

Diabètes et chirurgie bariatrique

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SOS Study : effet sur la mortalité

	Surgery Group (n=7925)		Control Group (n=7925)		Change
	No	No/10,000 person-yr	No	No/10,000 person-yr	
All causes of death	213	37.6	321	57.1	-34%
All deaths caused by disease	150	26.5	285	50.7	-48%
Cardiovascular diseases	55	9.7	104	18.5	-48%
Diabetes	2	0.4	19	3.4	-88%
Cancer	31	5.5	73	13.3	-59%
Other diseases	62	11	89	15.5	-59%
All non-disease causes	63	11.1	36	6.4	+73%
Accident unrelated to drugs	21	3.7	17	3.0	
Poisoning of undetermined intent	9	1.6	4	0.7	
Suicide	15	2.6	5	0.9	

Sjöström L and the Swedish Obese Subjects Study.
 Effects of bariatric surgery on mortality in Swedish obese subjects.
N Engl J Med. 2007 Aug 23;357(8):741-52.

SOS Study : effet sur le diabète

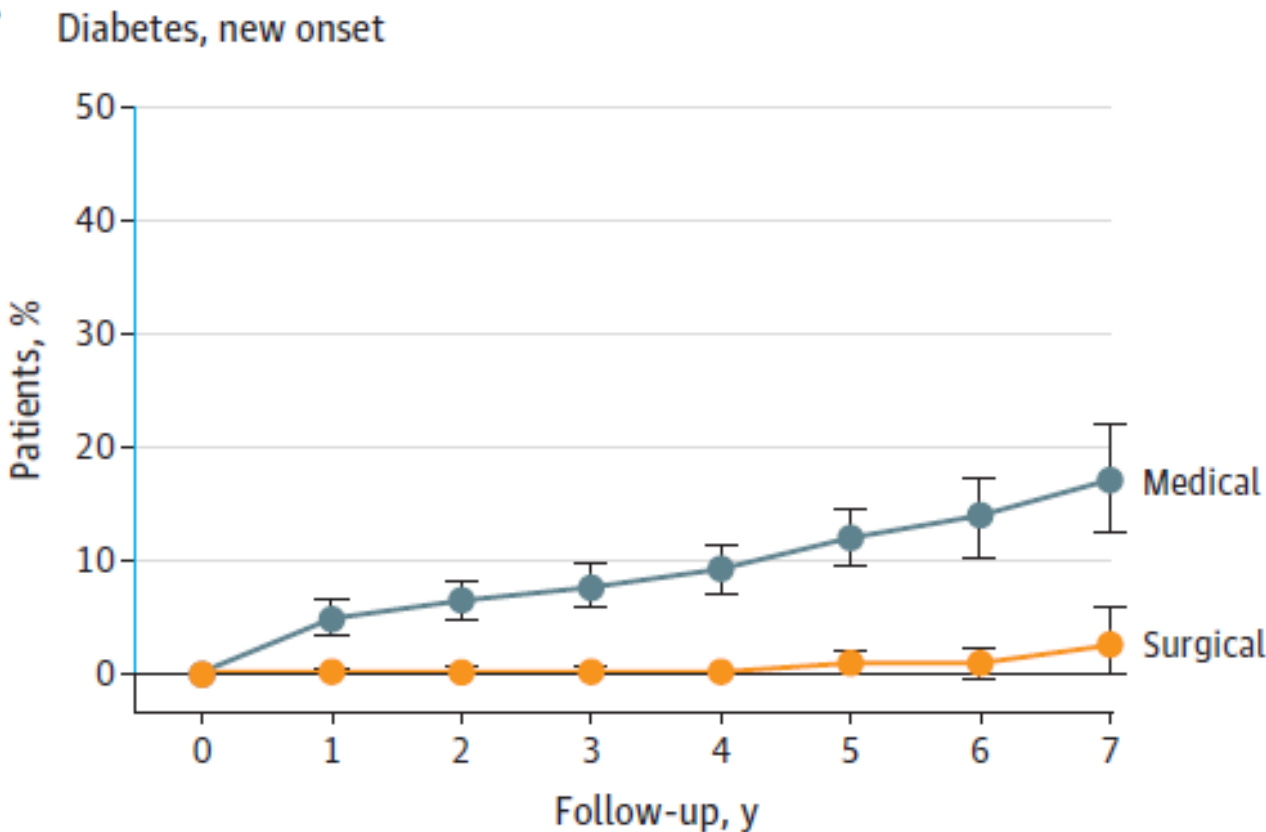
Table 2 Two and 10 year diabetes incidence and remission* rates from the Swedish Obese Subjects Study [7]

	Surgical	Control
2 year incident	1%	8%
10 year incident	8%	24%
2 year remission	72%	21%
10 year remission	36%	13%

*Remission based on fasting plasma glucose < 7.0 mmol/l and not on hypoglycaemic therapy [7].

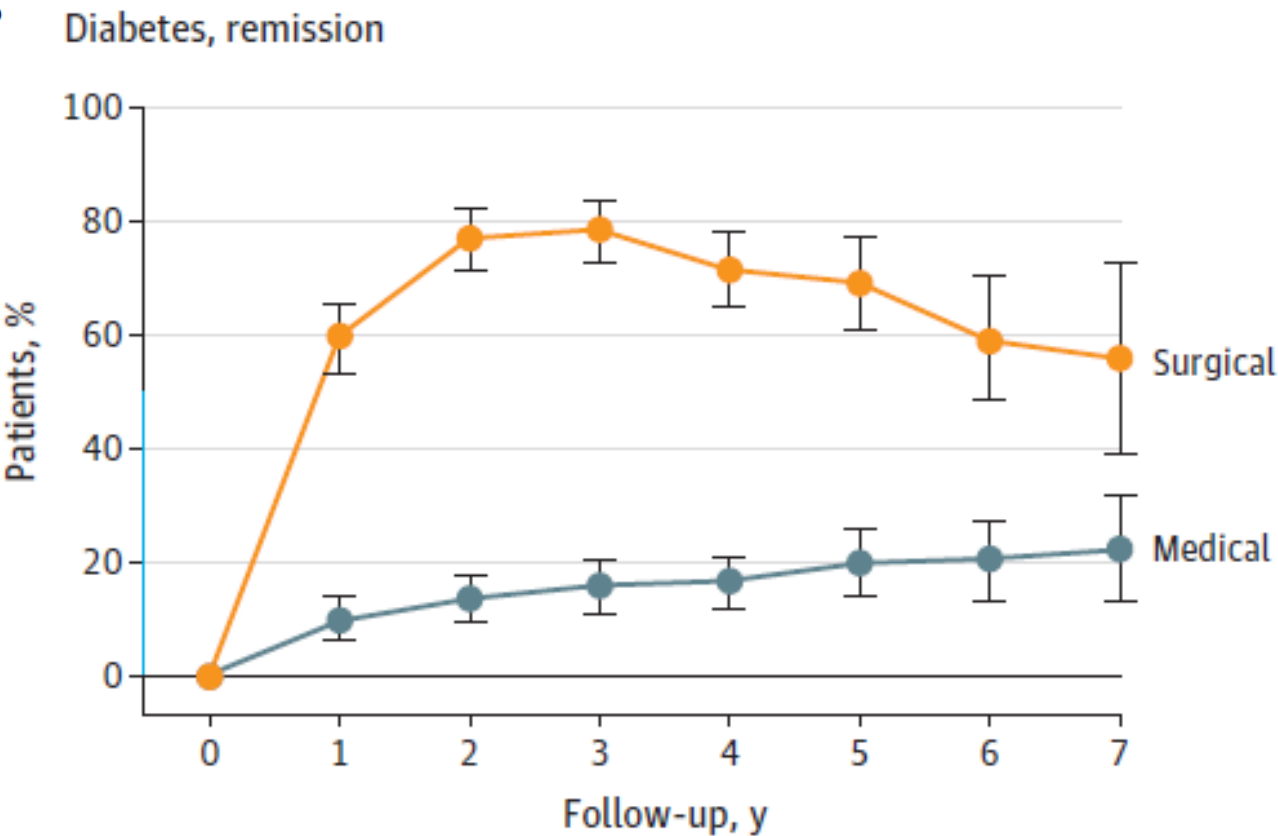
Diminution du risque par 3 à 10 ans

Association of Bariatric Surgery vs Medical Obesity Treatment With Long-term Medical Complications and Obesity-Related Comorbidities



