

Update bariatrische Chirurgie

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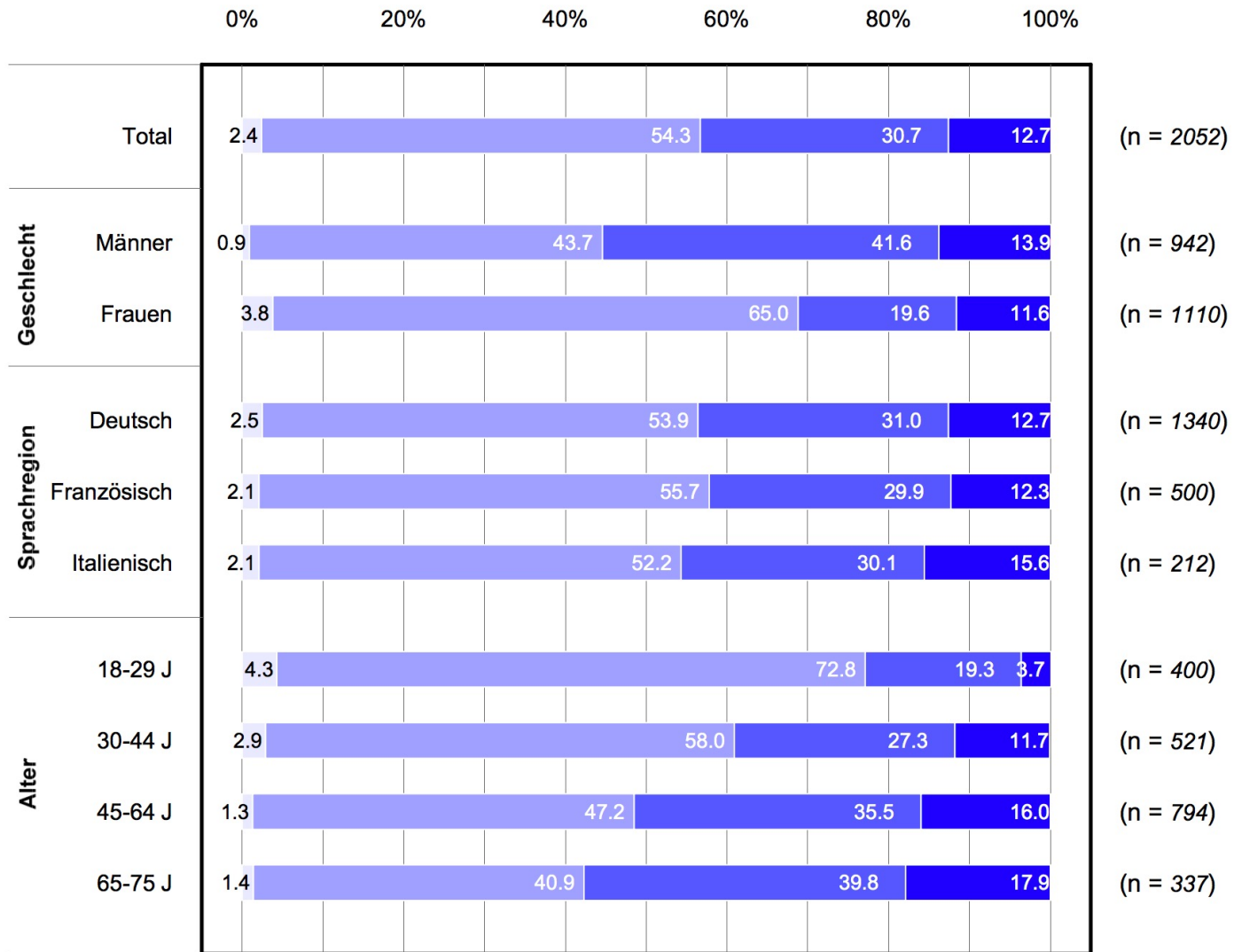
Leiter universitäres Adipositaszentrums Bern,
Leiter Upper-GI Chirurgie und
Leiter bariatrische und metabolische Chirurgie

Inselspital und Spitalnetz Bern (Inselgruppe AG)
Universitäre Klinik für viszerale Chirurgie und Medizin

ADIPOSITAS

in der SCHWEIZ

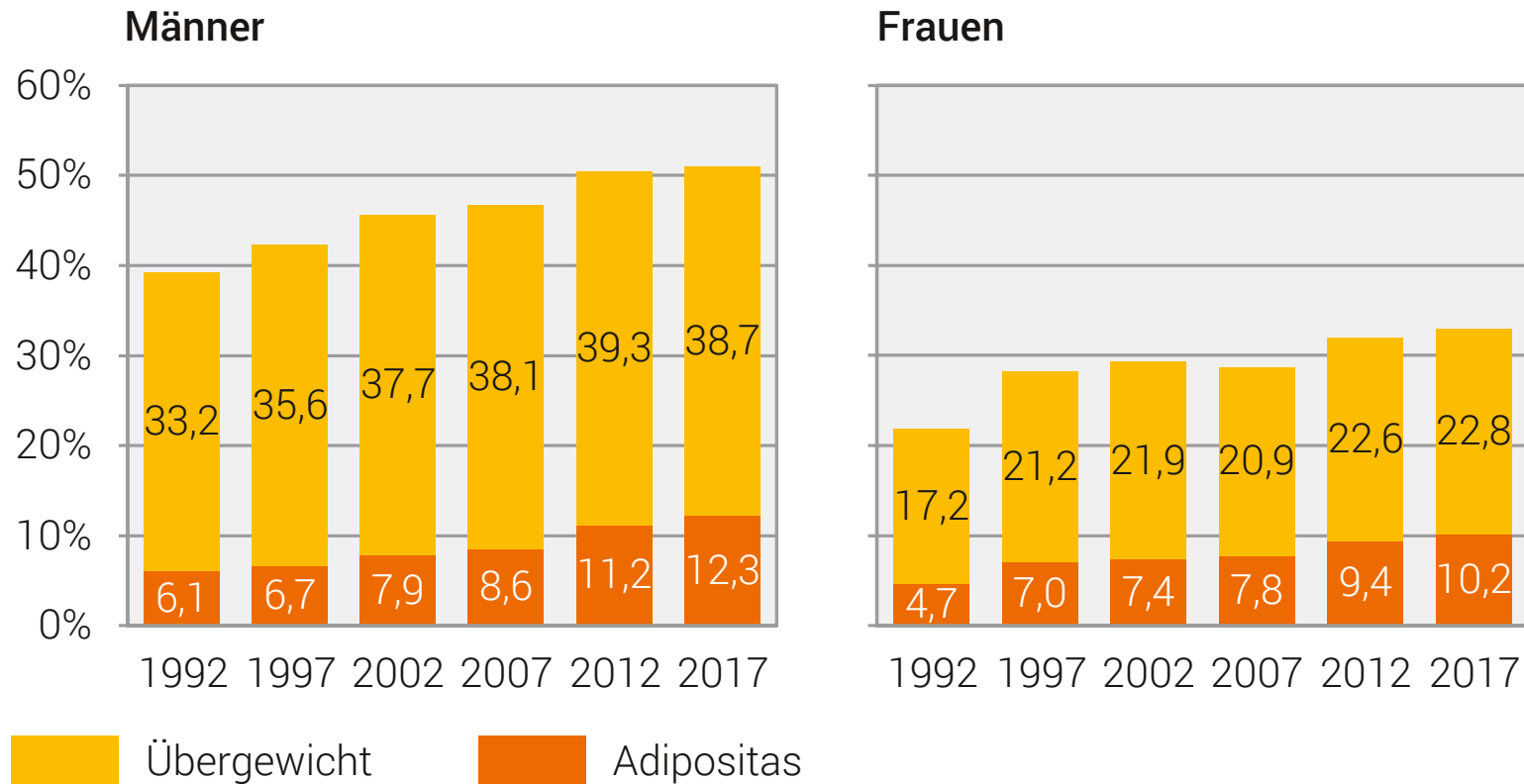
BMI-VERTEILUNG BEI DER ERWACHSENEN BEVÖLKERUNG DER SCHWEIZ NACH GESCHLECHT, SPRACHREGION UND ALTER (IN PROZENT)



Untergewicht, BMI < 18.5
 Normalgewicht, 18.5 ≤ BMI < 25
 Übergewicht, 25 ≤ BMI < 30
 Adipositas, BMI ≥ 30

Übergewicht und Adipositas

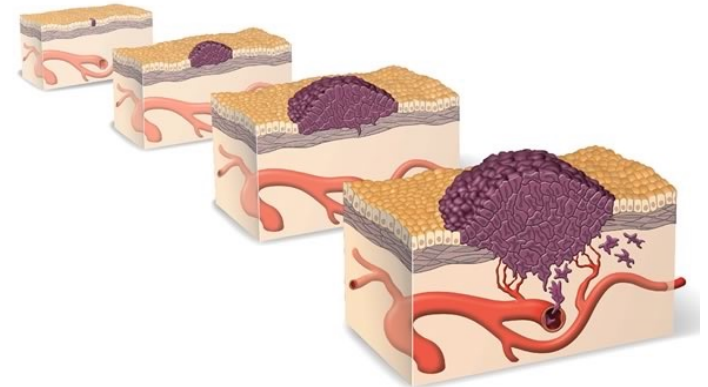
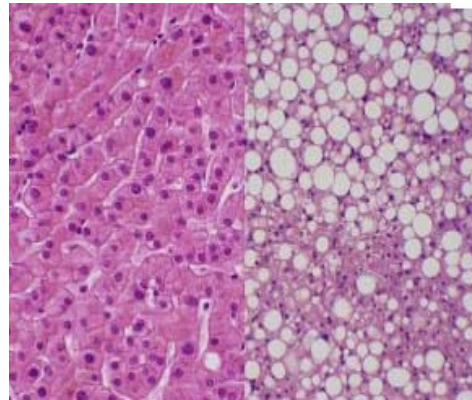
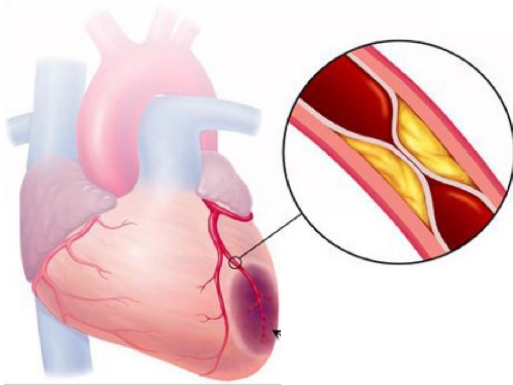
Bevölkerung ab 15 Jahren in Privathaushalten



