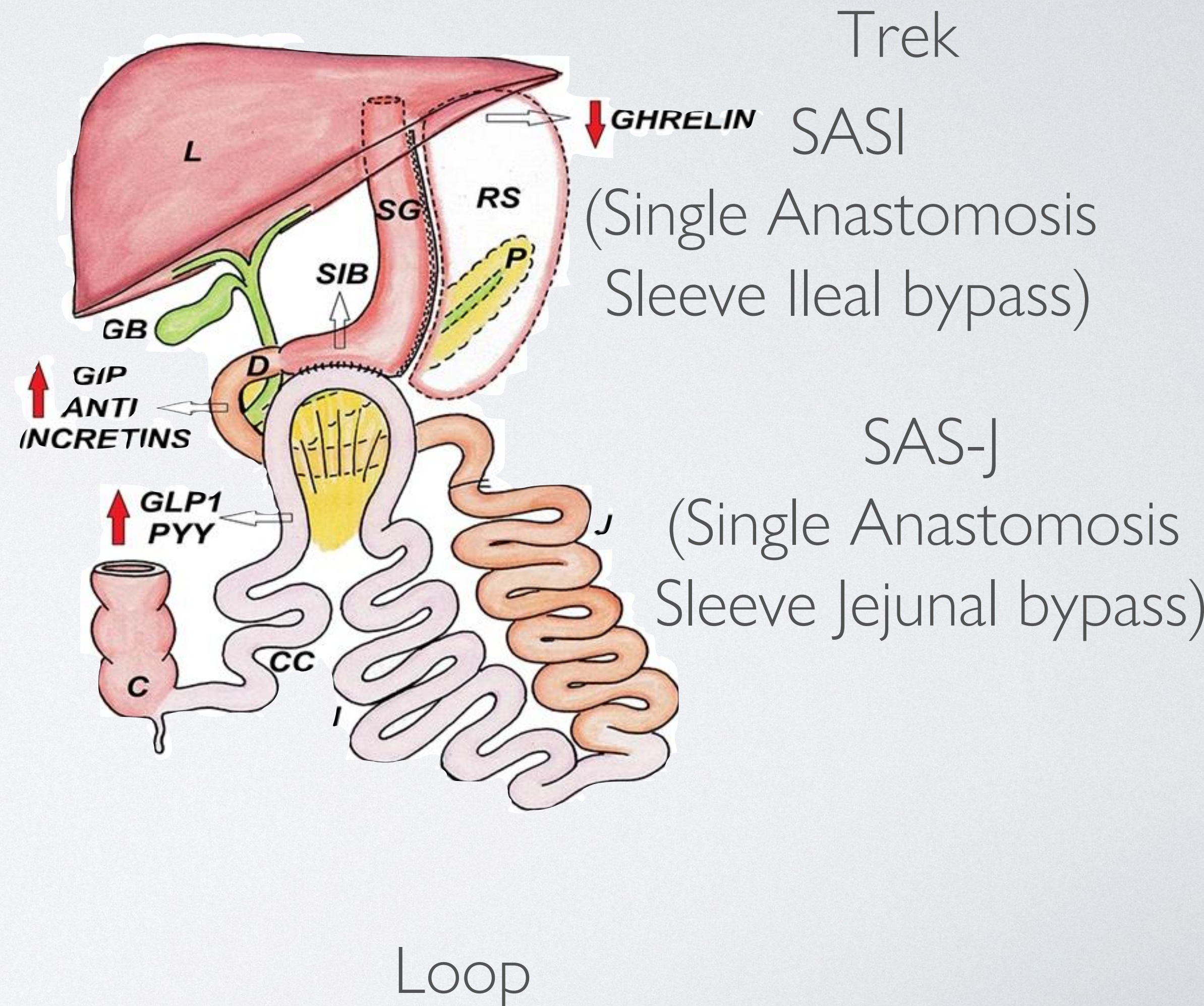
SLEEVE + BIPARTITION

SANTRO

SLEEVE GASTRECTOMY WITH TRANSIT BIPARTITION



SLEEVE WITH LOOP BIPARTITION



Trek

SASI

(Single Anastomosis Sleeve Ileal bypass)