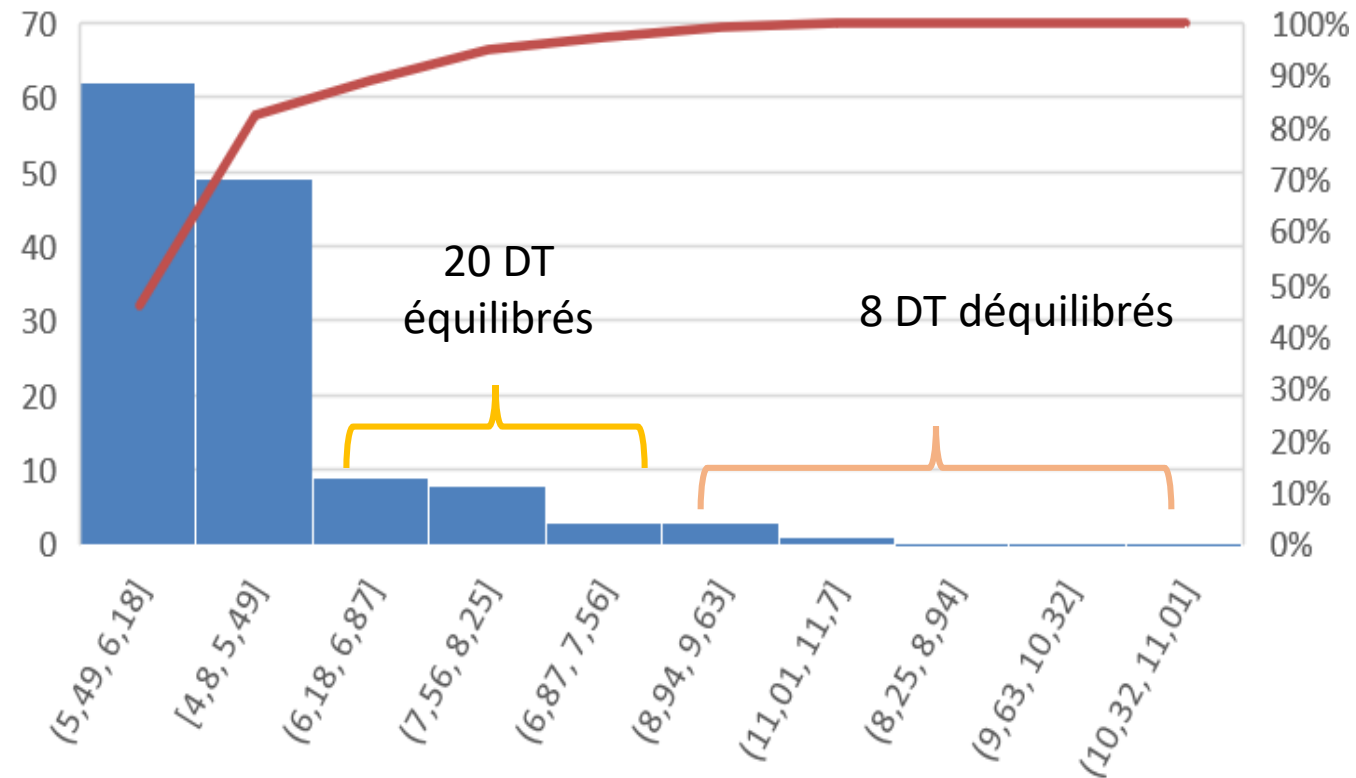
No. with event								
Medical	0	35	44	53	60	65	51	42
Surgical	0	1	2	2	0	3	2	2
Total No. of patients								
Medical	701	692	685	676	649	543	366	245
Surgical	696	692	688	621	483	358	207	78

Association of Bariatric Surgery vs Medical Obesity Treatment With Long-term Medical Complications and Obesity-Related Comorbidities



No. with event								
Medical	0	24	32	37	37	36	25	16
Surgical	0	139	177	169	126	84	48	19
Total No. of patients								
Medical	255	246	244	238	226	182	124	72
Surgical	236	233	231	216	176	122	81	34

**Répartition des HbA1c chez 140 sujets obèses consécutifs
entrant dans le programme de préparation à la chirurgie bariatrique
du CSO de Tours (2016)**



Environ 20 % de diabétiques, avec IMC > 40 pour la majorité

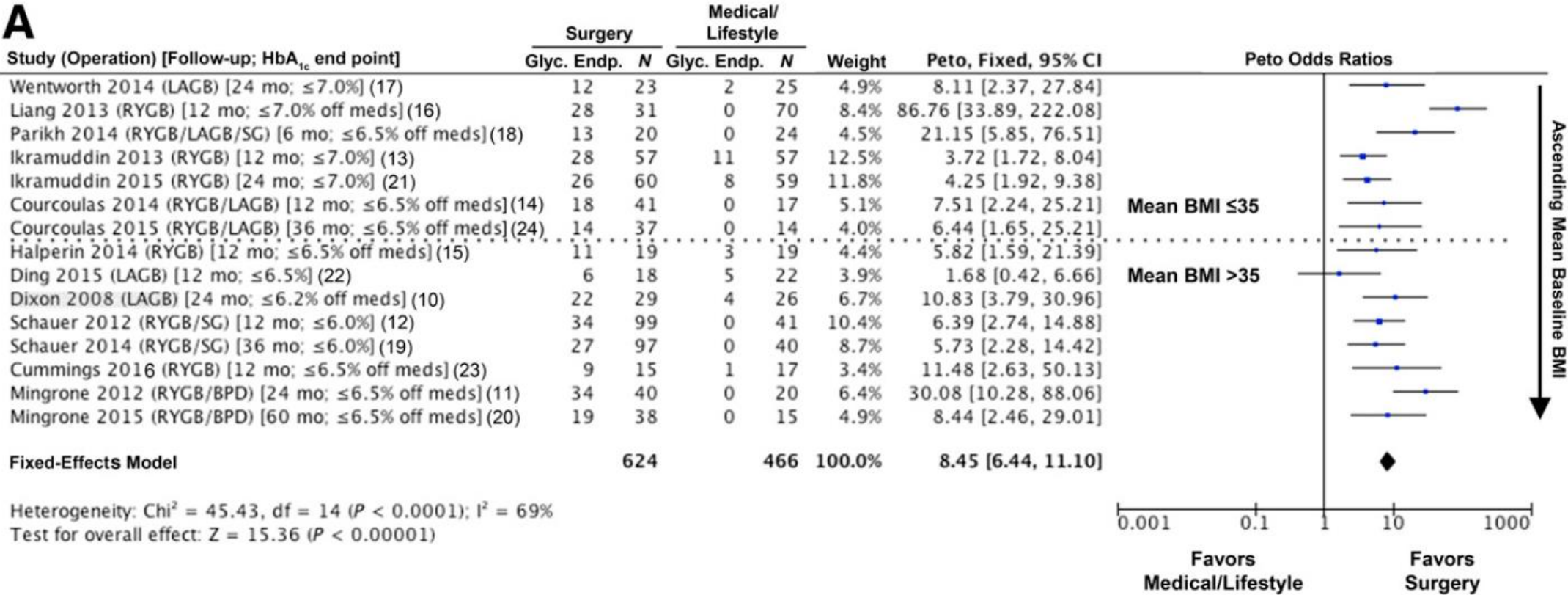
Metabolic Surgery in the Treatment Algorithm for Type 2 Diabetes: A Joint Statement by International Diabetes Organizations

Diabetes Care 2016;39:861–877 | DOI: 10.2337/dc16-0236

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Gaspar Taroncher-Oldenburg,¹¹
and David E. Cummings,¹²
on behalf of the Delegates of
the 2nd Diabetes Surgery Summit*

Lifestyle vs chirurgie,
11 études randomisées
1 à 5 ans de suivi :

8 fois plus de chance de voir son
diabète « partir » si opéré !