ADIPOSITAS

WELTWEIT

FOLGEN der ADIPOSITAS



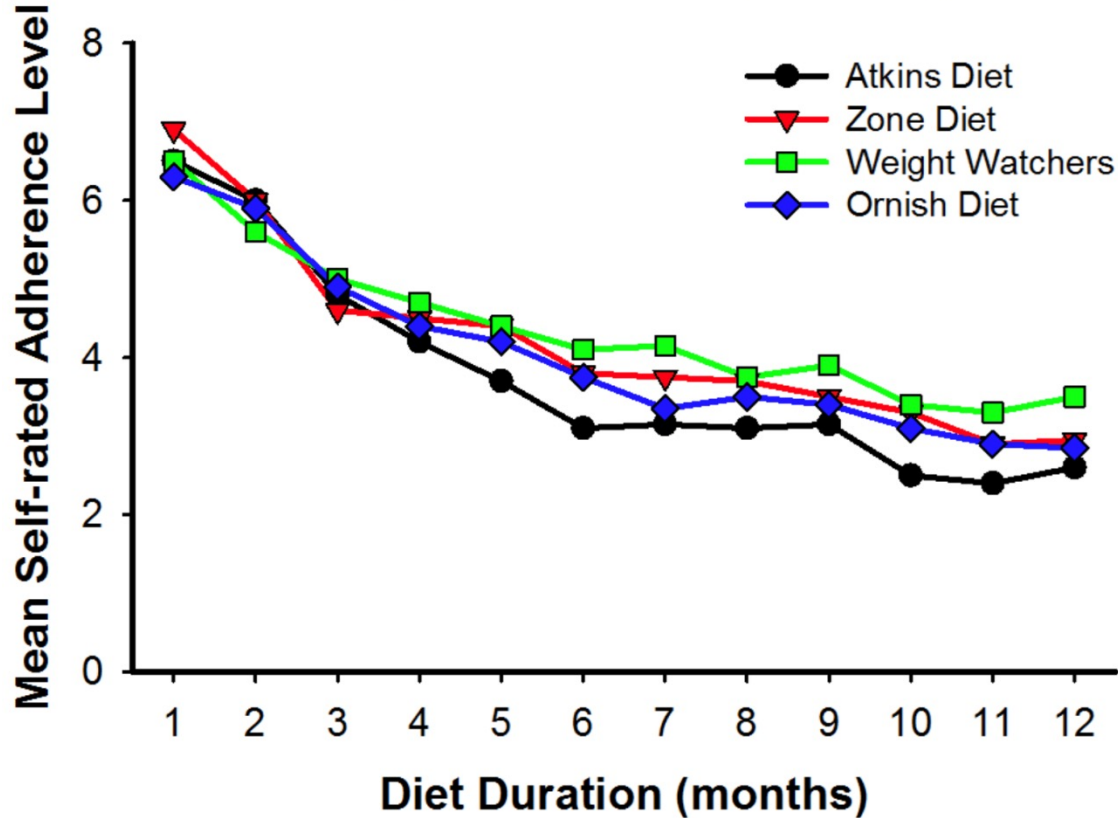
MODALITÄTEN der BEHANDLUNG

KONSERVATIV





Dietary Adherence by Diet Type



Chances of losing weight by diet according to UK electronic medical records of patients

Adult weight loss without bariatric surgery: n=176,000 with obesity – 2004-2014 in UK over 9 years

- BMI 40-45:

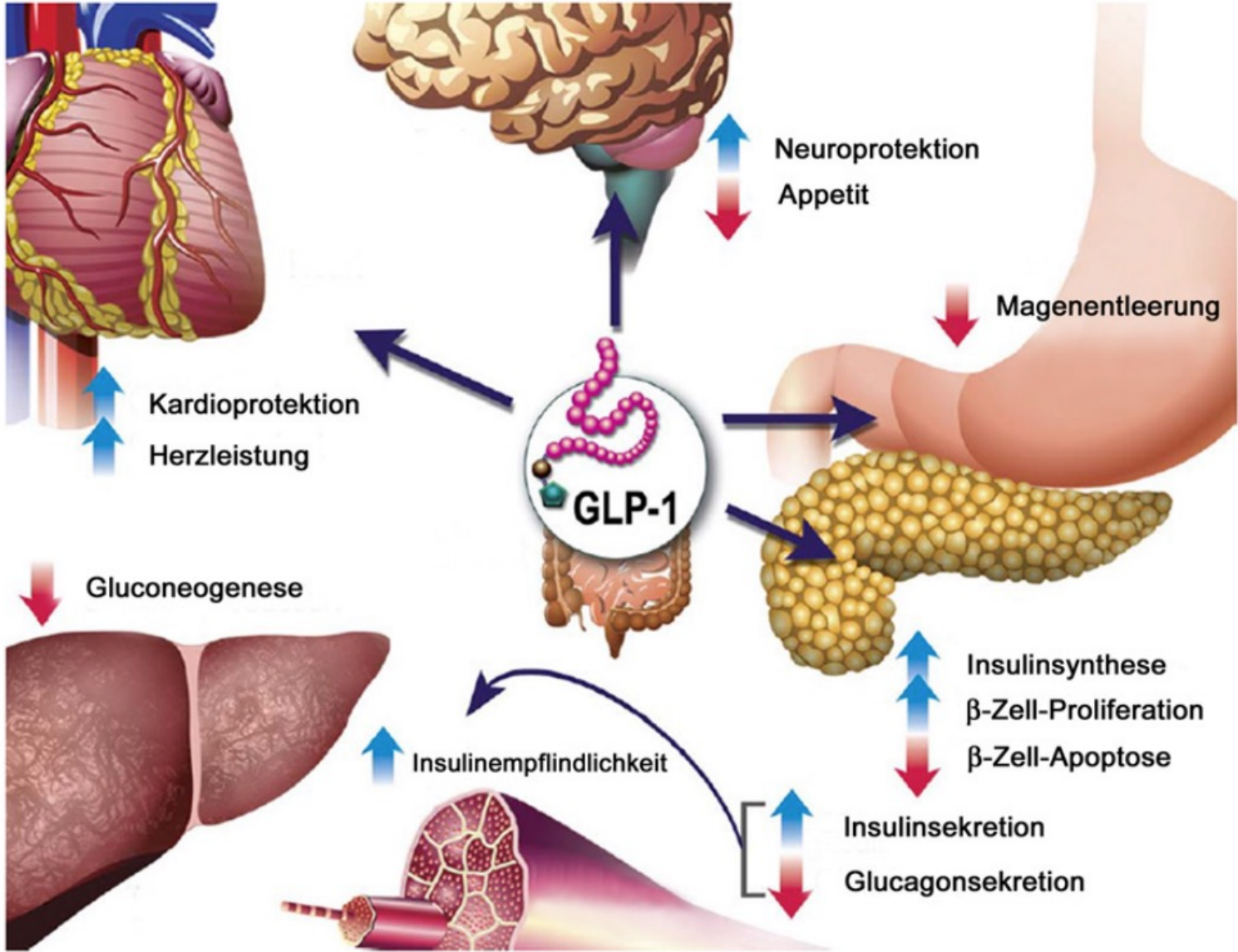
1 in 1290 for men

1 in 677 for women

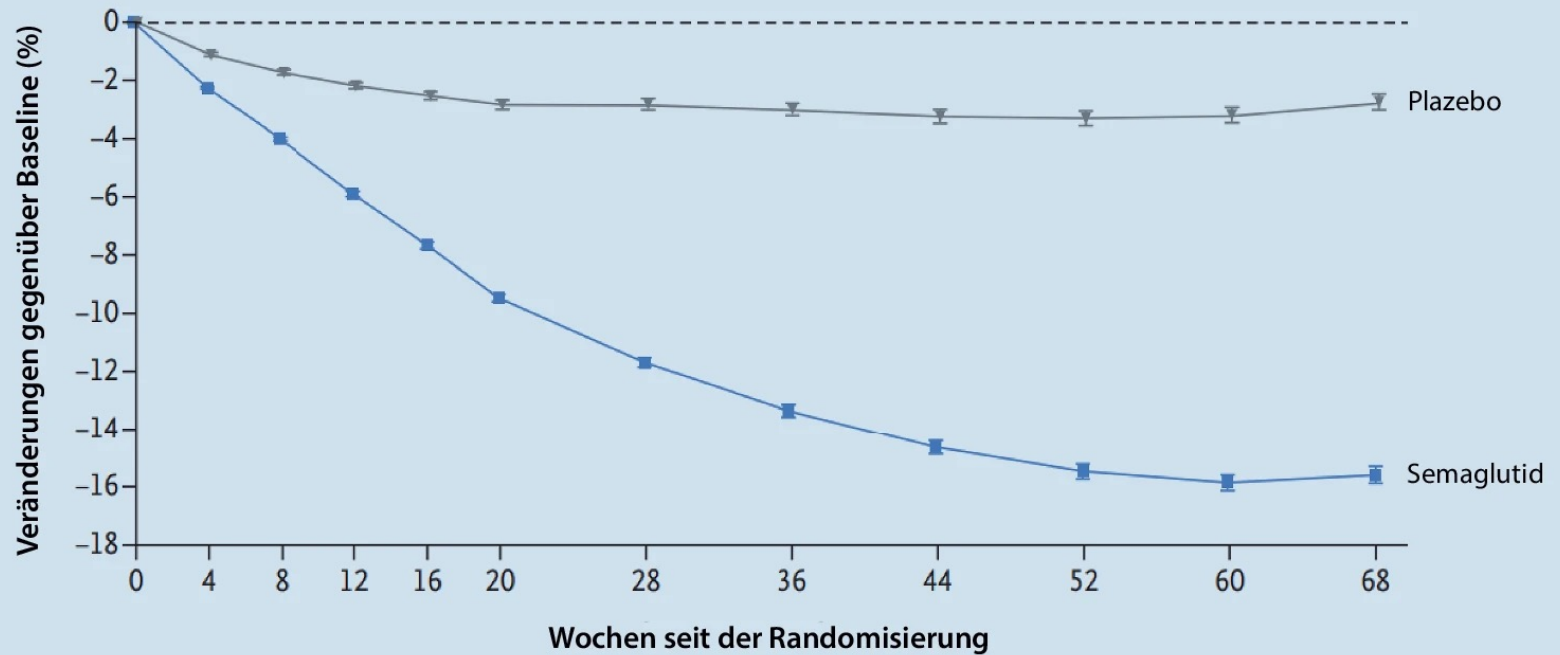


MEDIKAMENTÖS

GLP-1-REZEPTOR-AGONISTEN







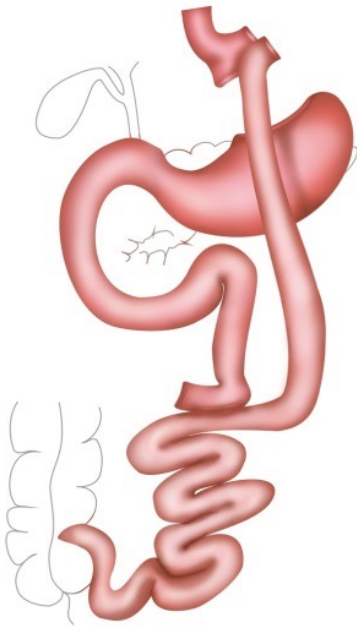
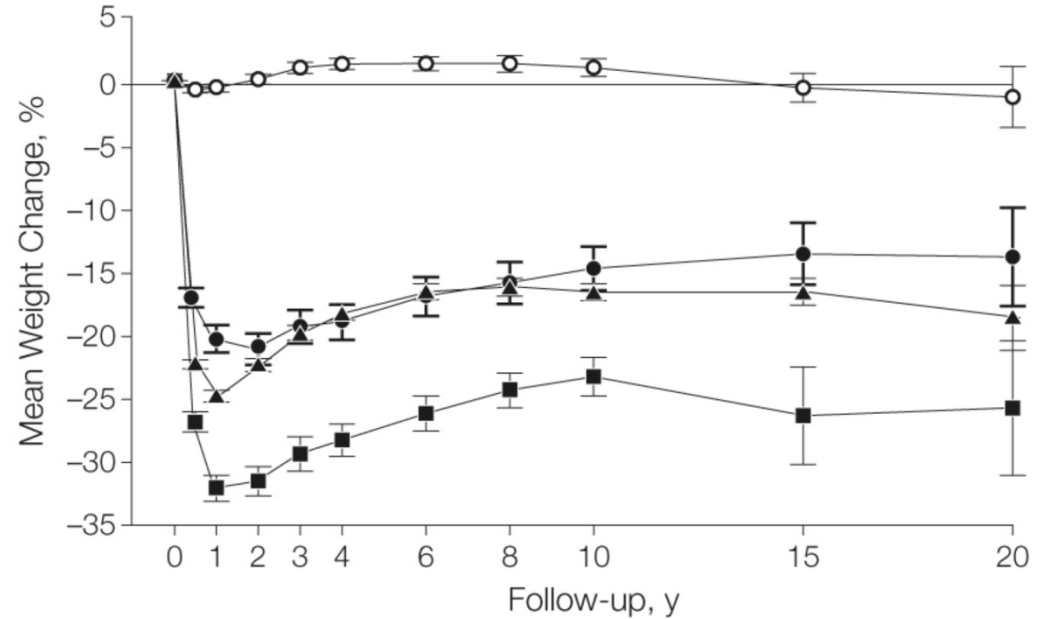
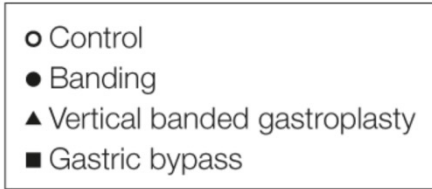
Anzahl Risikopatienten