SAS-J

(Single Anastomosis Sleeve Jejunal bypass)

Loop

SLEEVE PLUS IN APC

- DJB, loop, PJB , Bipartition, SADI, SAS-J, SASI



SLEEVE PLUS

- **Common channel: short or long ?**
- **Duodenal disconnection?**
- **RY or Loop?**

Duodenum Disconnection

No duodenum disconnection

Double anastomosis

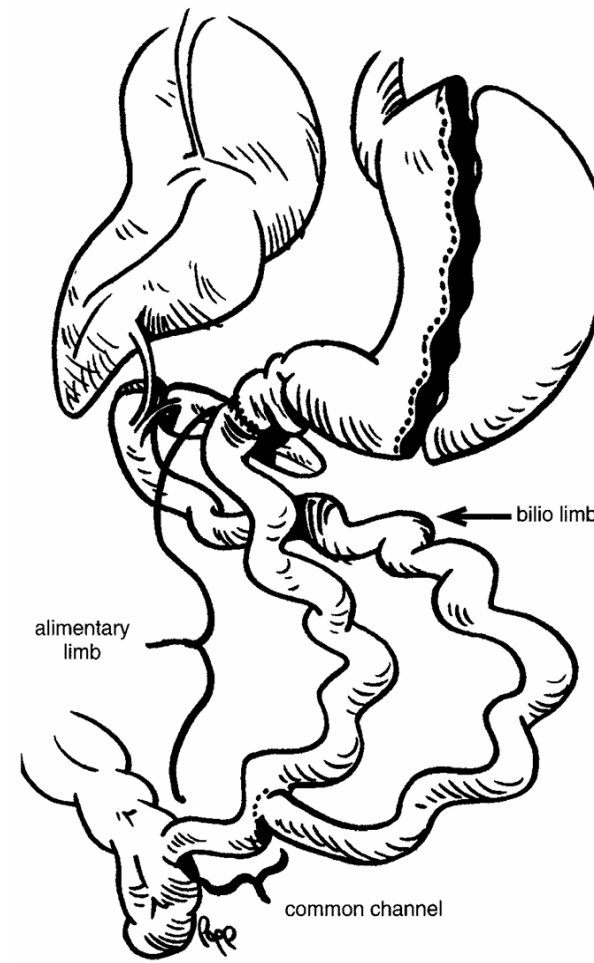
Single anastomosis