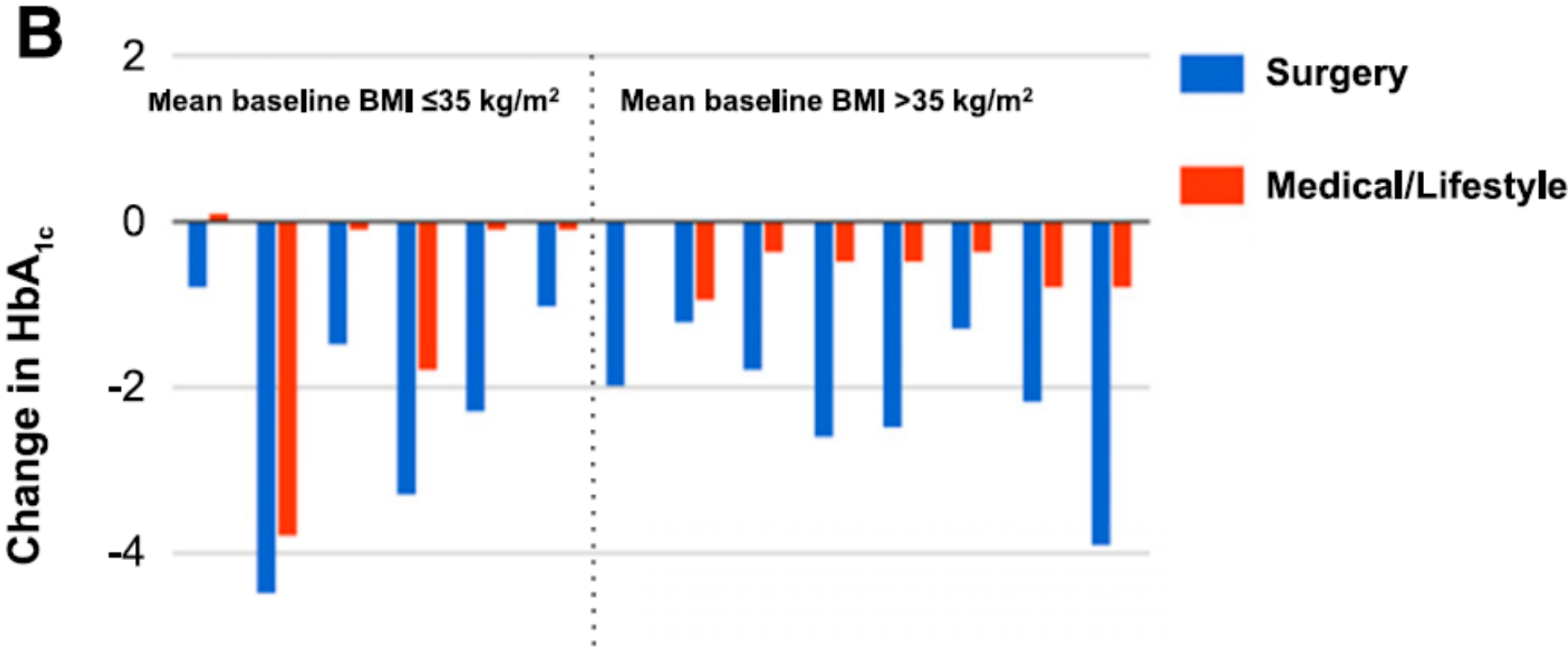


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Baisse d'HbA1c de 1,5 %
vs groupe non opéré

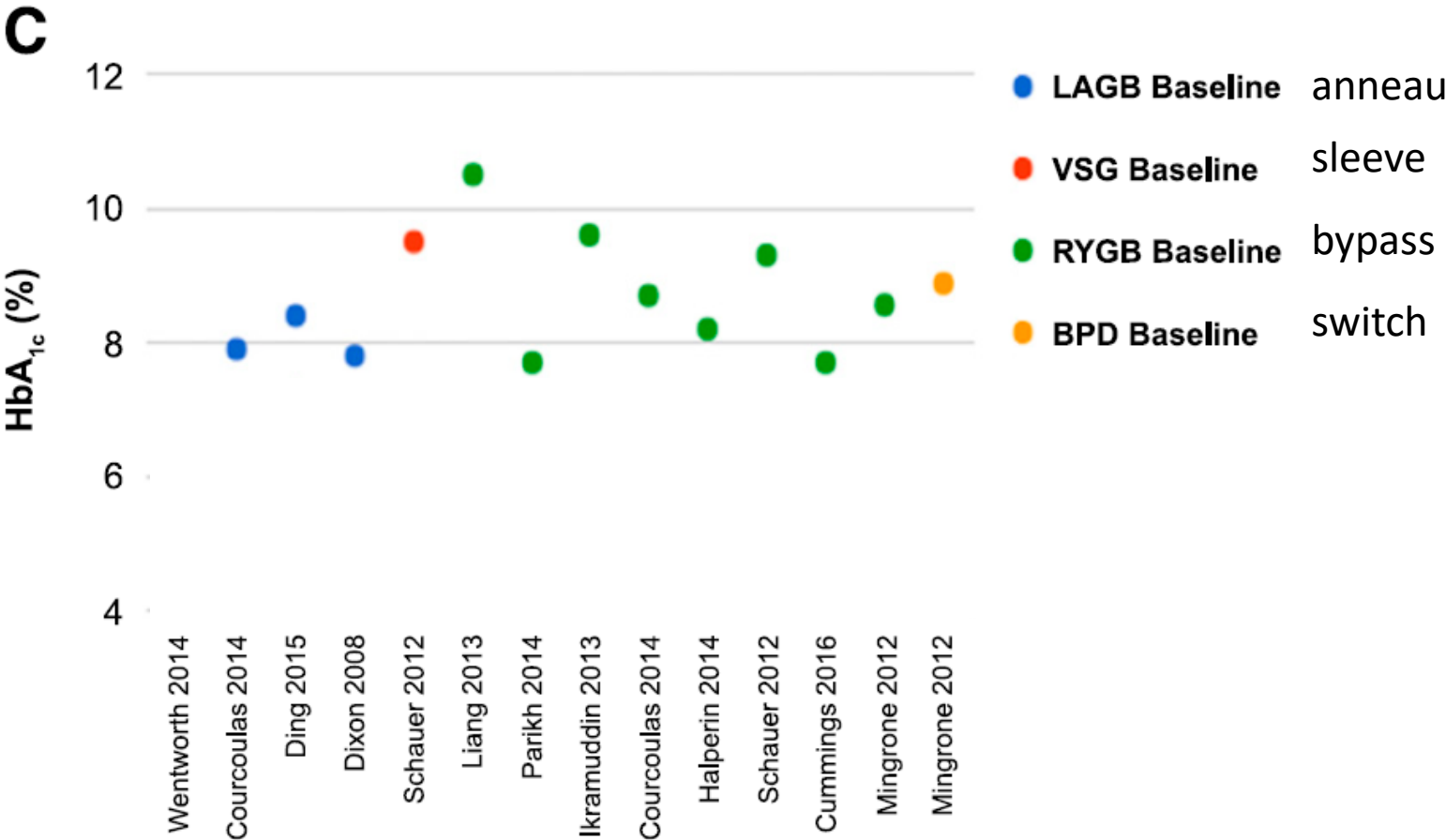


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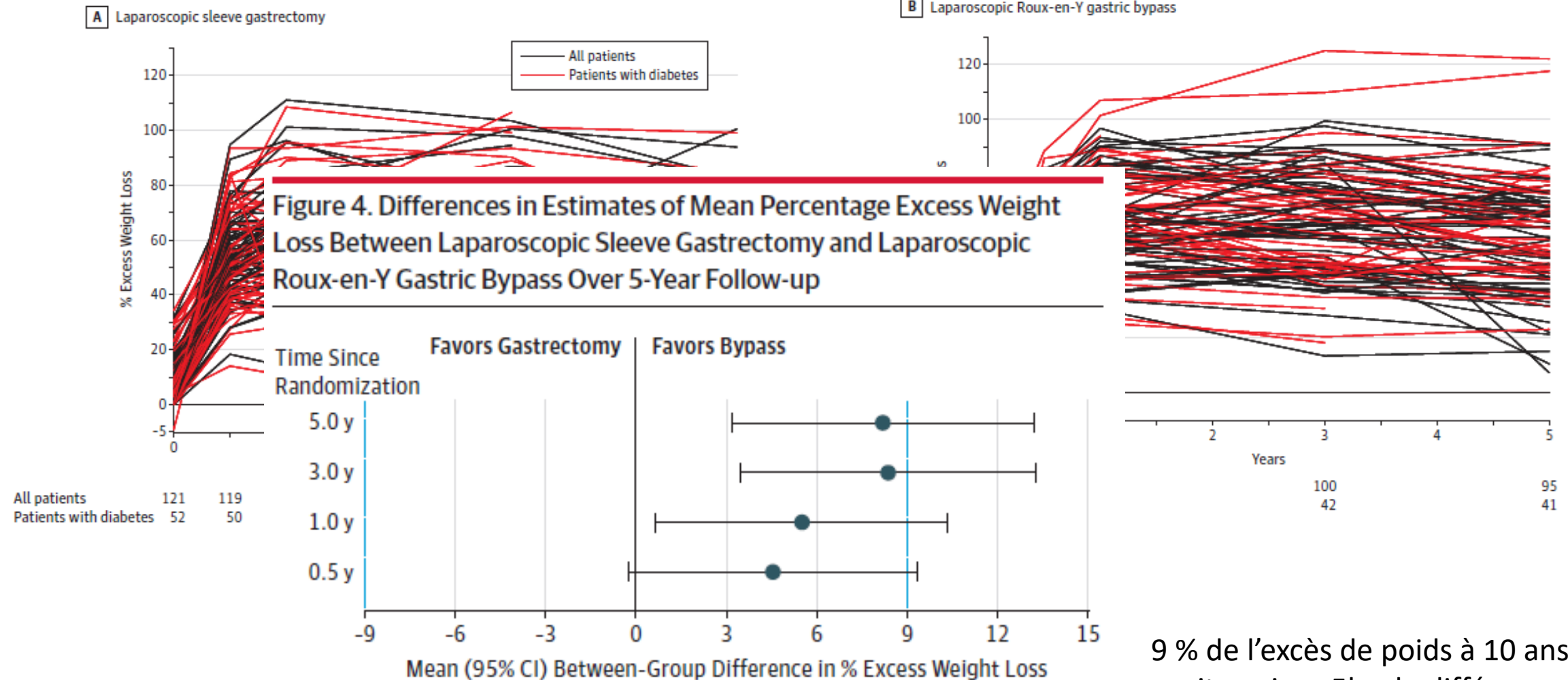
Baisse d’HbA1c dans tous les types de chirurgie