Placebo	655	649	641	619	615	603	592	571	554	549	540	577
Semaglutid	1306	1290	1281	1262	1252	1248	1232	1228	1207	1203	1190	1212

Endpunkt	Semaglutid (n = 1306)	Placebo (n = 655)	Unterschied zwischen Semaglutid und Placebo (95%-KI)	OR	p-Wert
Koprimäre Endpunkte, in der Gesamtpopulation bewertet					
Anteil Gewichtsreduktion (%) von Baseline in Woche 68	-14.85	-2.41	-12.44 (-13.37 bis -11.51)		<0.001

INTERVENTIONEN

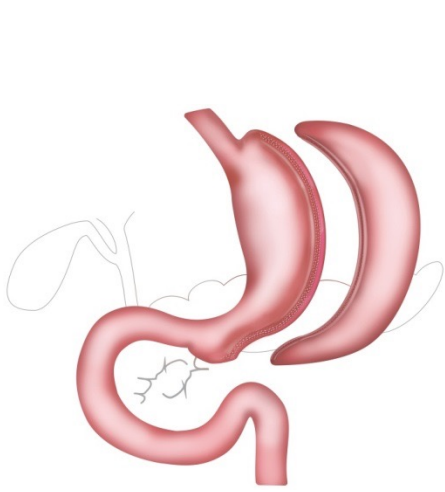




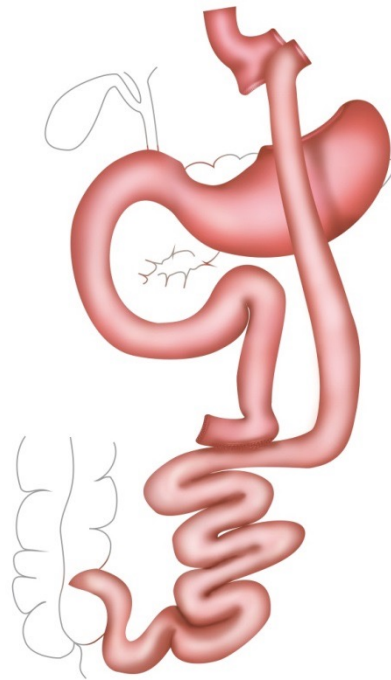
No. of patients	2037	1490	1242	1267	556	176
Control	2037	1490	1242	1267	556	176
Banding	376	333	284	284	150	50
Vertical banded gastroplasty	1369	1086	987	1007	489	82
Gastric bypass	265	209	184	180	37	13

Sjöström et al. JAMA, 2014
 Nett et al., Ann Surg 2017
 Nett et al., Obes Surg 2016

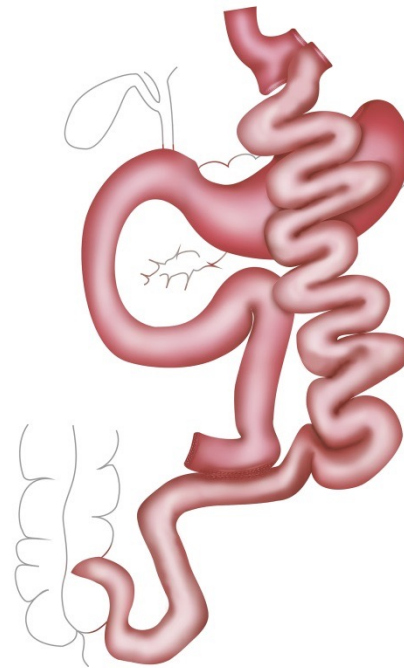
Metabolische Chirurgie



Sleeve-Gastrektomie

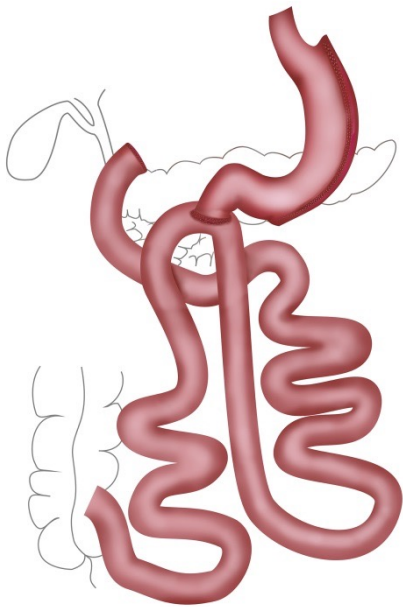


Magenbypass

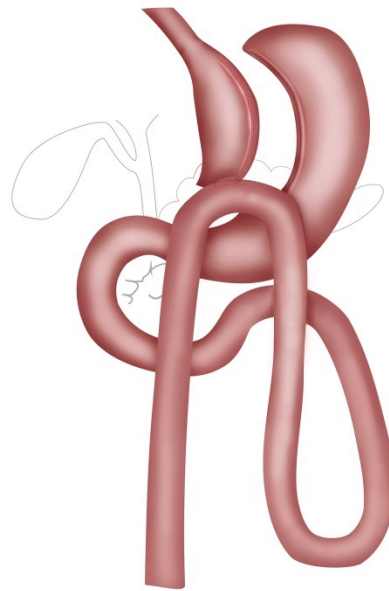


Magenband

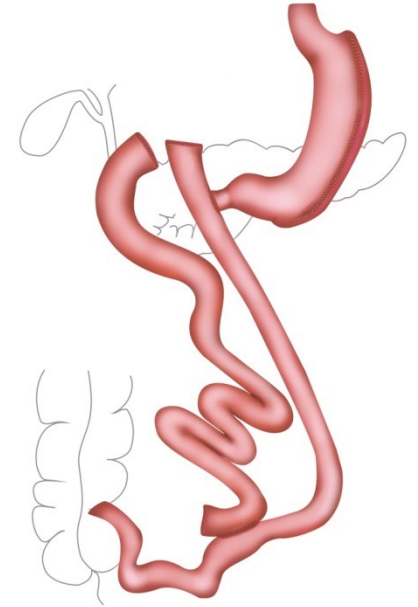
Metabolische Chirurgie



Single **A**nastomosis **D**uodeno-**I**lealer
Bypass mit **S**leeve-Gastrektomie
(SADI-S)

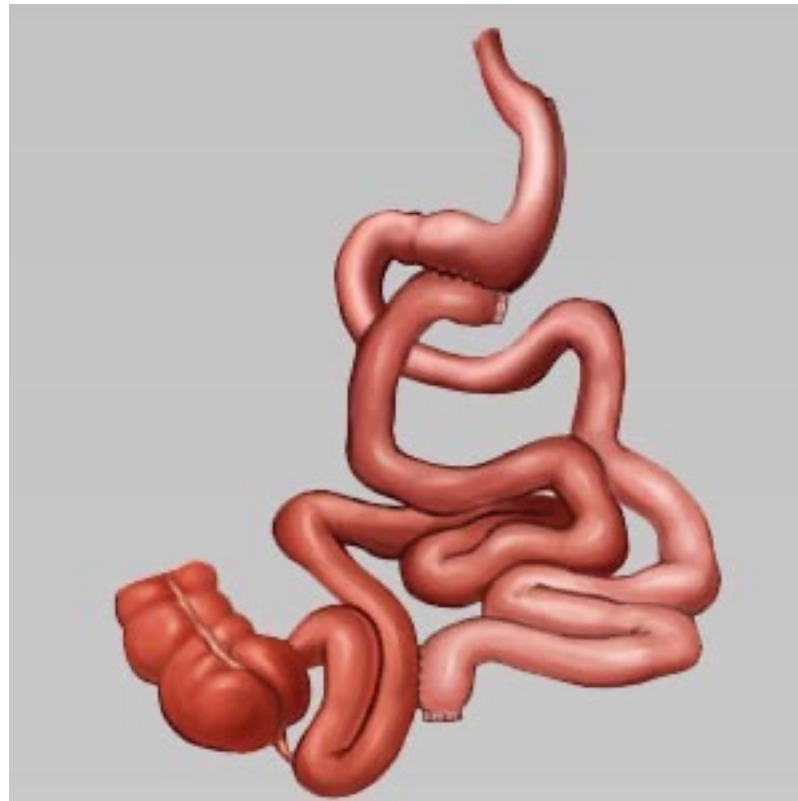


Mini-Bypass



Bilio-**P**ankreatisch **D**iversion mit
Duodenalem **S**witch
(BPD-DS)