Double anastomosis

Single anastomosis

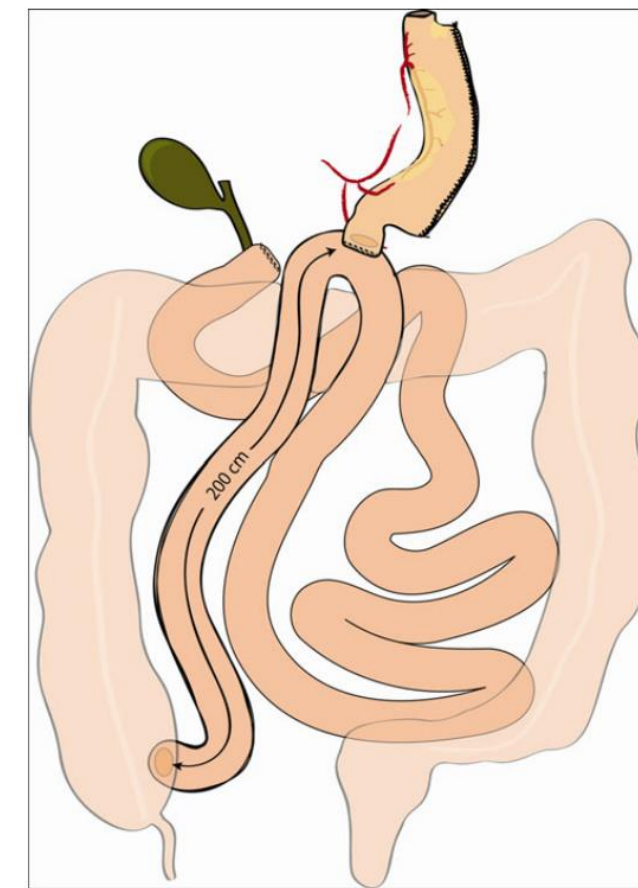
Blind loop

Short ~300cm
common channel



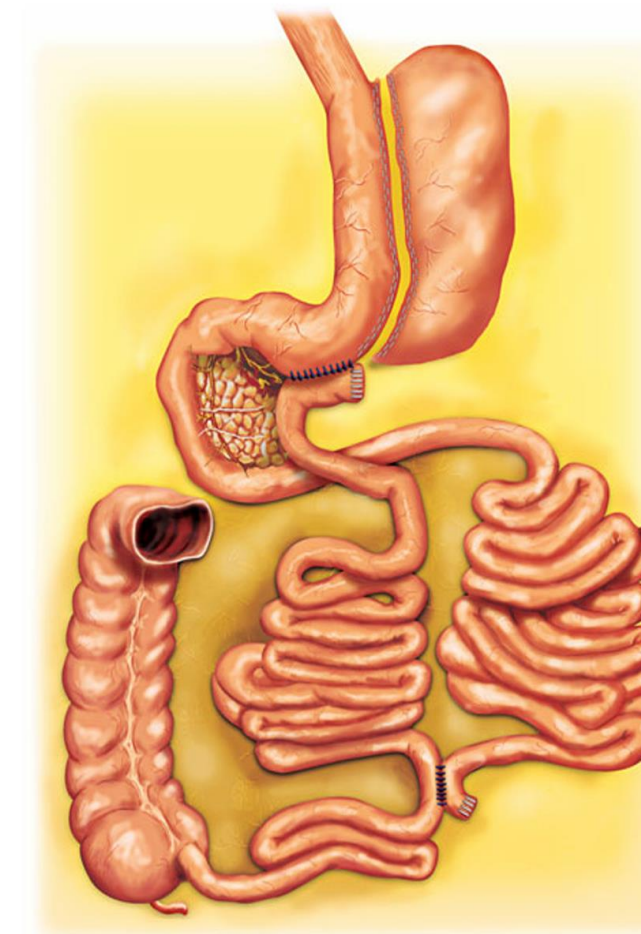
BPD-DS

Biliopancreatic diversion
with a duodenal switch
(Hess 1998)



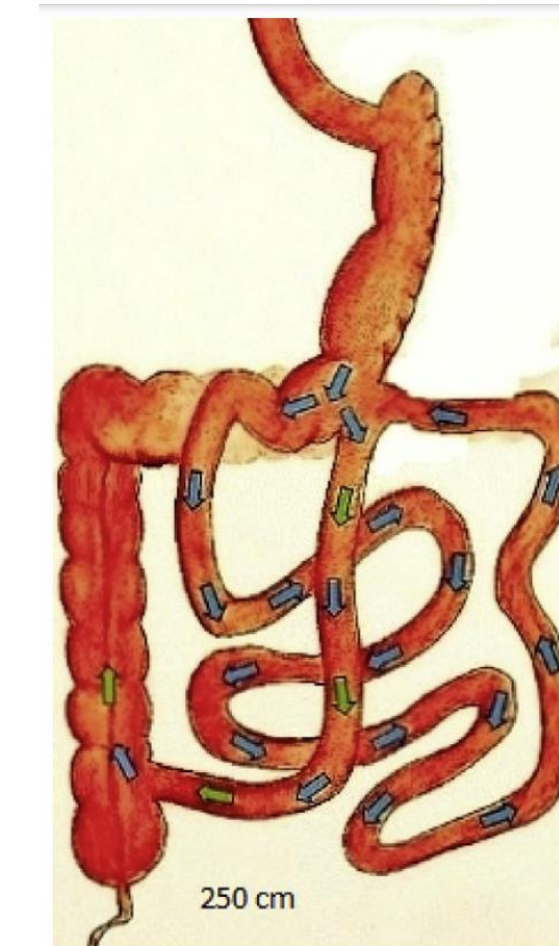
SADI-S

Single anastomosis duodeno-ileal bypass
with sleeve gastrectomy
(Sanchez-Pernaute 2007)