Effect of Laparoscopic Sleeve Gastrectomy vs Laparoscopic Roux-en-Y Gastric Bypass on Weight Loss at 5 Years Among Patients With Morbid Obesity

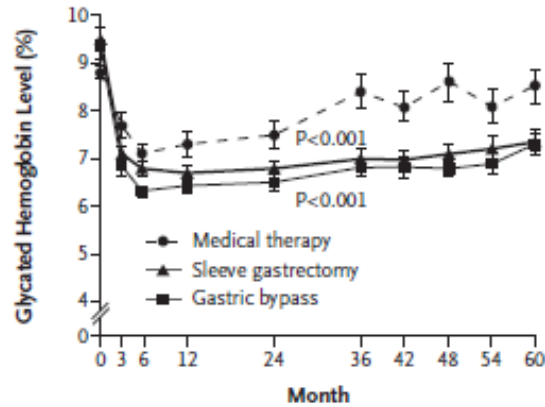
The SLEEVEPASS Randomized Clinical Trial 2018

Figure 2. Percentage Excess Weight Loss Over 5-Year Follow-up for Individual Patients After Laparoscopic Sleeve Gastrectomy (n = 121) and Laparoscopic Roux-en-Y Gastric Bypass (n = 119)



La chirurgie bariatrique est efficace pour contrôler le DT2 (à 5 ans post-opératoire)