Transit Bipartition

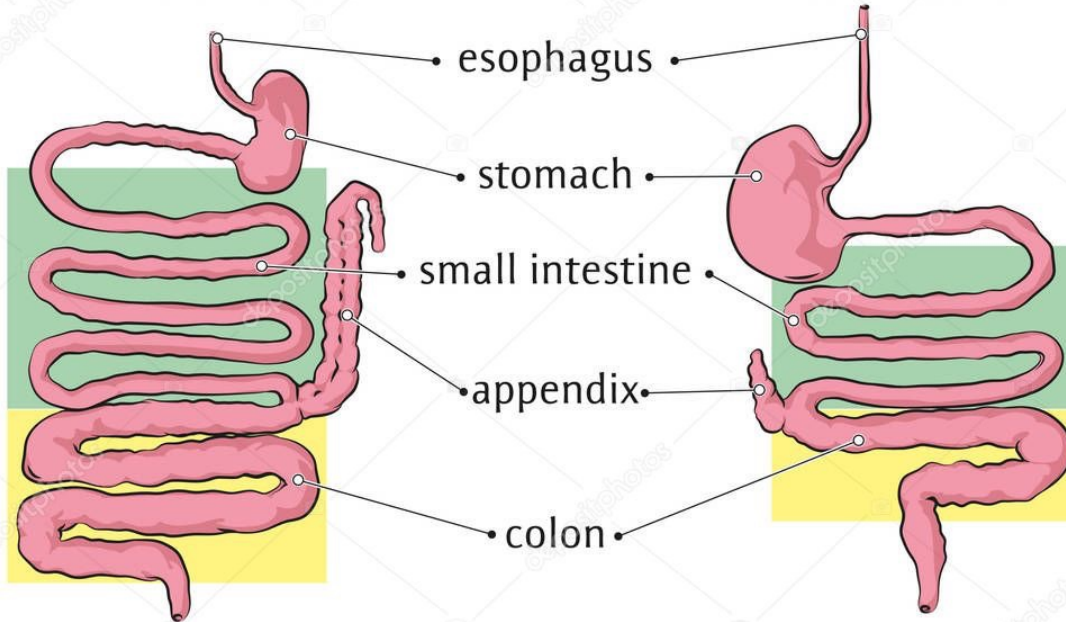




**Digestive system
in herbivores**

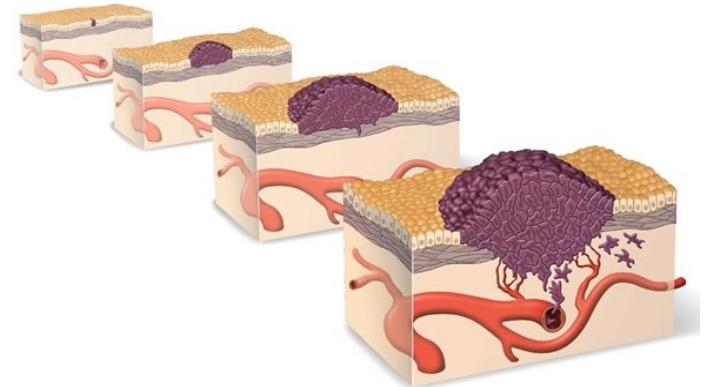
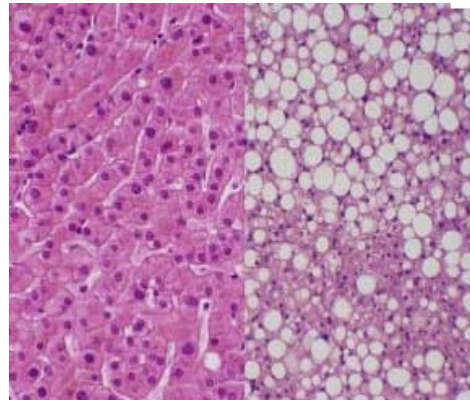
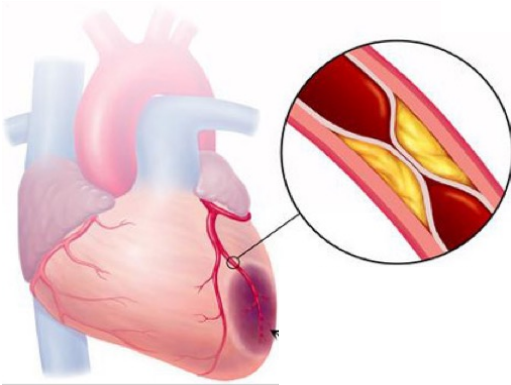


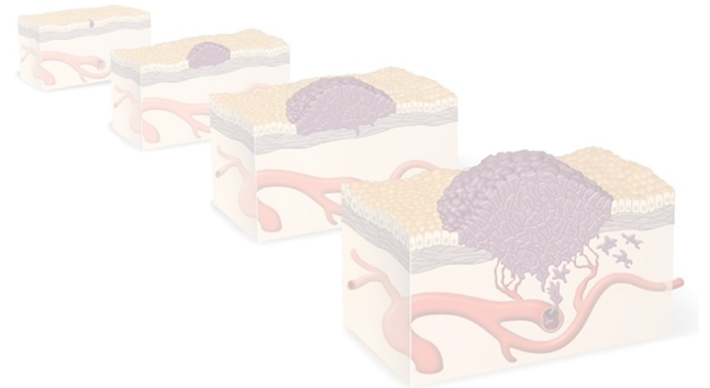
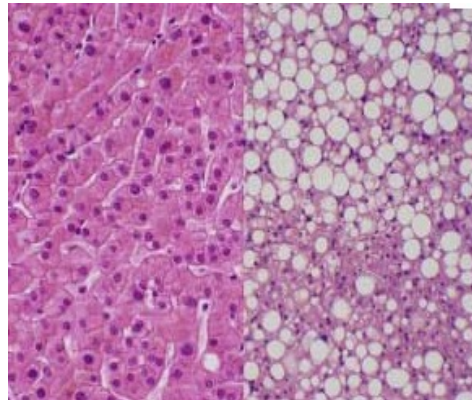
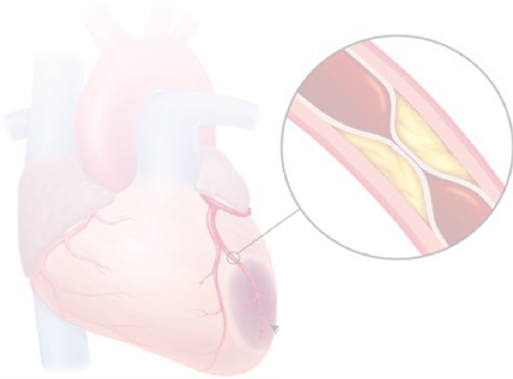
**Digestive system
in carnivours**