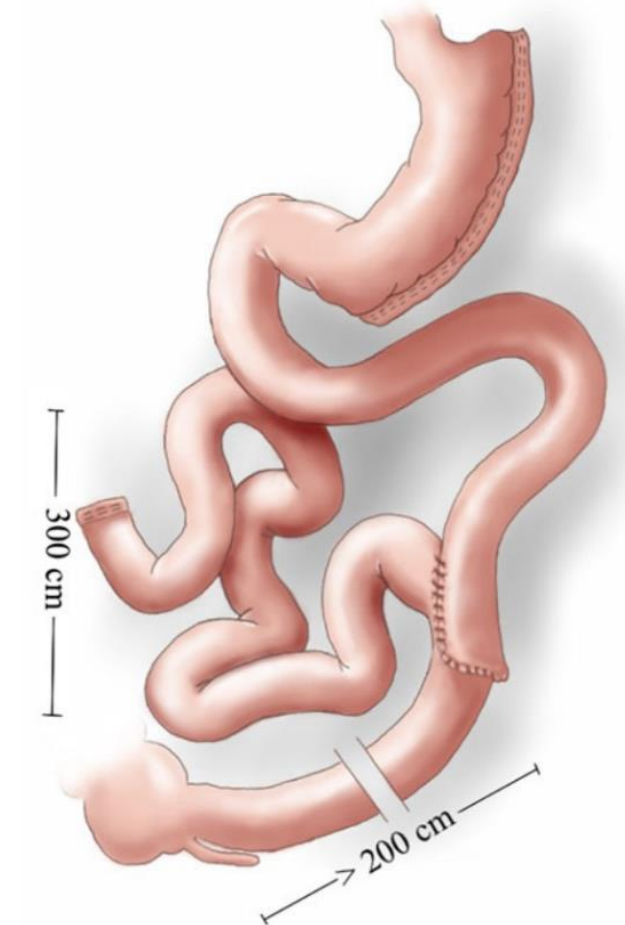
SG-TB

Sleeve gastrectomy
with transit bipartition
(Santro 2006)



SASI

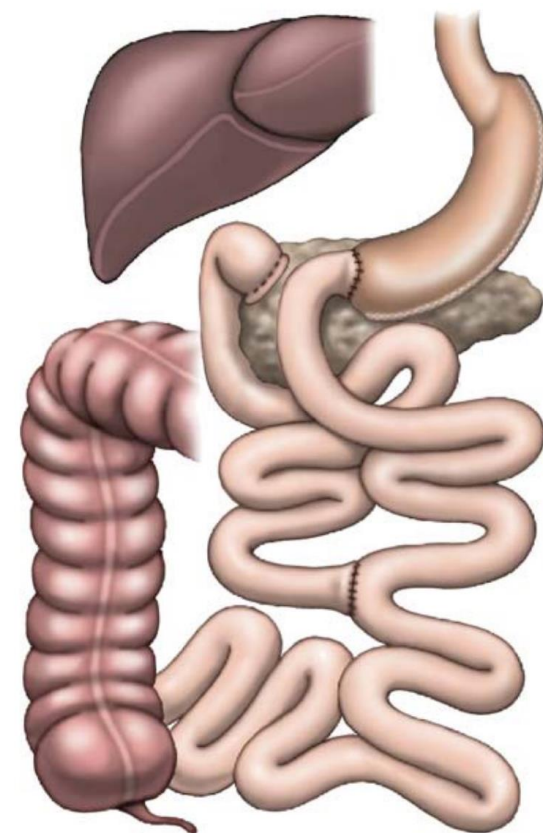
single anastomosis sleeve ileal bypass
(Mahdy 2016)