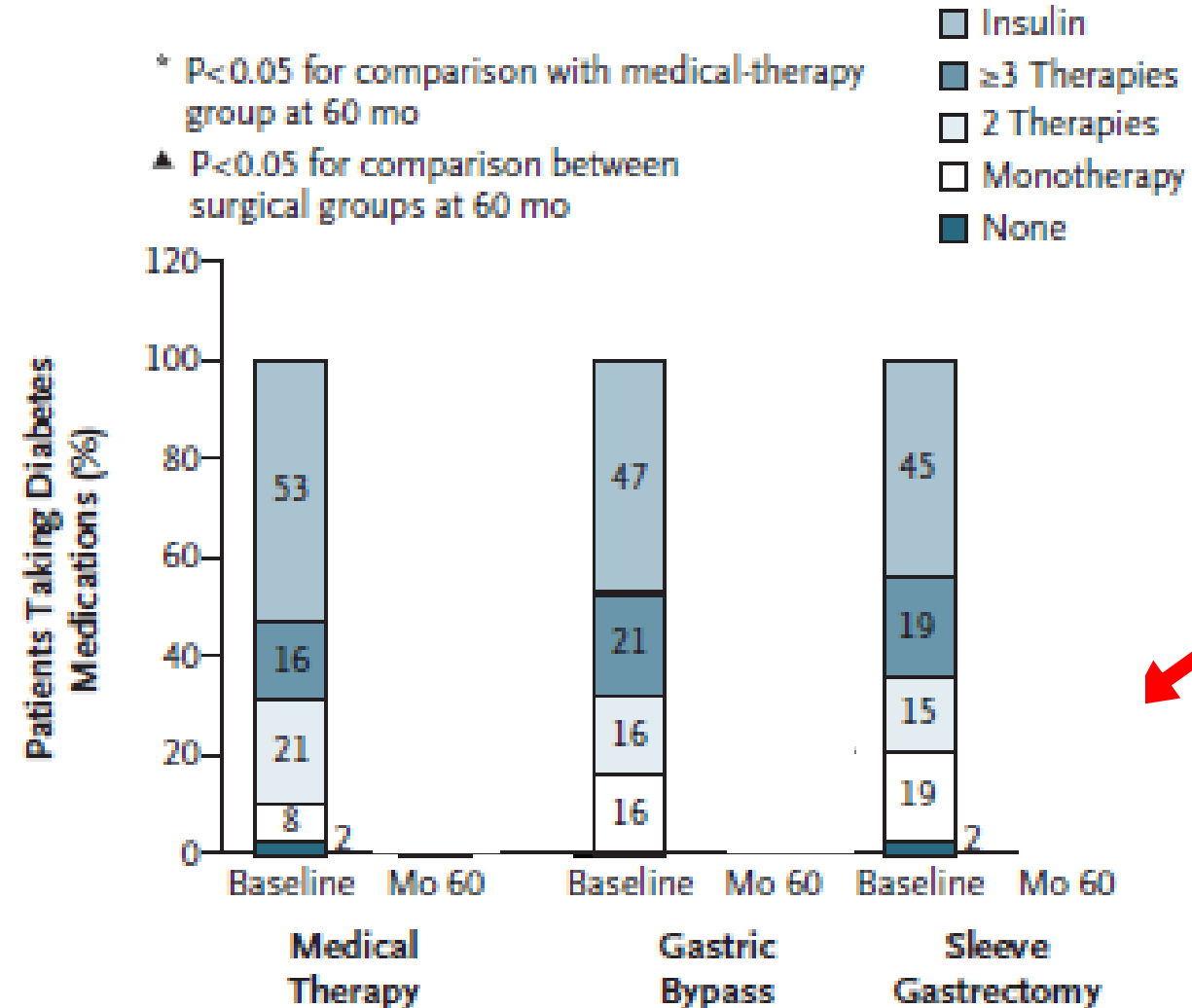
A Glycated Hemoglobin



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



Définition de la rémission du diabète

critères ADA

Rémission complète

HbA1c normale (<6%) et

Glycémie à jeun < 1,0g/l (5,6mmol/l) et

Pas de tt antidabétique

Pendant 1 an de suivi

Rémission prolongée

si rémission à 5 ans de suivi

Rémission partielle

HbA1c < 6,5%

et

**Glycémie à jeun < 1,26g/l
(7mmol/l) et**

Pas de tt antidabétique

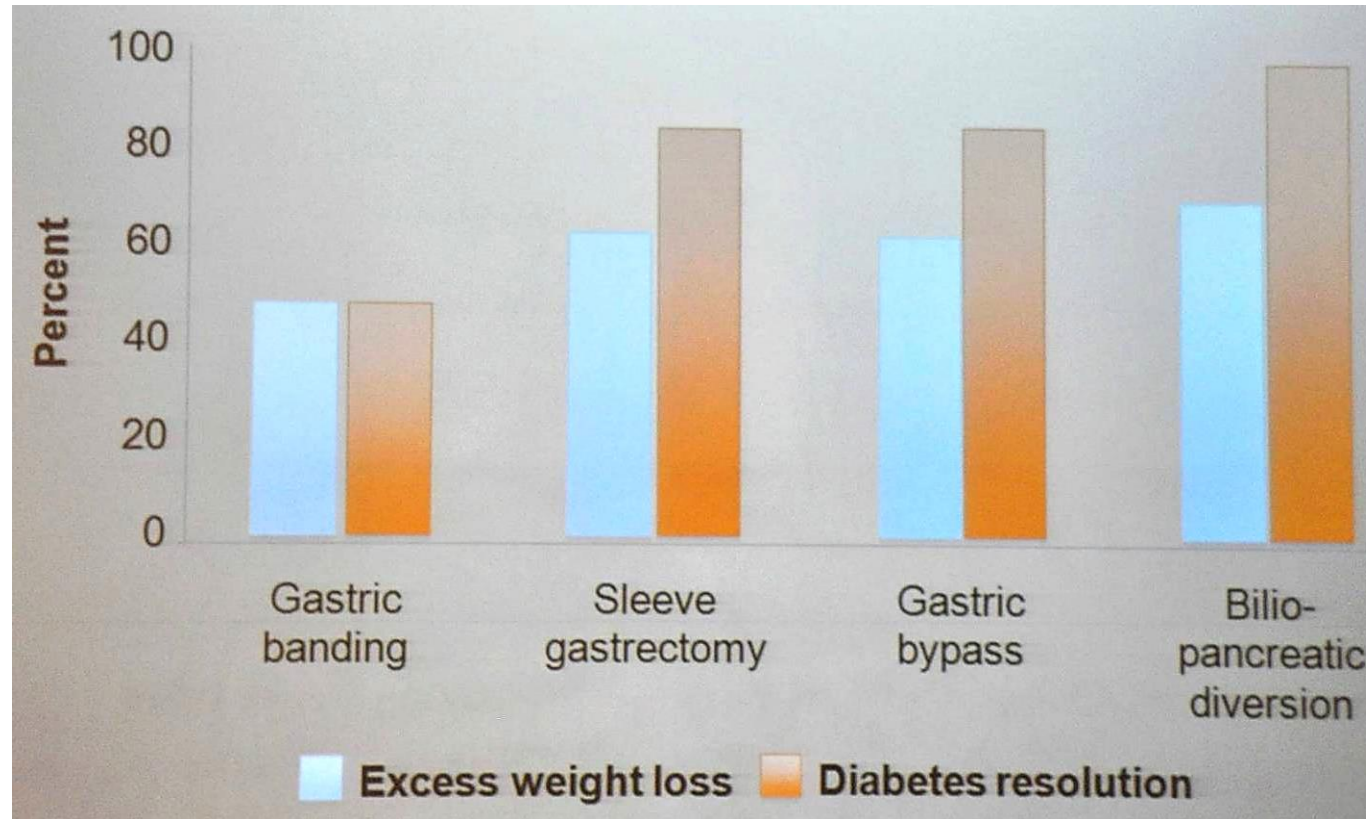
Pendant 1 an de suivi

Rémission incomplète

HbA1c < 6,5%

**AVEC un seul ttt
antidabétique**

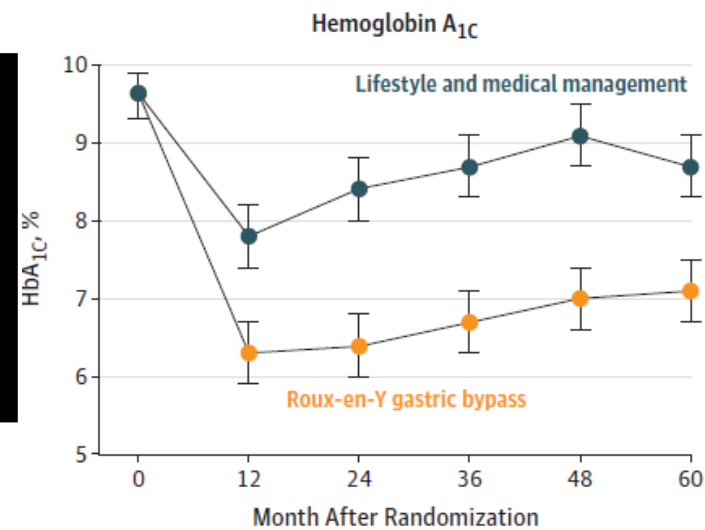
Taux de rémission du diabète sans tenir compte des traitements : 80%



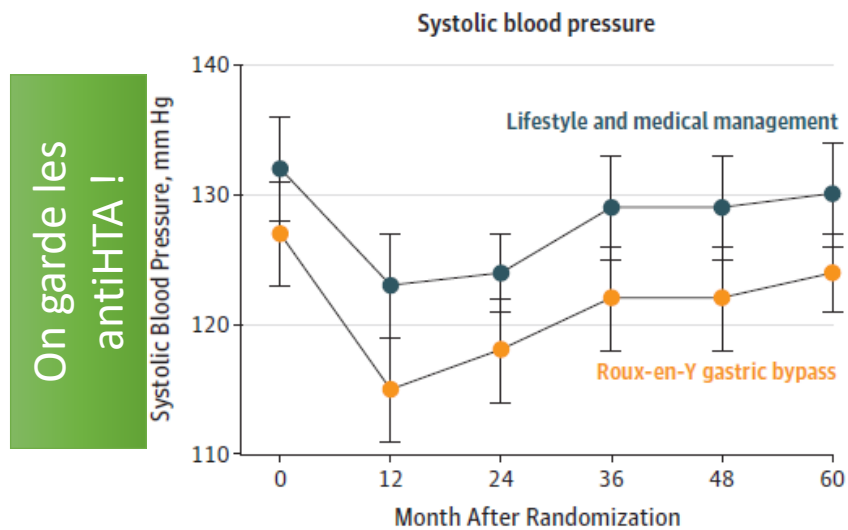
Critères + durs : GAJ < 1,26g/l et 2h post HGPO < 2 g/l et HbA1c < 6.5%

Lifestyle Intervention and Medical Management With vs Without Roux-en-Y Gastric Bypass and of Hemoglobin A_{1c}, LDL Cholesterol, and Systolic Blood Pressure at 5 Years in the Diabetes Sur

On ne sait pas
bien comment
faire !

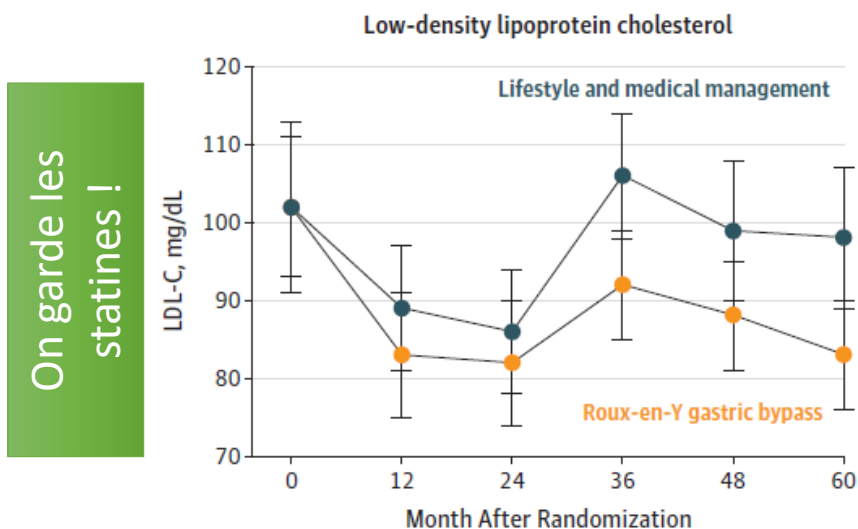


No. of patients						
Lifestyle and medical management	56	56	54	44	42	43
Roux-en-Y gastric bypass	57	57	56	55	54	55

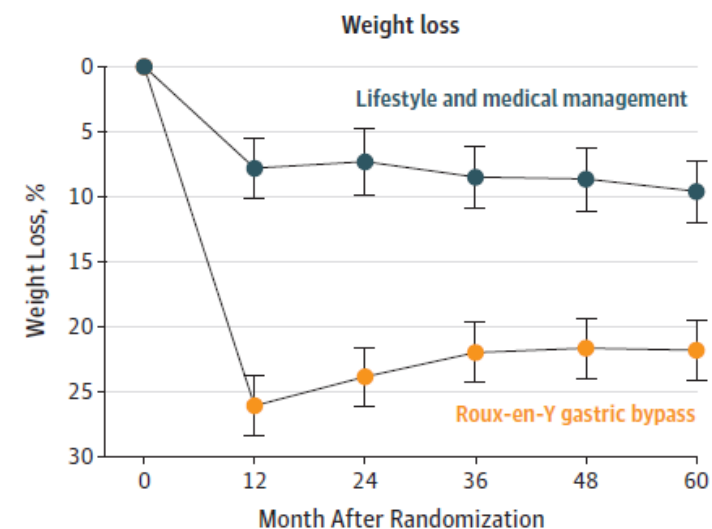


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Action sur
les FRCV



No. of patients						
Lifestyle and medical management	56	56	54	44	42	43
Roux-en-Y gastric bypass	57	57	56	55	54	55