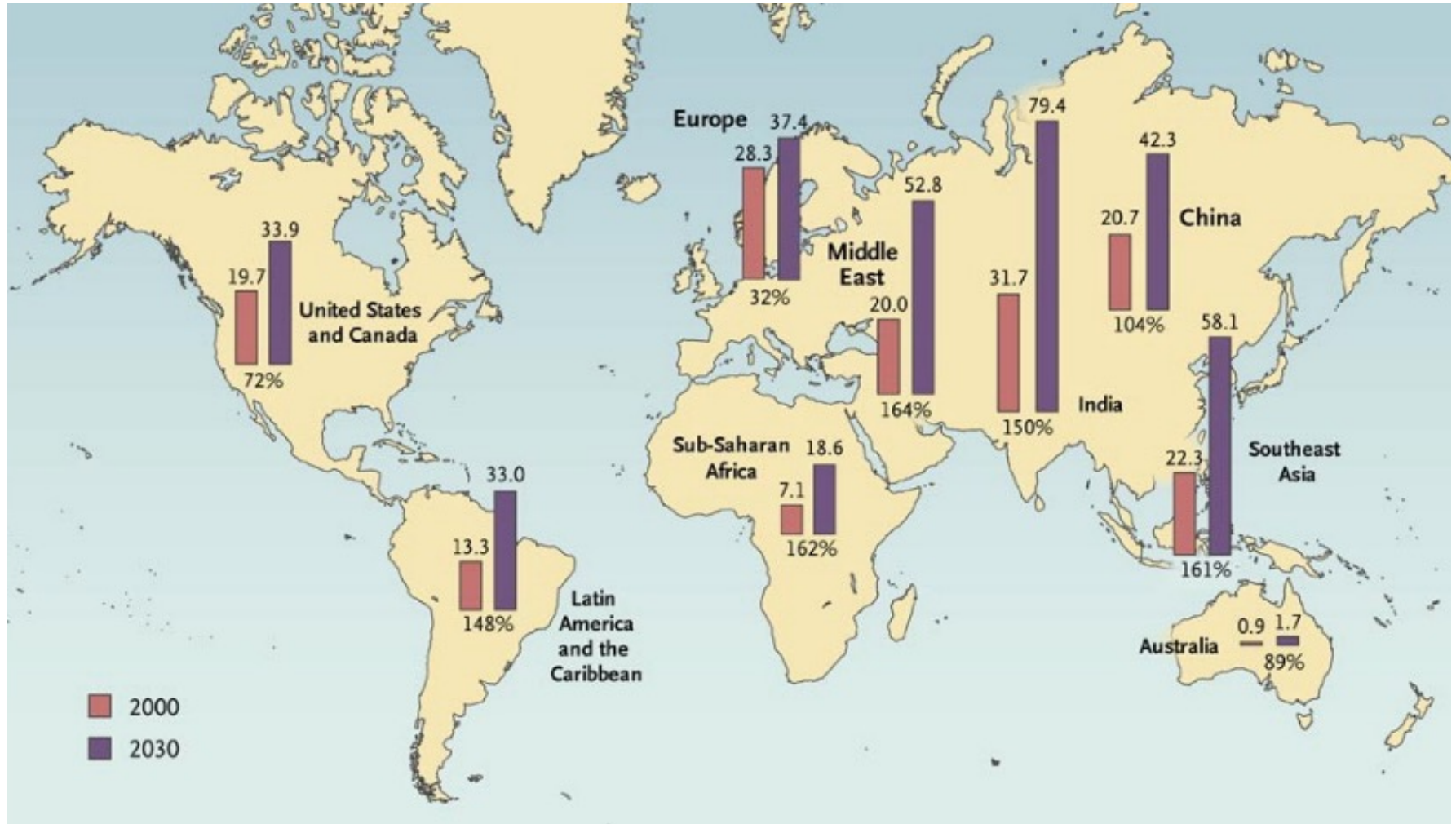


REMISSION

von KOMORBIDITÄTEN

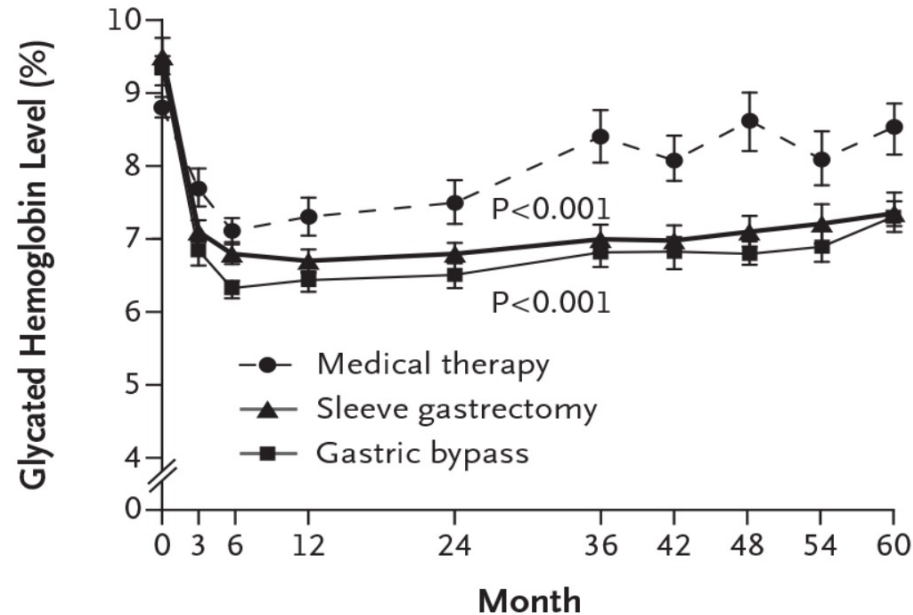






STAMPEDE-Trial

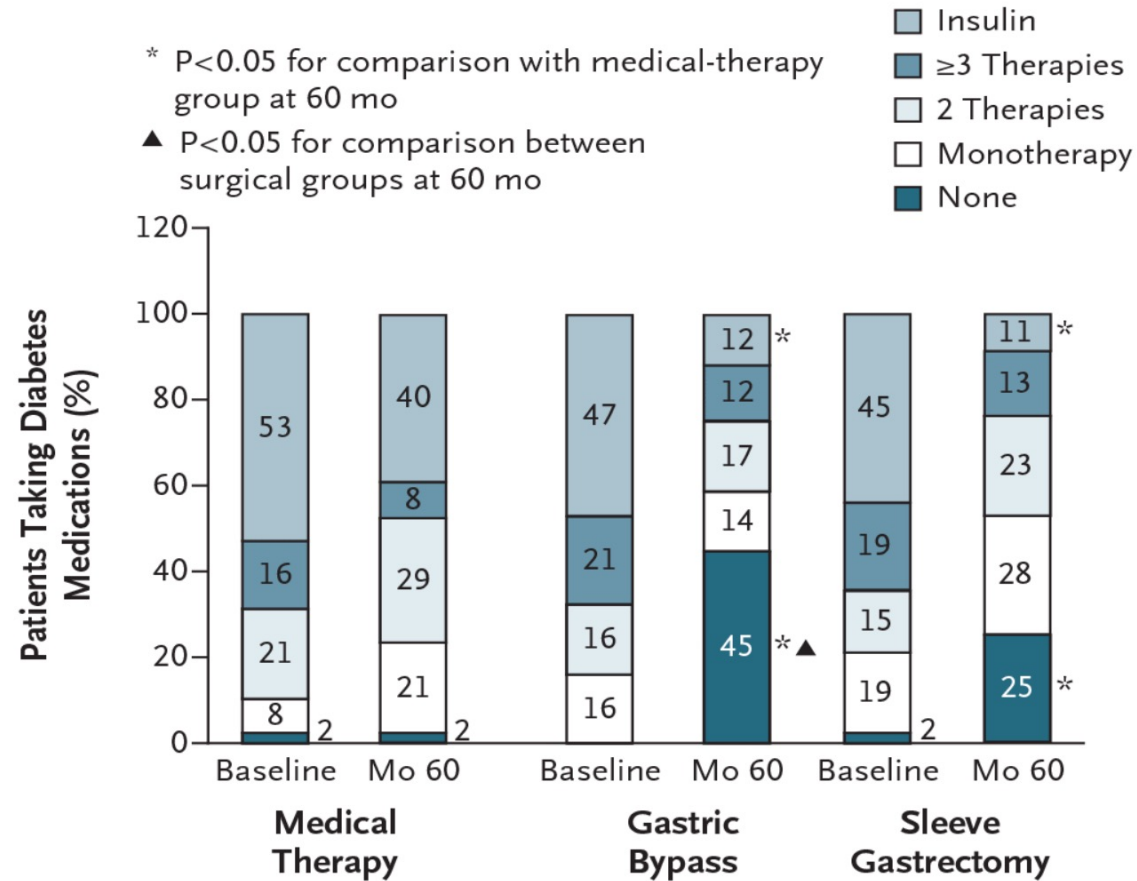
A Glycated Hemoglobin



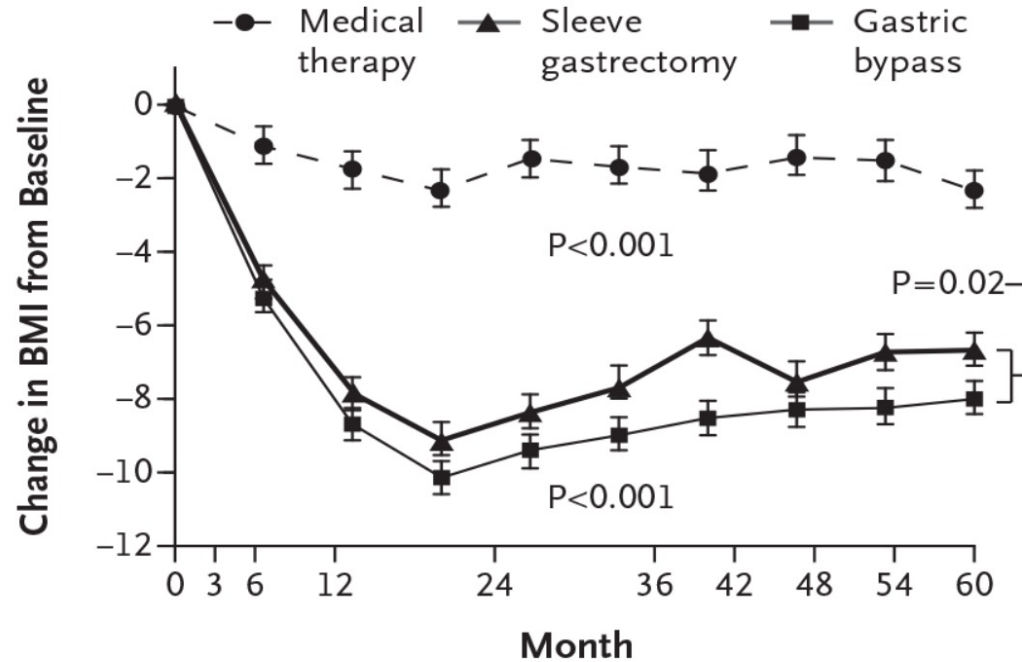
**Mean (median)
Value at Visit**

Medical therapy	8.8 (8.6)	7.3 (6.8)	7.5 (7.2)	8.4 (7.7)	8.6 (8.2)	8.5 (8.0)
Gastric bypass	9.3 (9.4)	6.4 (6.2)	6.5 (6.4)	6.8 (6.6)	6.8 (6.8)	7.3 (6.9)
Sleeve gastrectomy	9.5 (8.9)	6.7 (6.4)	6.8 (6.8)	7.0 (6.7)	7.1 (6.6)	7.4 (7.2)

B Diabetes Medications



C Body-Mass Index



**Mean Value
at Visit**

Medical therapy	36.4	34.1	35.0	34.8	35.1	34.0
Gastric bypass	37.0	26.9	27.4	28.2	28.6	28.9
Sleeve gastrec- tomy	36.0	26.9	27.7	28.1	28.2	29.3

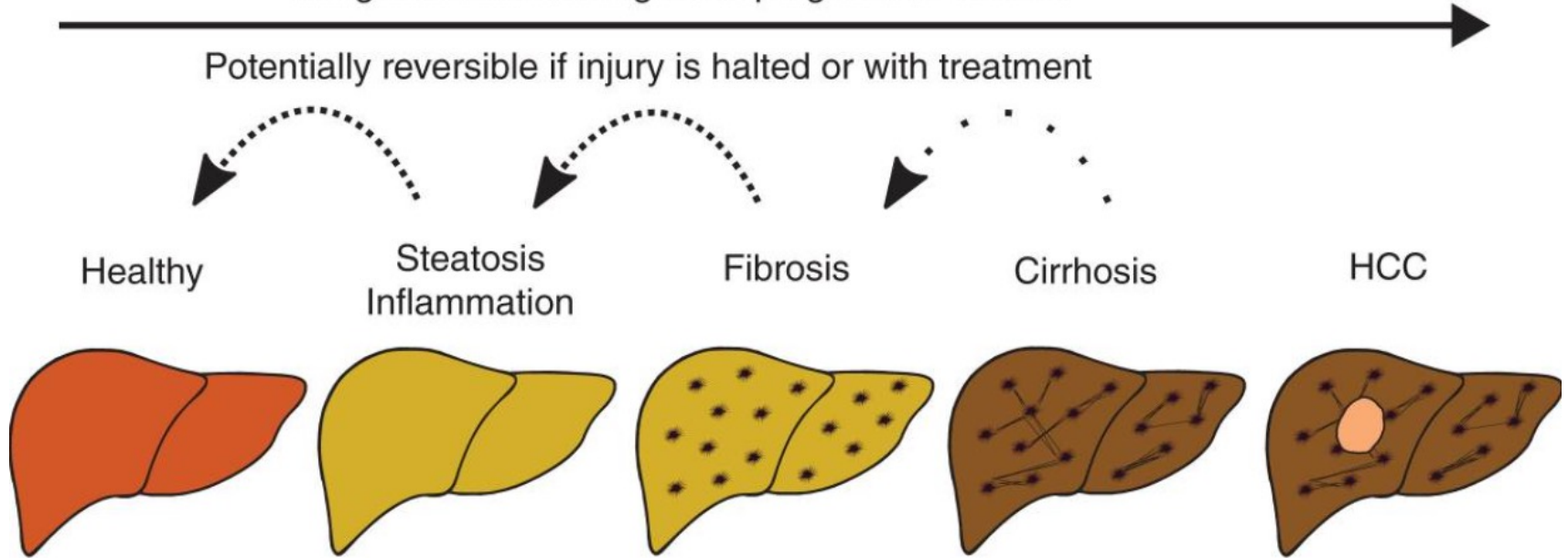
Swiss Society for the Study of

 morbid **Obesity**
and metabolic disorders

www.smob.ch

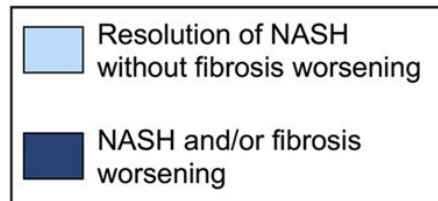
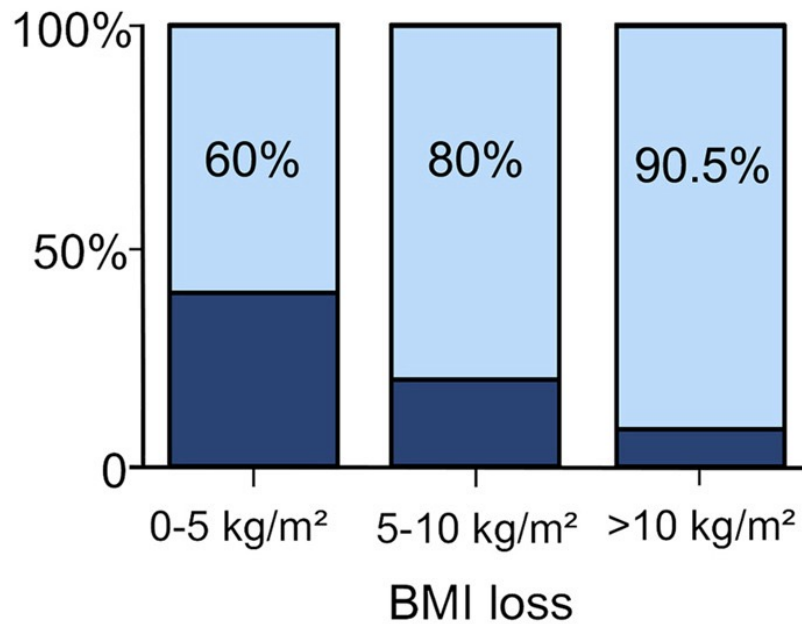
Richtlinien zur operativen Behandlung von Übergewicht

Stages of liver damage and progression to HCC

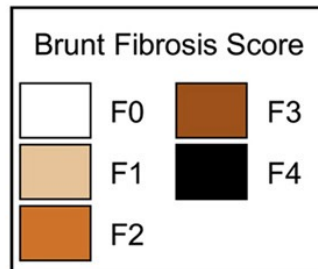
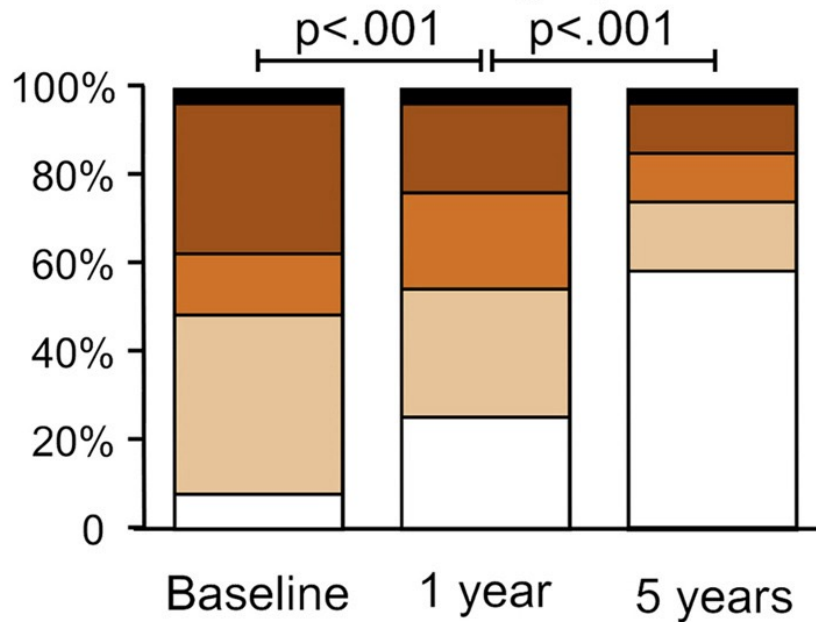