SG-JB

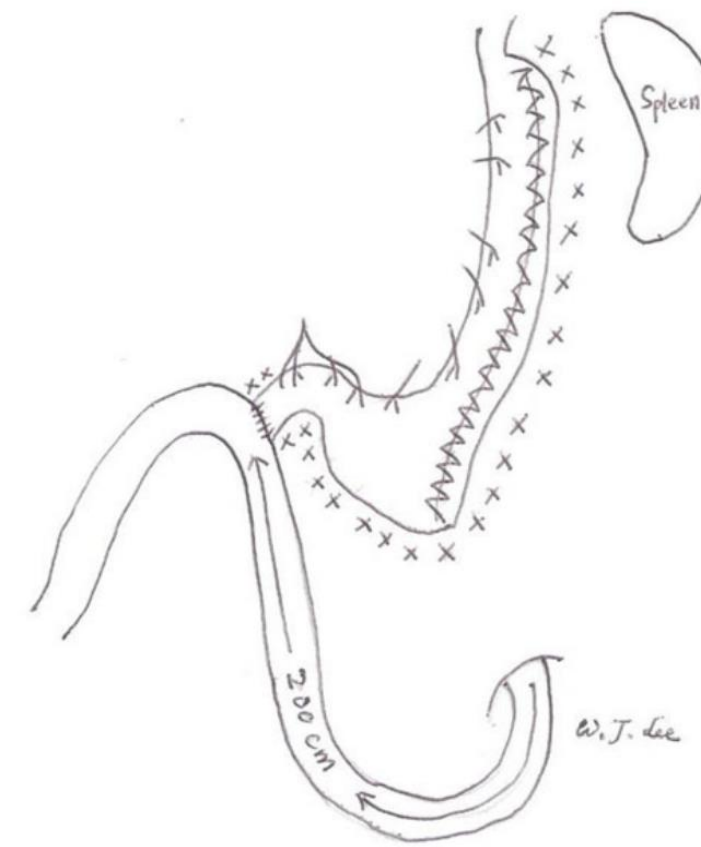
sleeve gastrectomy
with jejunal bypass
(Alamo 2006)

Long > 400cm
common channel



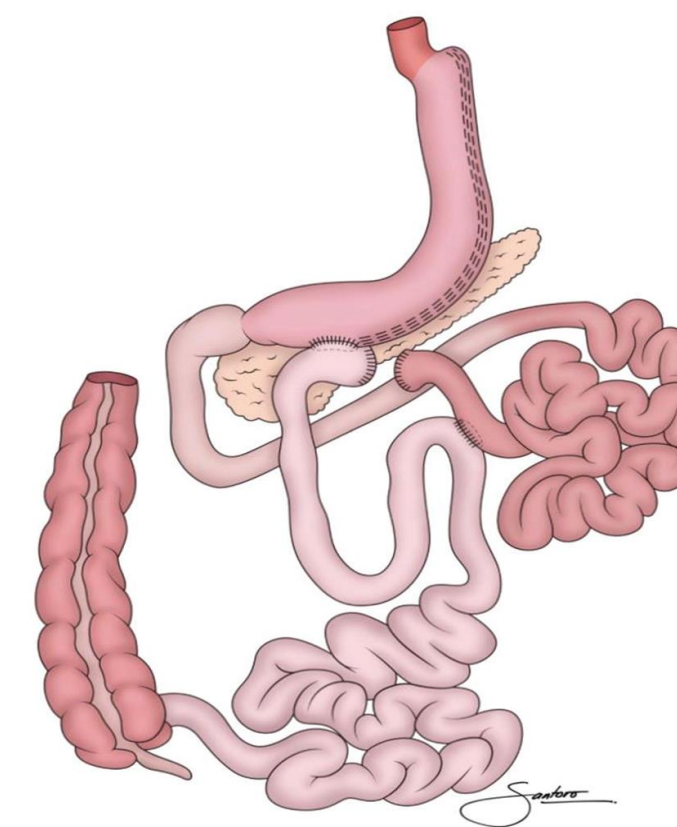
SG-DJB

Sleeve gastrectomy
with duodenojejunal bypass
(Kasama 2009)