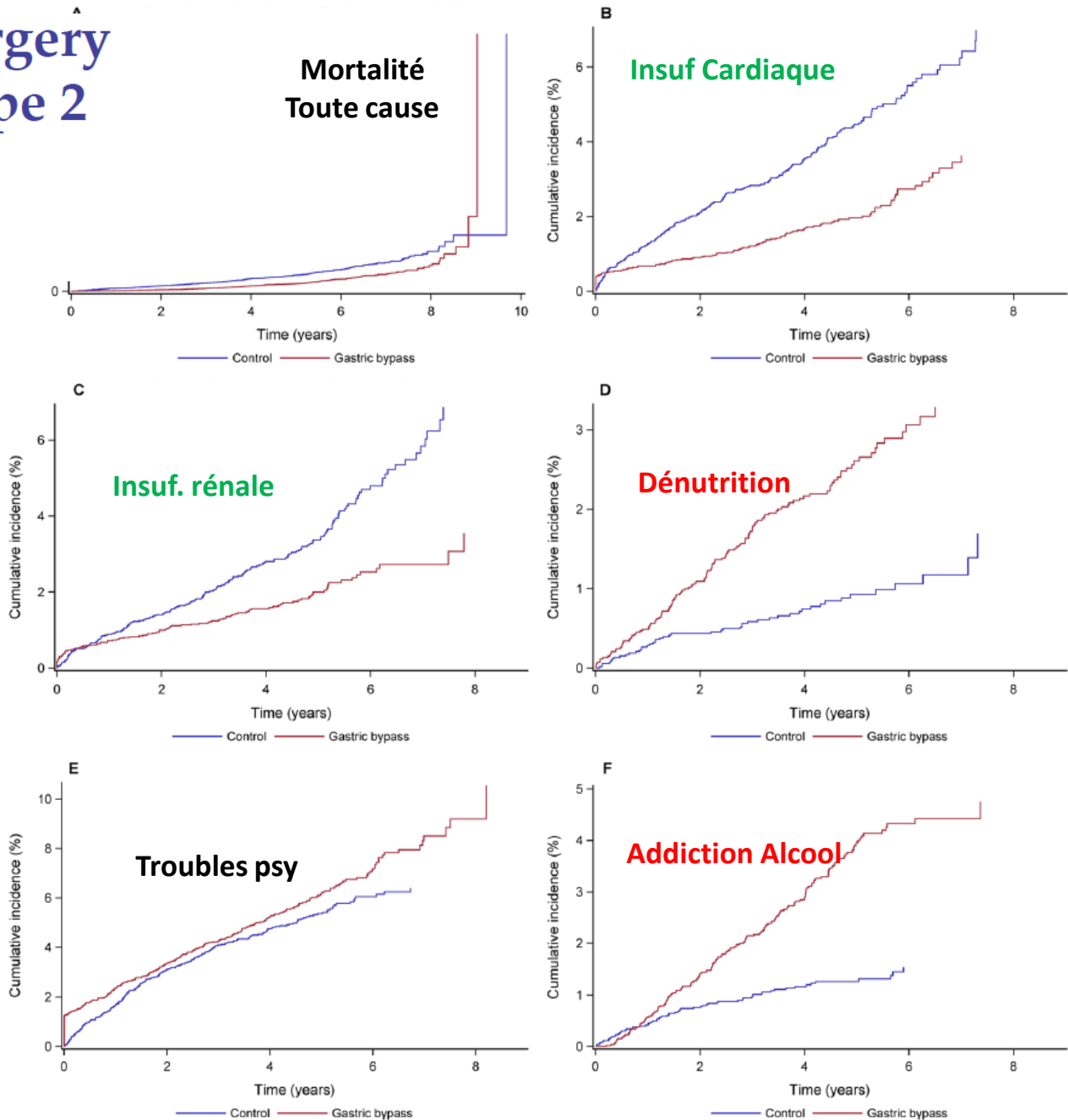
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On garde les
statines !

On garde les
antiHTA !

Pros and cons of gastric bypass surgery in individuals with obesity and type 2 diabetes: nationwide, matched, observational cohort study

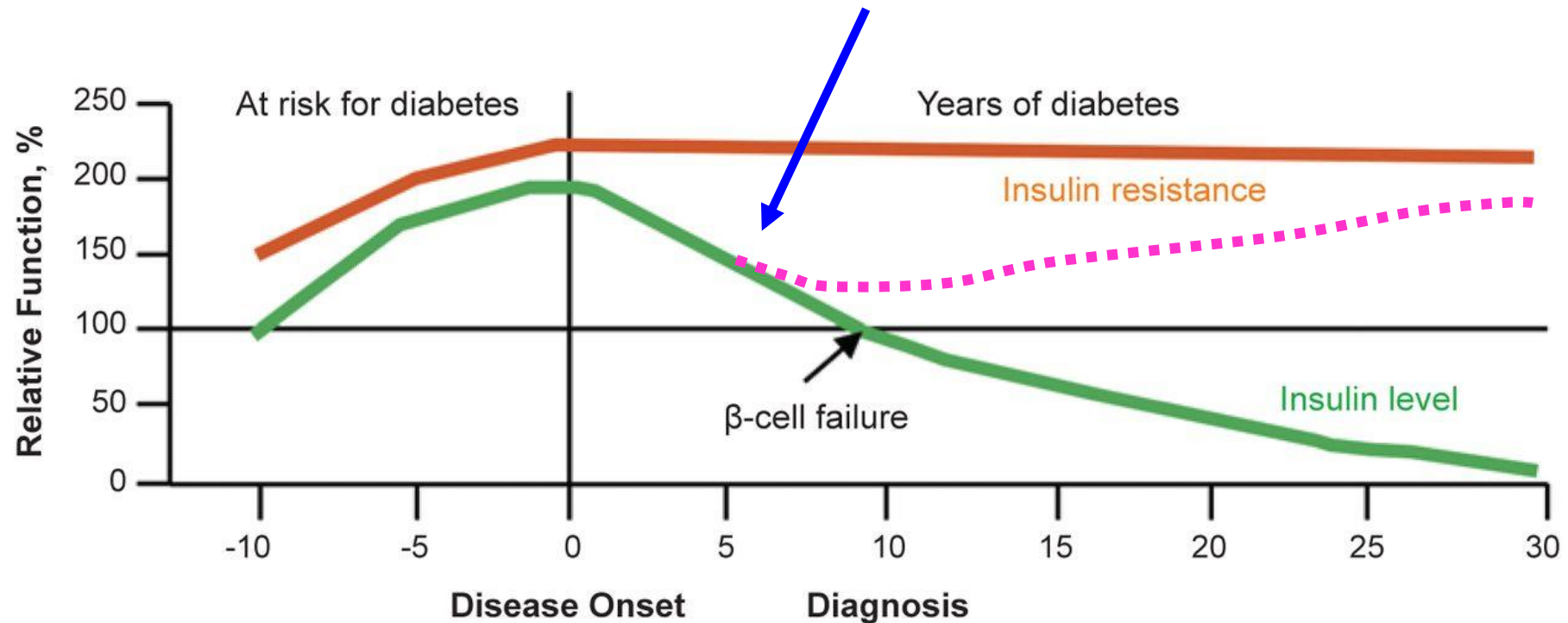
Mettre les score addiction alim chez DT 2



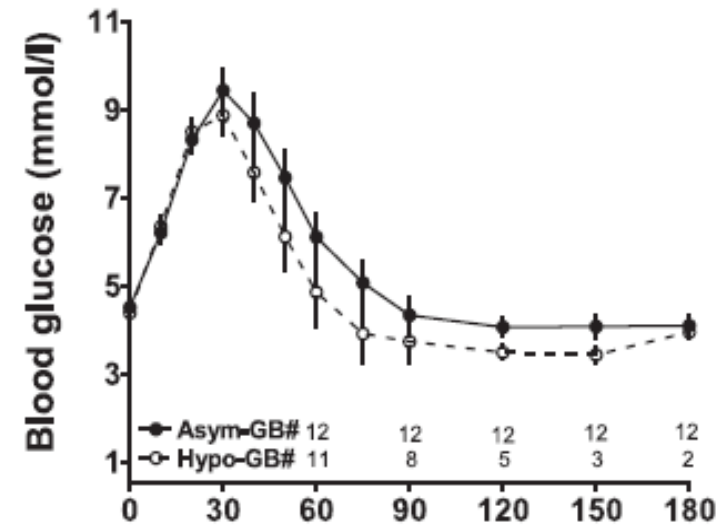
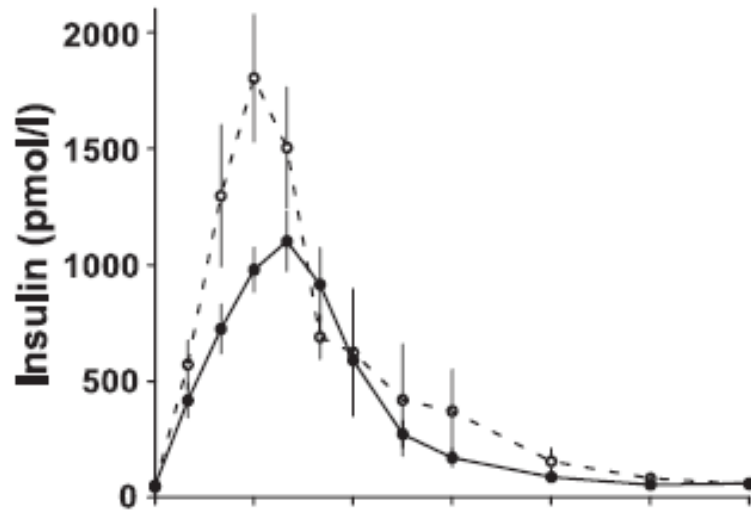
Liakopoulos V, et al. *BMJ Open* 2018;9:e023882. **Figure 1** A–F Cumulative incidence of postoperative outcomes during the 9 years follow-up. All-cause mortality; congestive heart failure; kidney disease; malnutrition; psychiatric disorder; alcohol abuse.

La normalisation aiguë post-opératoire d'une glycémie nécessite une amélioration de la sécrétion d'insuline

Comment éviter ? Comment restaurer ?