CHRONIC LIVER DISEASE
(such as viral hepatitis, alcoholic and
non-alcoholic fatty liver disease, haemochromatosis)

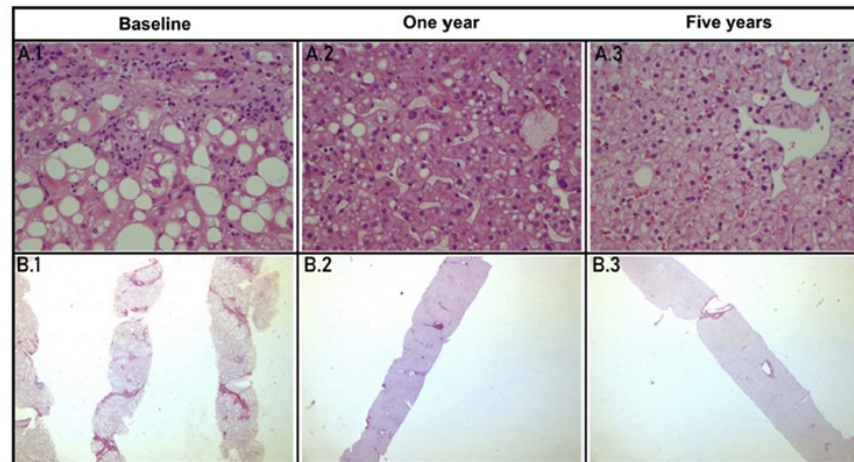
Resolution of NASH according to weight loss



Evolution of Fibrosis after Bariatric Surgery



Histological Evolution of NASH and Fibrosis after Bariatric Surgery



A: Upper panel
H&E staining,
(X400)

B: Lower panel
Sirius Red
staining, (X25)

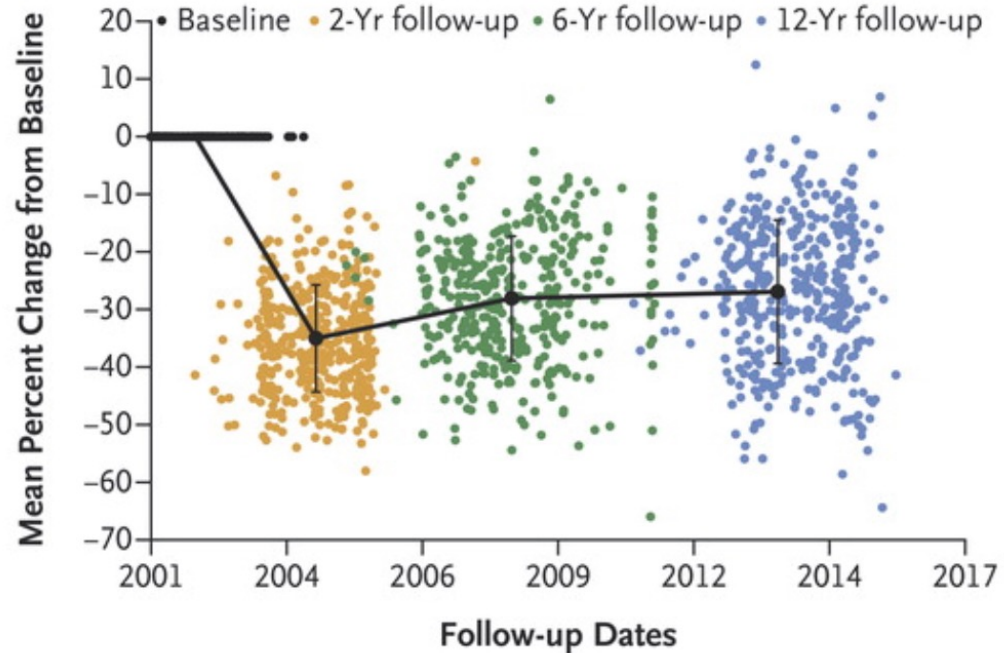
Gastroenterology

VARIABILITÄT

des BEHANDLUNGSERFOLGS

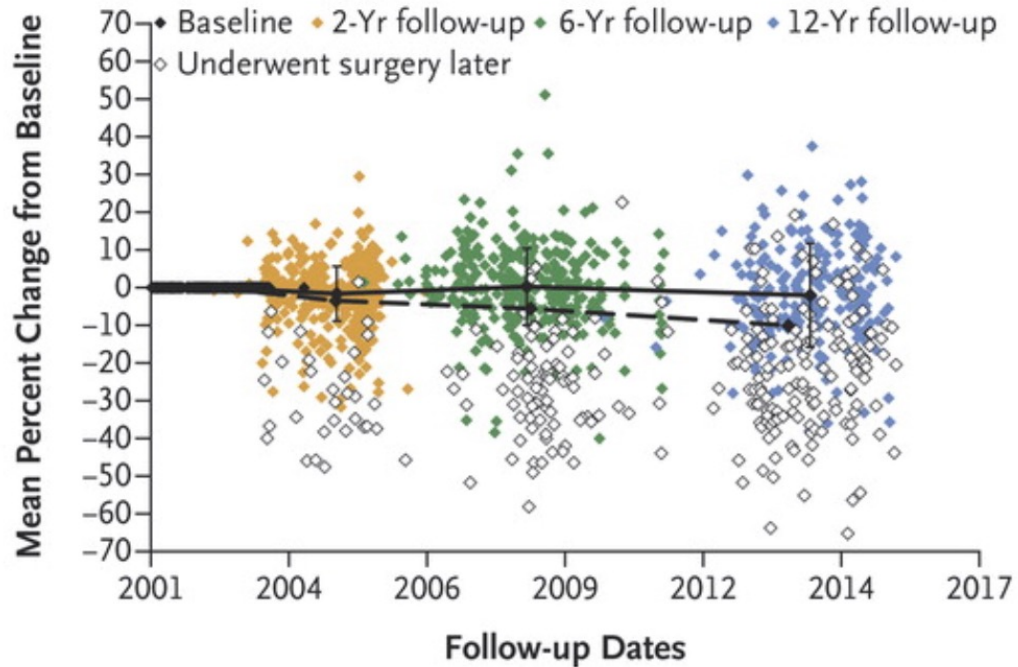
Bariatrische vs. konservative Behandlung

A Mean Percent Change in Body Weight from Baseline to Years 2, 6, and 12 in the Surgery Group



No. of Patients	Baseline	2 Yr	6 Yr	12 Yr
Surgery group	418	409	379	387
Deaths	—	3	9	14
Total	418	412	388	401

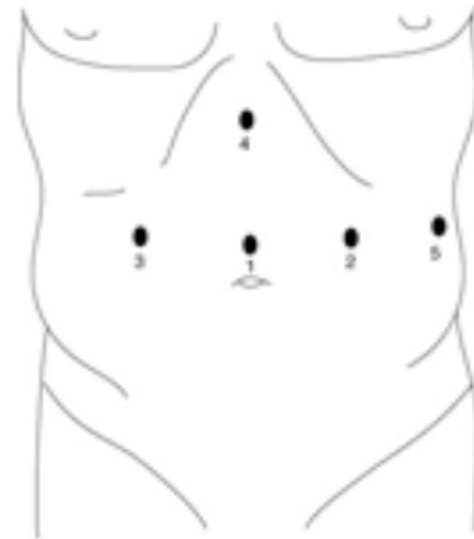
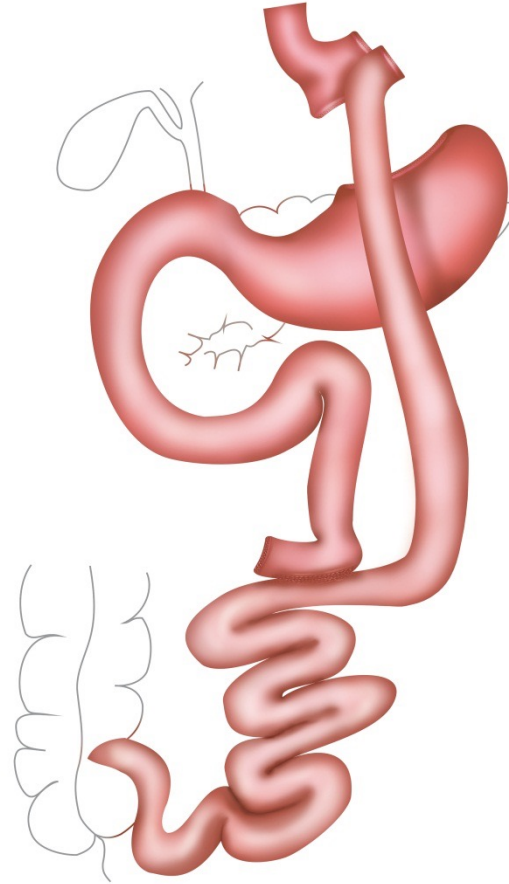
B Mean Percent Change in Body Weight from Baseline to Years 2, 6, and 12 in Nonsurgery Group 1



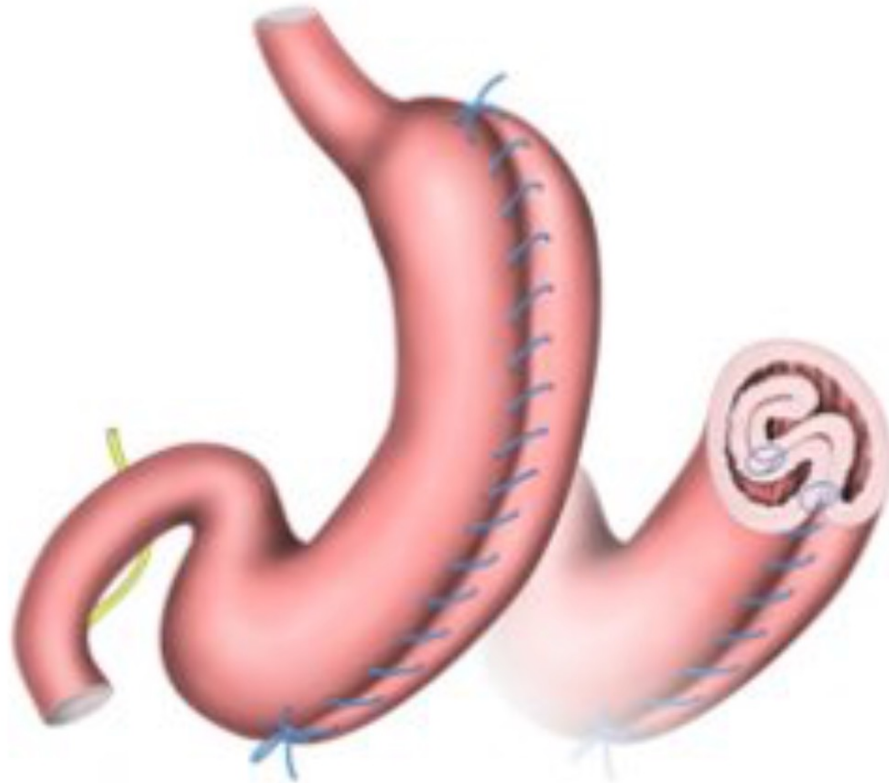
No. of Patients	Baseline	2 Yr	6 Yr	12 Yr
Nonsurgery group 1	417	373	294	217
Underwent surgery later	—	28	89	146
Deaths	—	3	11	25
Total	417	404	394	388