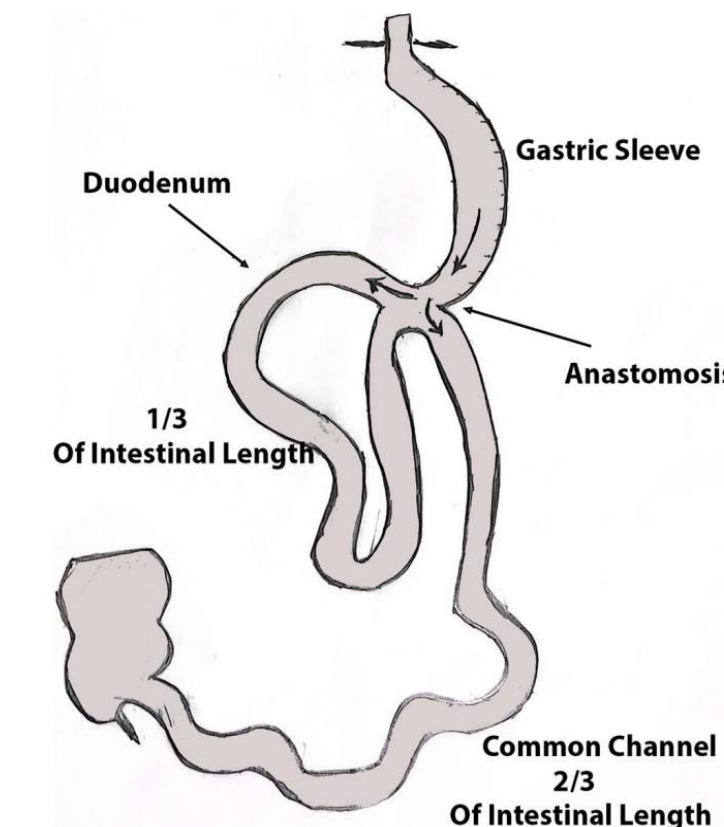
SADJB-SG

Single-anastomosis duodenal-jejunal bypass
with sleeve gastrectomy
(Lee WJ 2014)



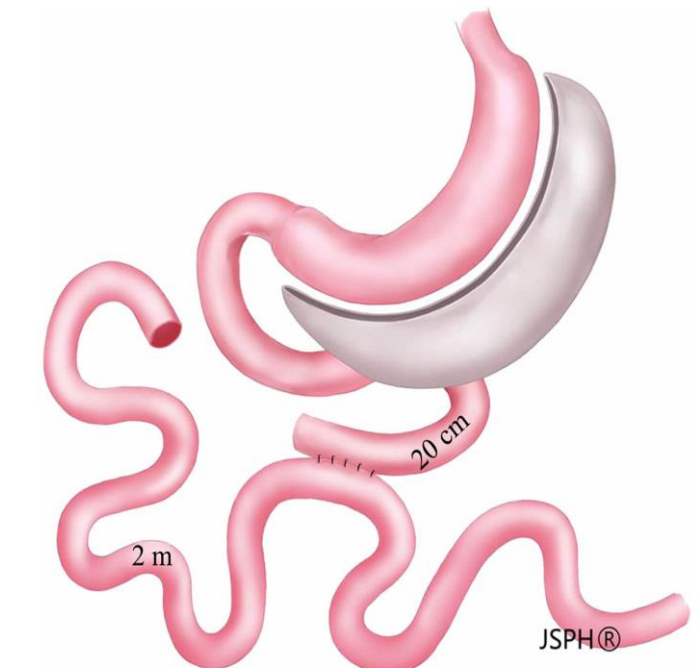
SG-TB

Sleeve gastrectomy
with transit bipartition
(Azevedo, Santro 2018)



SAS-J

Single anastomosis sleeve jejunal bypass
(Sewefy 2021)



SG-JJB

sleeve gastrectomy
plus jejunojejunal bypass
(Lin 2019)

Surgical Strategy & Modifications

- Roux-en-Y Gastric Bypass (RYGB): strong effect, poor surveillance
- Sleeve Gastrectomy (SG): surveillance possible, GERD risk, Less effective for DM than bypass procedures
- Sleeve plus: many new procedures, need long term results
- Recommendations: H. pylori eradication, **pre and post operative endoscopy**, SG and SG plus favored in some countries in Asia