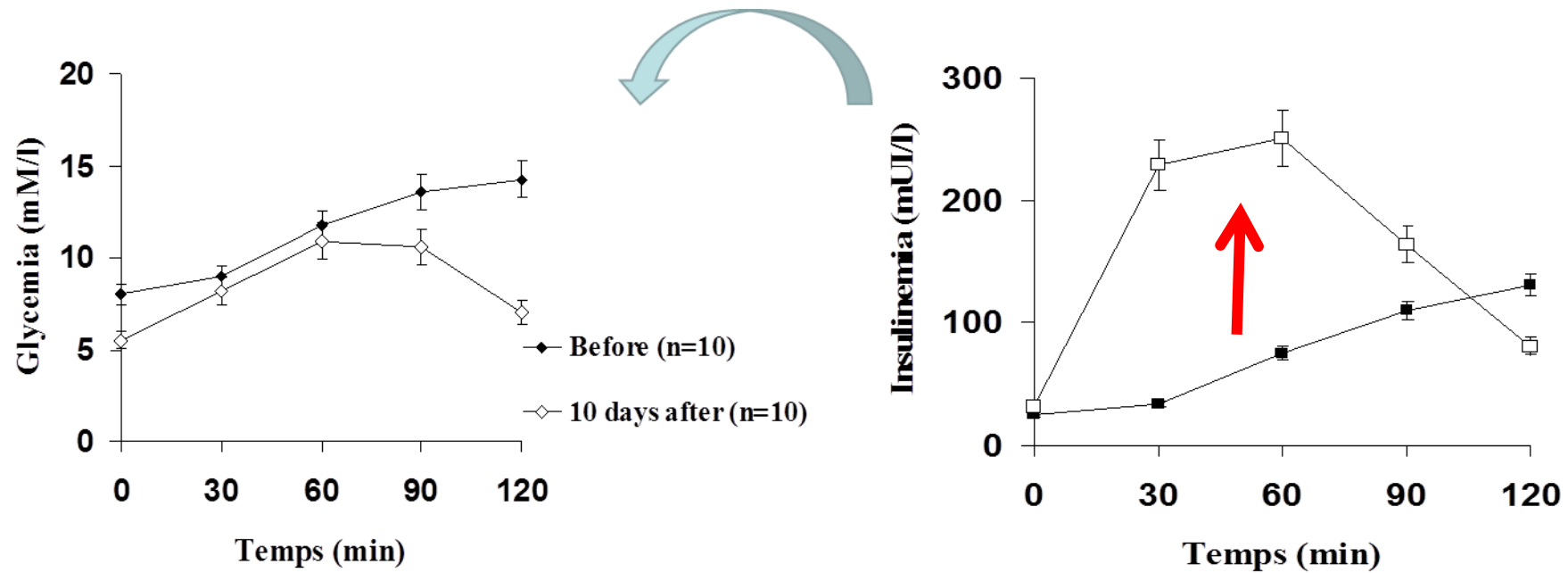
Hypoglycémie post chirurgie



----- Sujets opérés **avec** hypoglycémies symptomatiques

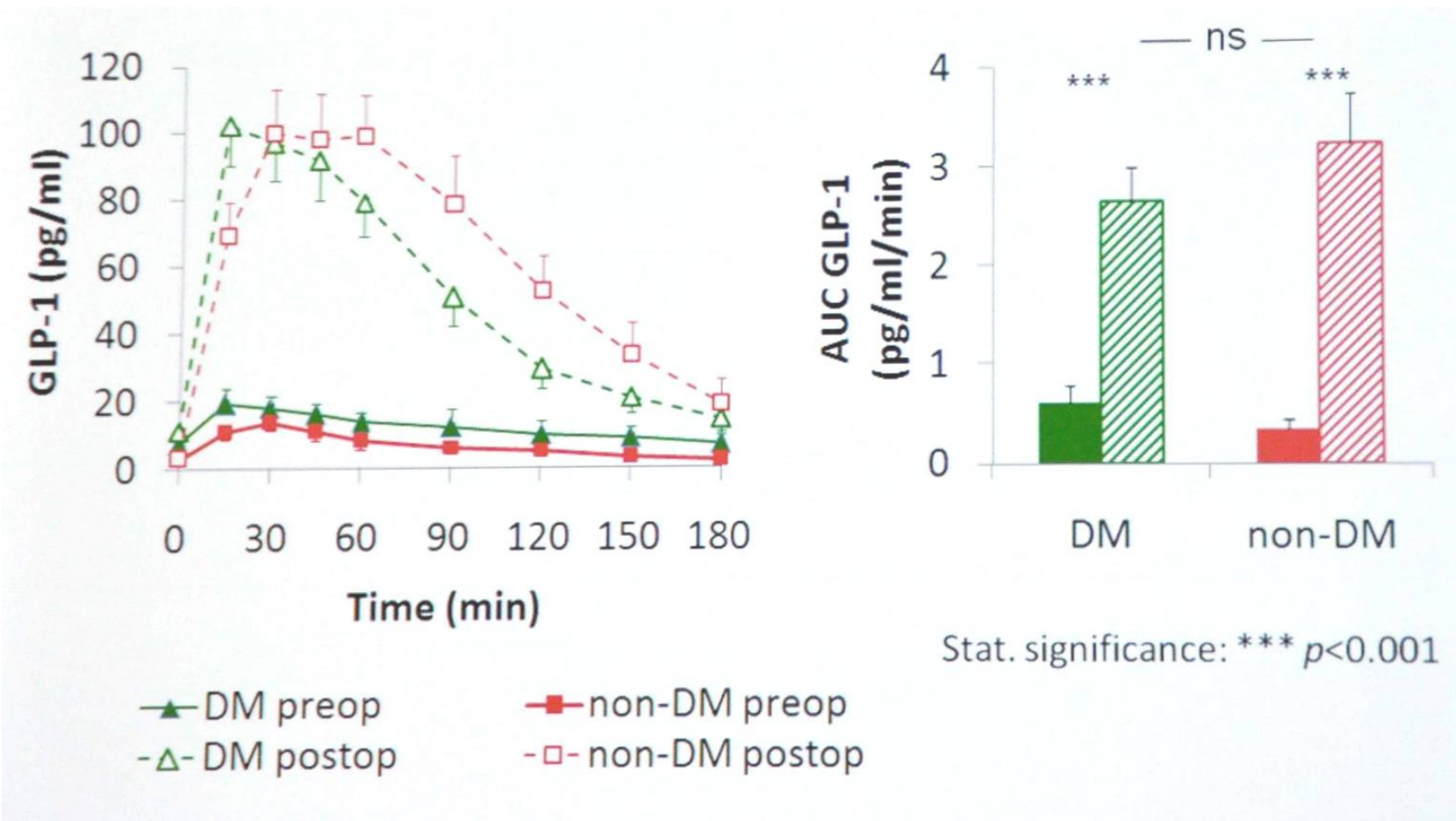
————— Sujets opérés **sans** hypoglycémies