INVASIVITÄT

vs. BEHANDLUNGSEVOLUTION



POSE (Primary Obesity Surgery, Endolumenal)



IMPACT

vs. OUTCOME



ERWEITERUNG
von INDIKATIONEN

Hochrisikopatienten

n=110

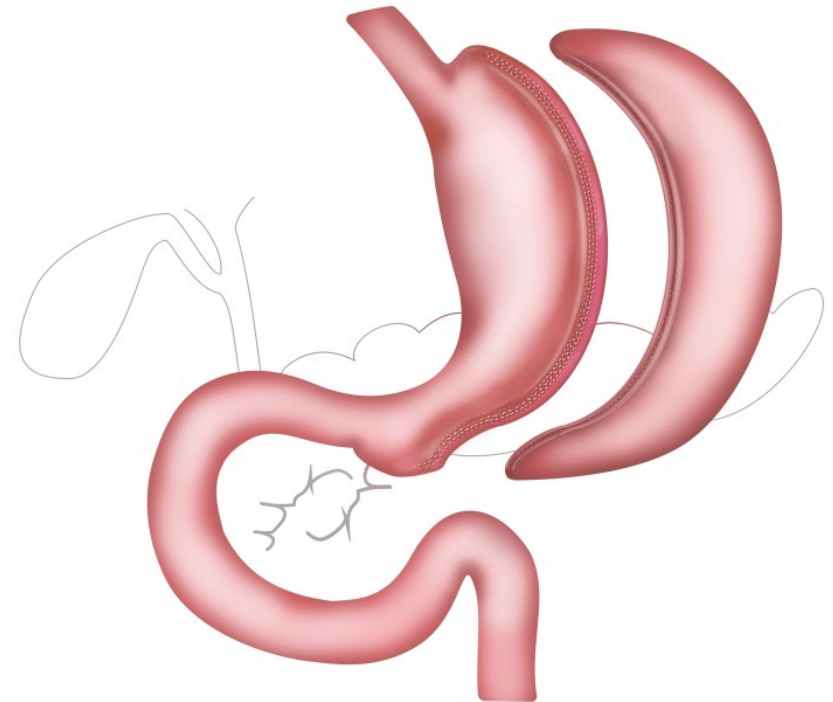
2008-2014

Risikofaktoren (mindestens 2)

- ASA 4
- RCRI 4
- St.n. zentraler LE
- Niereninsuffizienz (GFR<30ml/min)
- Leberzirrhose

Perioperatives Outcome (30 Tage)

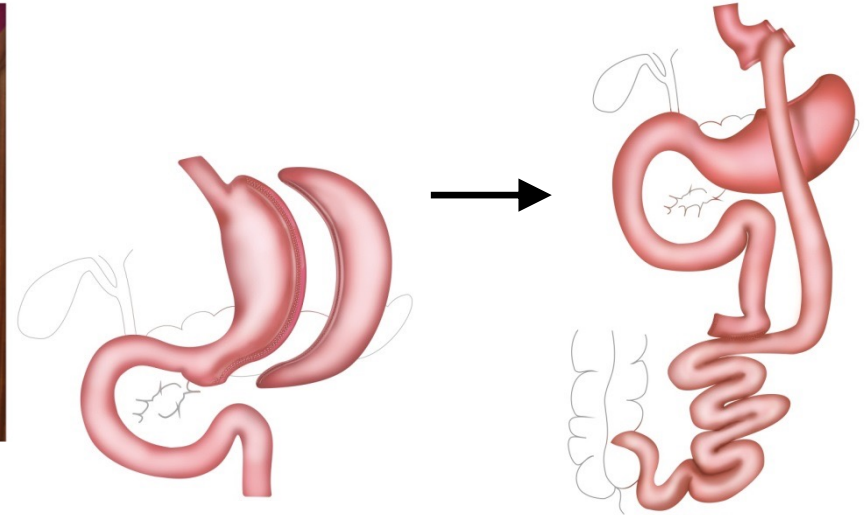
- Mortalität 1%
- Morbidität 10%



Sleeve-Gastrektomie

Nett et al., SOARD 2017

Bauchwandnarbenhernien



Sleeve-Gastrektomie

Magenbypass

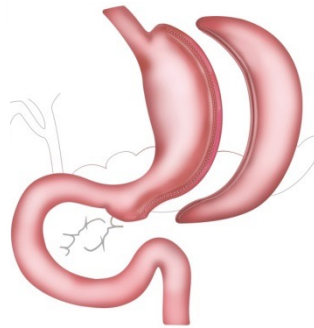
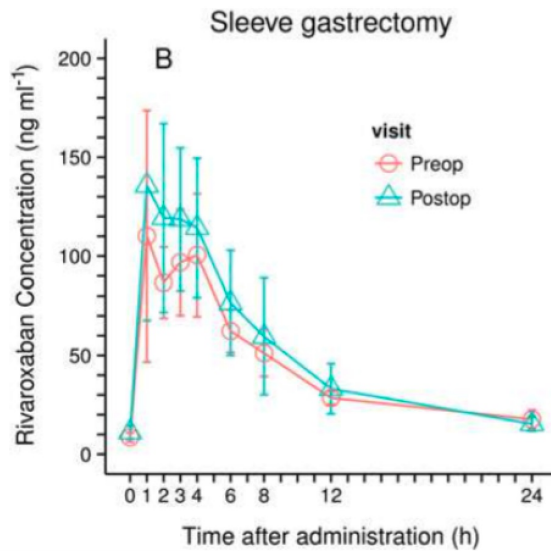


n=15; 2008-2016

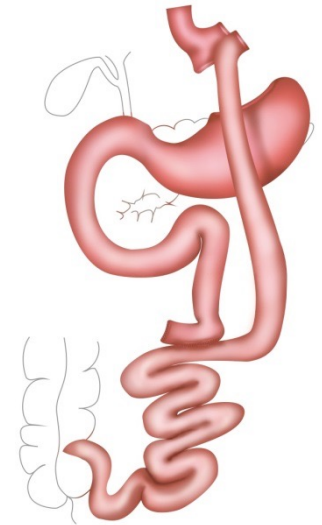
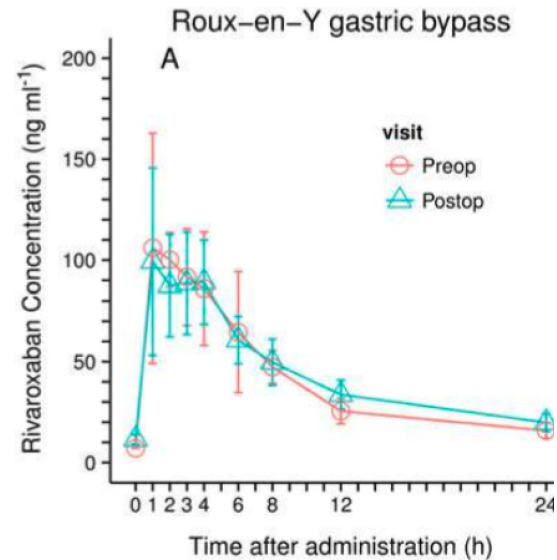
Nett et al., SOARD 2017



Resorption (Rivaroxaban)