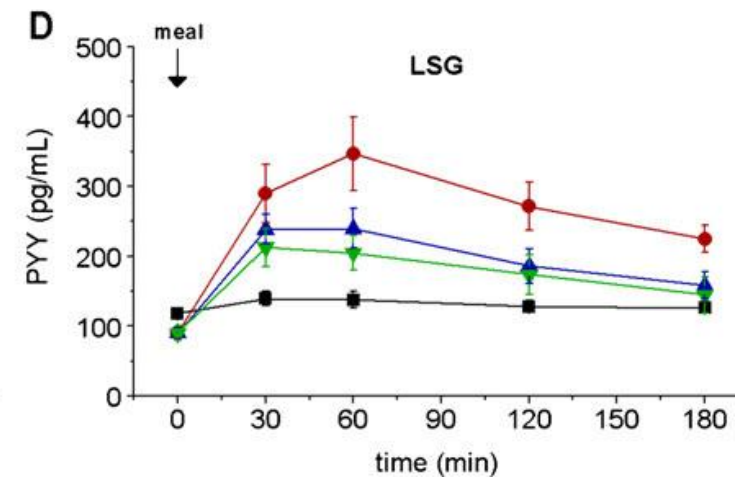
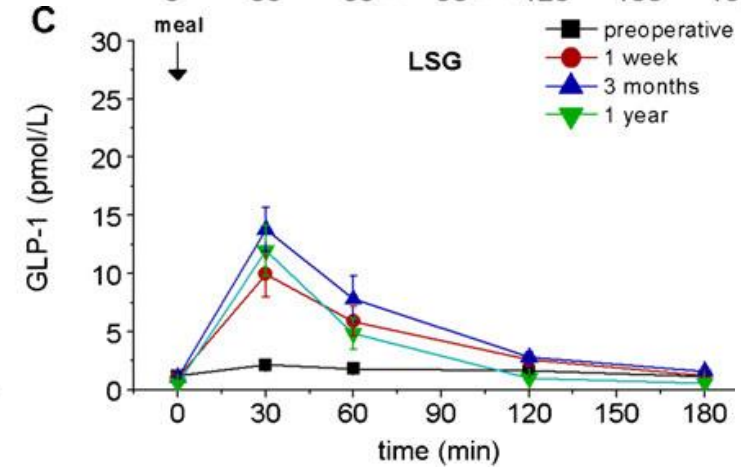
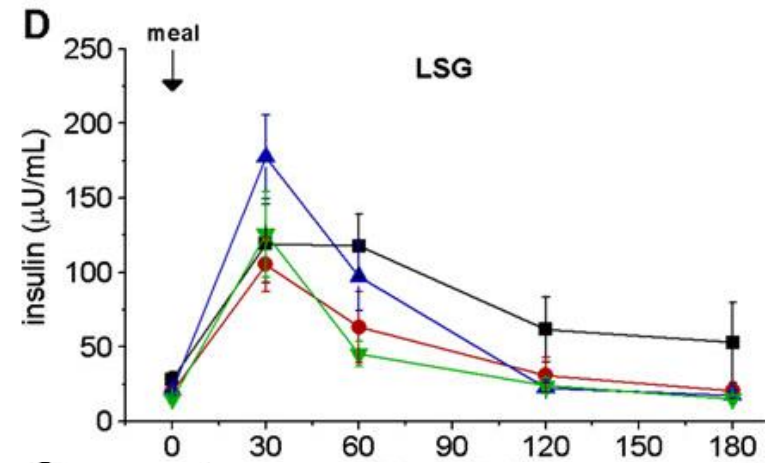
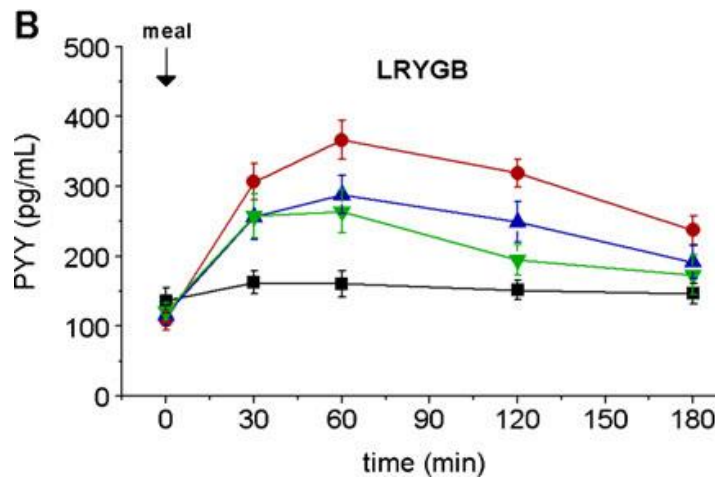
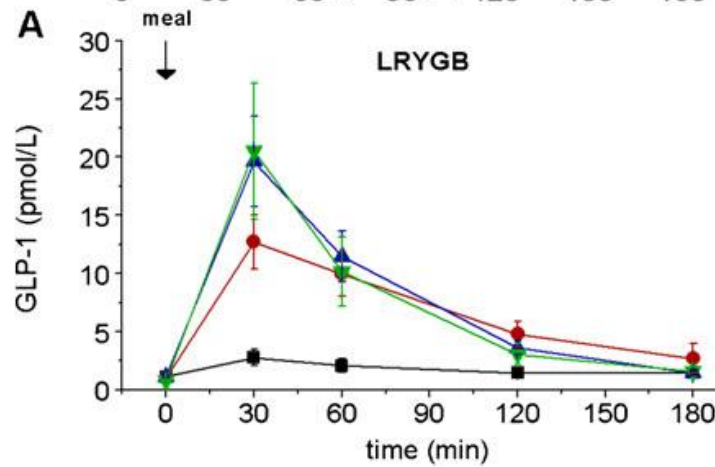
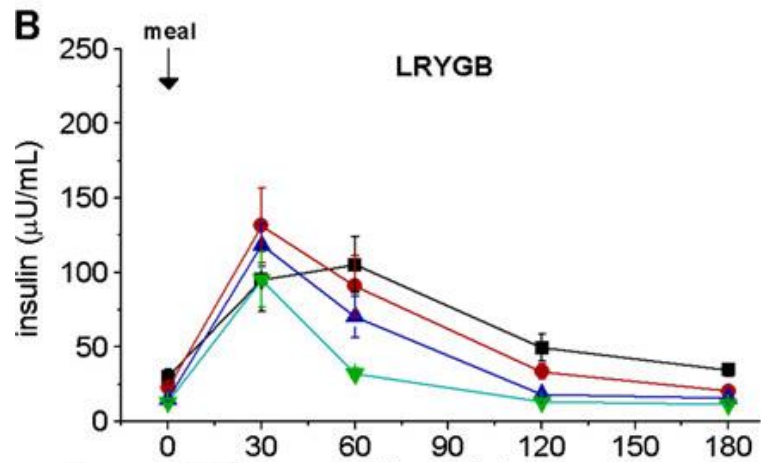
Au stade d'insulinorequérance, y-a-t-il encore des cellules beta ?



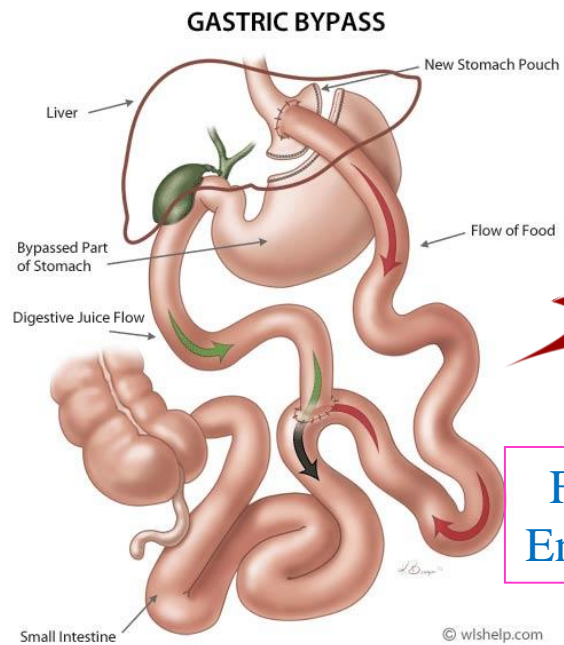
Hypersécrétion précoce de GLP1 (J7 post Xie)

Repas test pris à t0

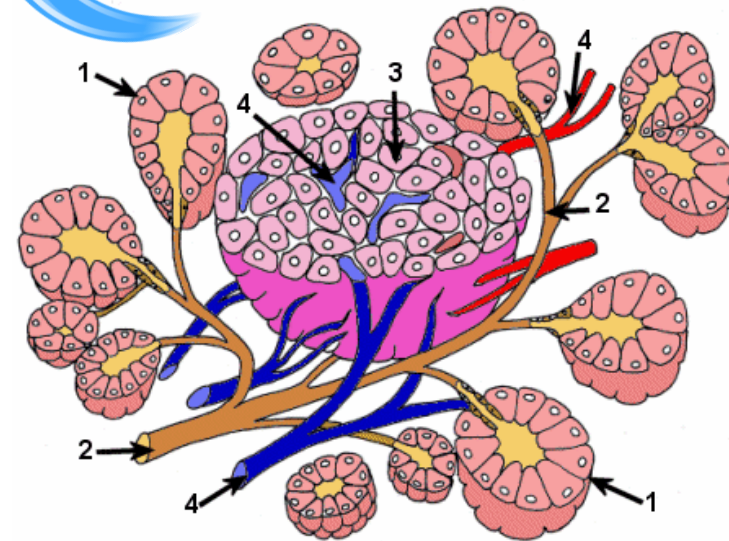




Correction du diabète



Facteur(s)
Endogène(s)



Traitements futurs



- ✓vidange gastrique
- ✓transit intestinal
- ✓détection des nutriments
- ✓acides biliaires

Restriction
calorique

Malabsorption

Trajet des
nutriments

Inflammation

Perte de poids

Sécrétion
d'incrétine

- ✓GLP1
- ✓GIP
- ✓PYY
- ✓exclusions des
anti-incrétones (jéjunum)

Sensibilité à
l'insuline

Gluko/lipotoxicité

Effets
incrétines

Diminution des glycémies
A JEUN et POST PRANDIALES

Bariatric surgery: an IDF statement for obese Type 2 diabetes

J. B. Dixon*, P. Zimmet*, K. G. Alberti† and F. Rubino‡, on behalf of the International Diabetes Federation Taskforce on Epidemiology and Prevention

*Baker IDI Heart and Diabetes Institute, Melbourne, Victoria, Australia †Imperial College London, London, UK ‡Weill Cornell Medical College of Cornell University, New York, NY, USA

Accepted 5 April 2011

Indication d'une chirurgie bariatrique chez le diabétique de type 2 :

- avec un IMC > 35 (idem obésité compliquée)

Facteurs prédictifs de rémission du diabète post chirurgie :

- apparition récente du DT (< 5 ans) ++
- pénétrance familiale du DT peu marquée +++
- absence d'éthylisme présent ou passé