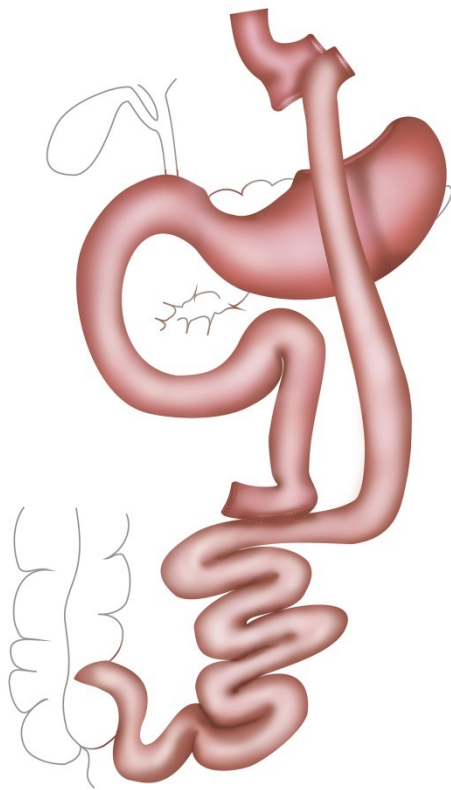


n=8

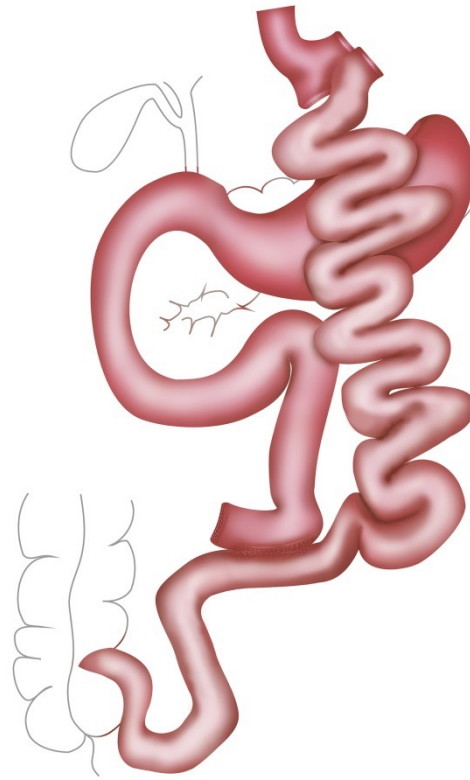


n=8

Steatorrhoe



Magenbypass



n=188

2008-2014

FU>2 Jahre

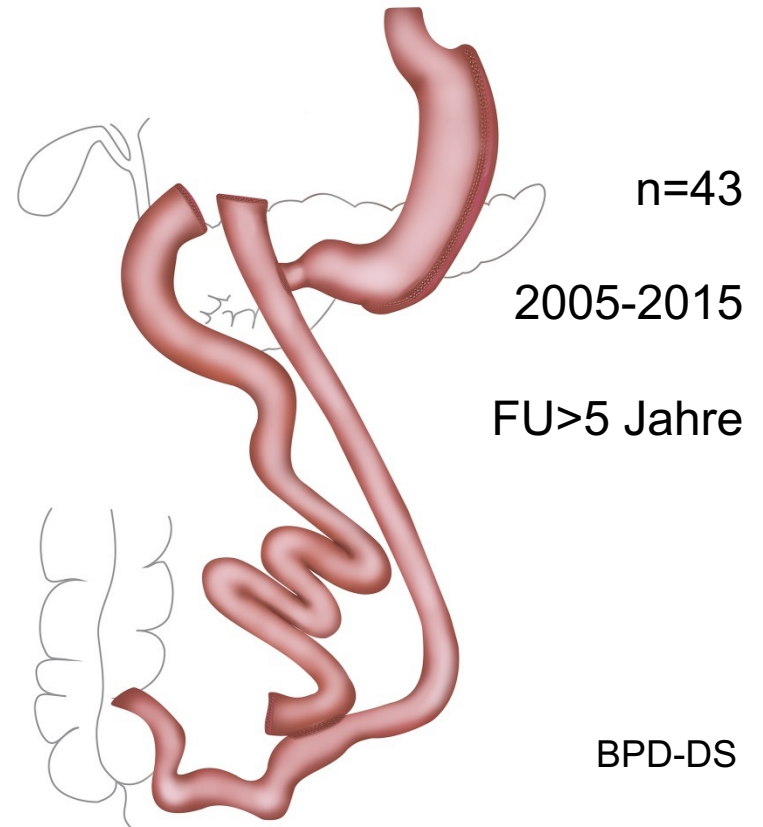
Steatorrhoe
pRYGB 19%
dRYGB 48%

Nett et al., SOARD 2016

Mangelzustände

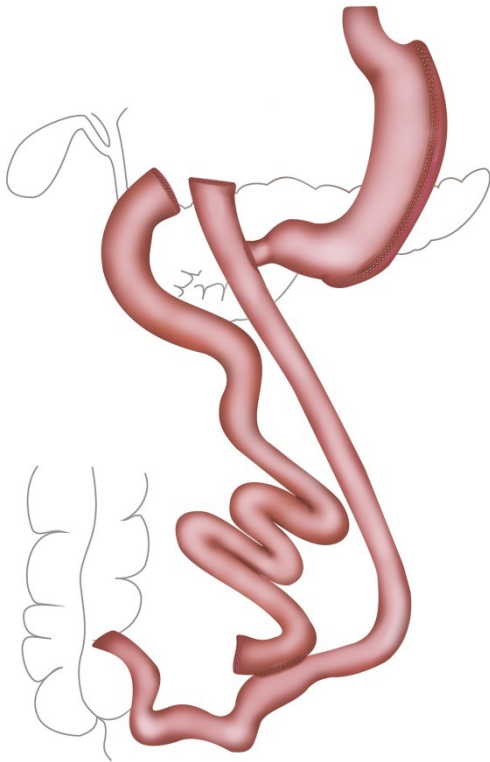
Additional multivitamin ^a	33 (76.7 %)
Iron	23 (53.5 %)
Vitamin B ₁₂	18 (41.9 %)
Vitamin D	16 (37.2 %)
Calcium	16 (37.2 %)
Zinc	11 (25.6 %)
Selen	9 (21.0 %)
Folate	7 (16.3 %)
Vitamin A	5 (11.6 %)

^aLife-long underlying micronutrient supplementation consisted of a multivitamin-mineral supplementation on a daily base covering 200 % of the daily value containing 5000 IU of vitamin A, 2000 IU of vitamin D₃, 300 mg of vitamin K, 2400 mg of calcium, and 16 mg of iron

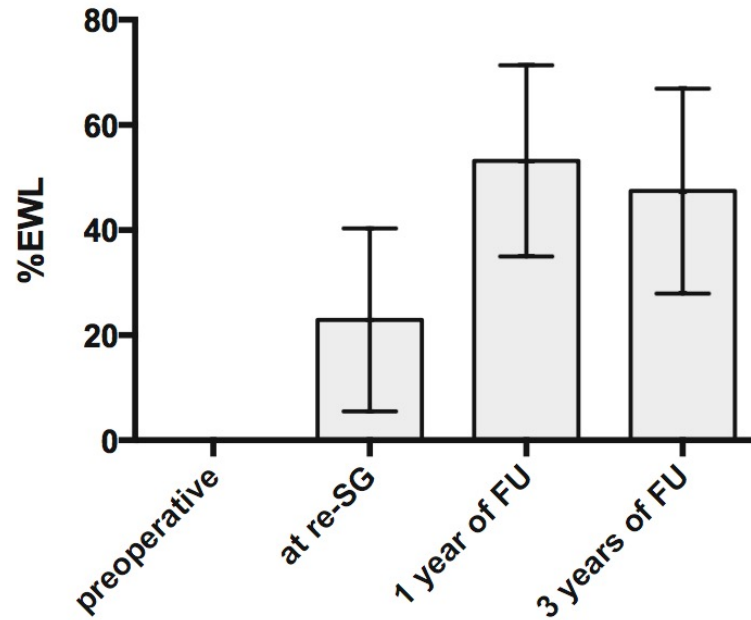




Gewichtszunahme BPD-DS



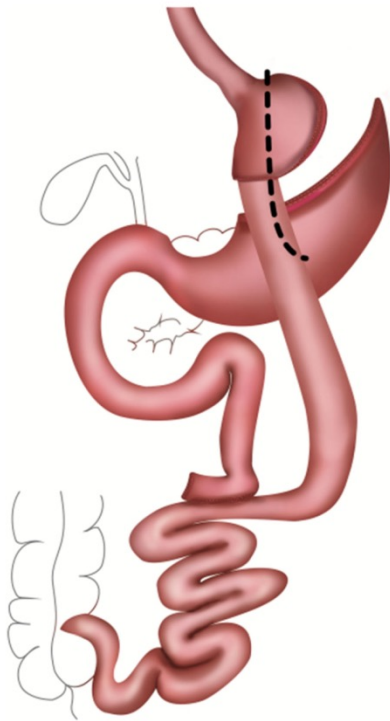
BPD-DS



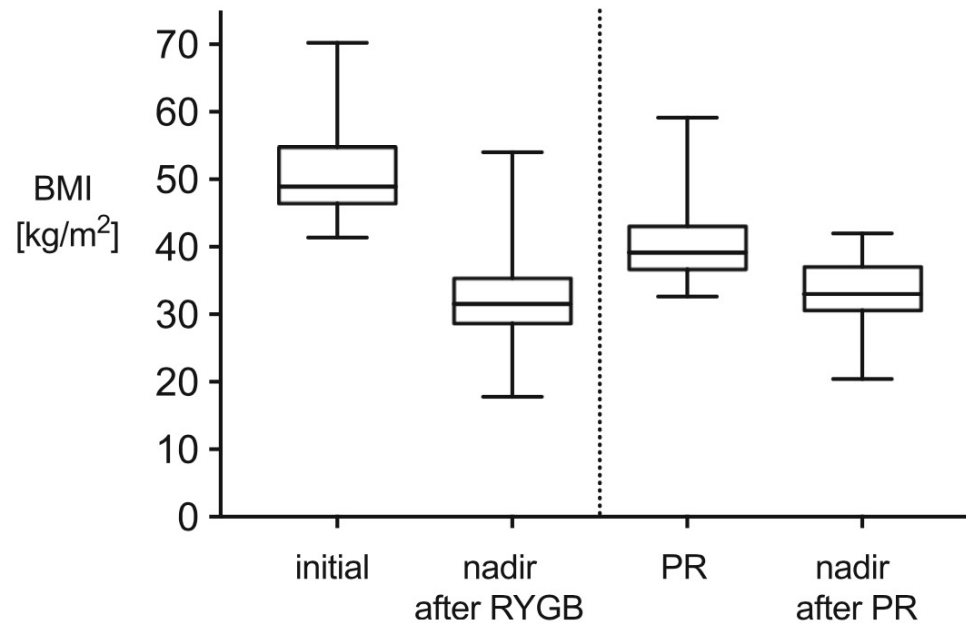
n=17, 2010-2013

Nett, Surg Endosc 2016

Gewichtszunahme Magenbypass



Magenbypass

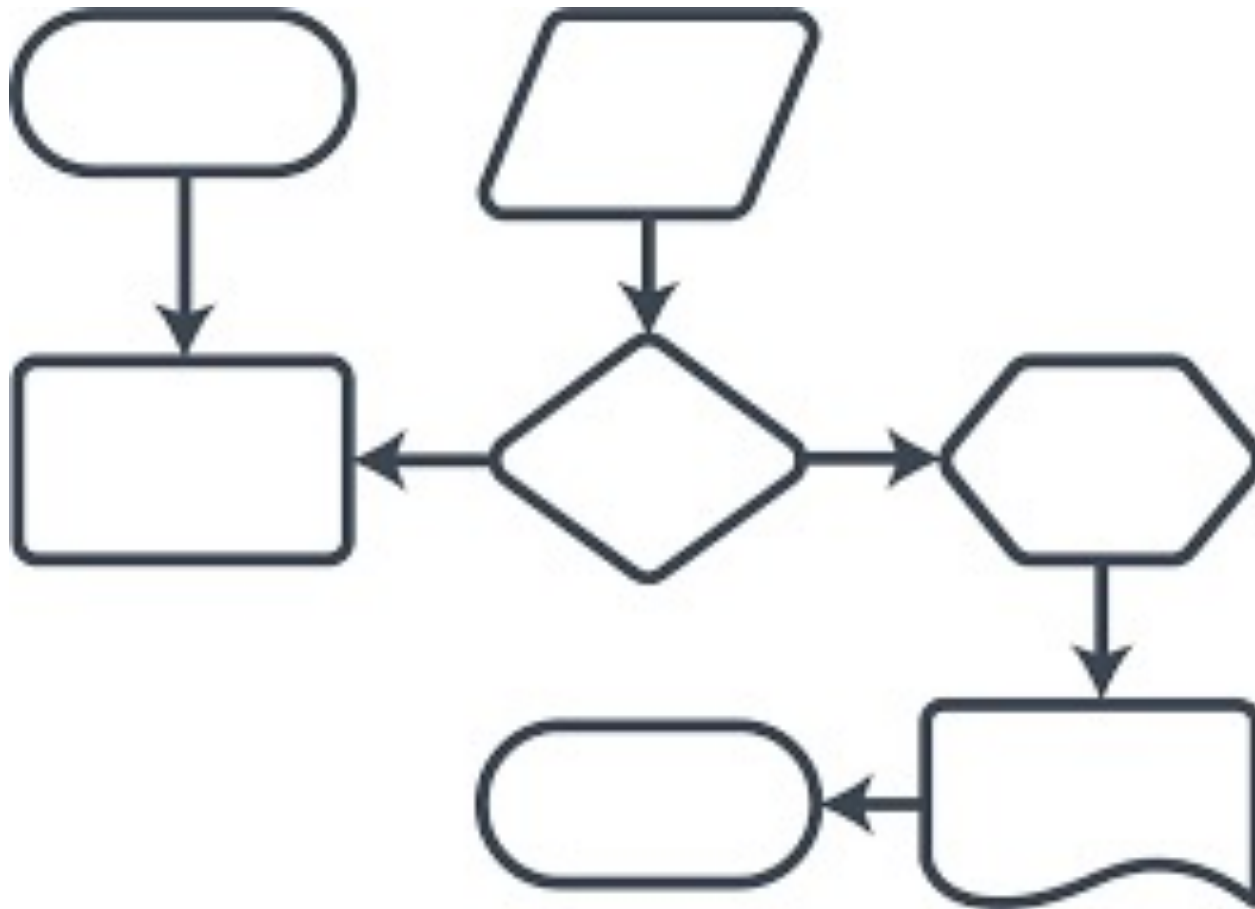


n=26, 2010-2016

Nett, Surg Endosc 2016

KOSTEN vs. BENEFIT

















**ADIPOSITAS
ZENTRUM BERN**

