Pouch size: does it really matter ?

Prof Michel Suter

Consultant-surgeon, Riviera-Chablais Hospital, Rennaz, Switzerland

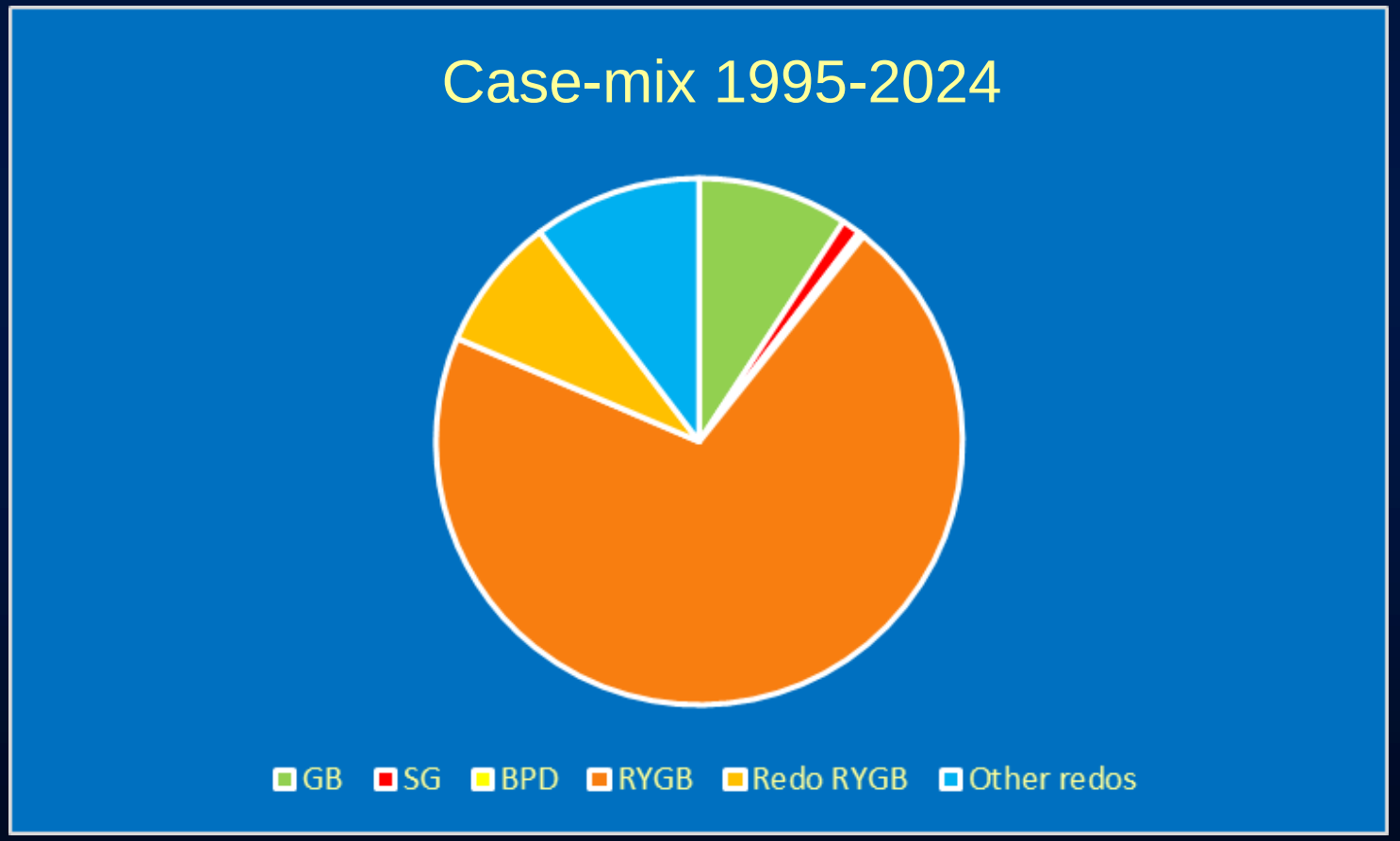
Faculty of Biology and Medicine, University of Lausanne

UNIL | Université de Lausanne

HÔPITAL RIVIERA-CHABLAIS
VAUD-VALAIS

Disclosures

Nothing to disclose



RYGB: mechanisms of action

- Reduction of appetite and enhancement of satiety through neuro-hormonal mechanisms (ghrelin, GLP-1, PYY, OXI, …)
- Increase in circulating biliary acids
- Modifications of the microbioma
- Mechanical restriction
- …

The role of restriction

- Although it is debated, mechanical restriction most certainly plays a role in RYGB
- Patients are happy to feel it and complain if it fades away. It is a reminder for eating slowly
- Large pouches based on fundus were replaced by smaller lesser-curvature based pouches
- Adding restriction for RWG is usually efficient, at least temporarily, and leads to enhanced weight loss
- Some authors use a band around the gastric pouch

Restriction: mechanisms

Size and distensibility of the gastric pouch

Diameter of the gastrojejunostomy

Adaptability of the Roux limb

External banding

Hormonal effects

Rapid emptying of the pouch

Early arrival of food in the distal bowel

Increased stimulation of L-cells in the ileum

Pouch size:
What does the literature say ?

Obesity Surgery, 17, 317-320 *2007*

Does Pouch Size Matter?

Atul K. Madan, MD, FACS[1]; David S. Tichansky, MD, FACS[1]; Jerry C. Phillips, MD[2]

59 patients, Mean BMI = 48

Mean FU 19 months (6-36)

Upper GI study on POD1

Success defined according to EWL, weight, TWL

Table 1. Categories for pouch size

Pouch Size	Description
Size I	Smaller than average pouch
Size II	Average pouch
Size III	Larger than average pouch
Size IV	Over 3 times the size of an average pouch

Table 2. Categories for amount of fundus

Amount of Fundus	Description
Fundus 0	No fundus appreciated
Fundus I	Slight amount of fundus barely noted
Fundus II	Fundus noted
Fundus III	Large amount of fundus noted
Fundus IV	Majority of the pouch was fundus

Obesity Surgery, 17, 317-320

2007

Does Pouch Size Matter?

Atul K. Madan, MD, FACS[1]; David S. Tichansky, MD, FACS[1]; Jerry C. Phillips, MD[2]

Conclusion: no correlation between pouch size and/or presence of fundus and success

Table 3. Weight loss and success by pouch size

Grade	%EWL	Success A	Success B	Success C
Size I	70%	92%	78%	92%
Size II	74%	100%	93%	86%
Size III	64%	100%	87%	100%
P value (all NS)	0.59	0.42	0.54	0.56

Table 4. Weight loss and success by amount of fundus

Grade	%EWL	Success A	Success B	Success C
Fundus 0	72%	92%	77%	92%
Fundus I	69%	92%	71%	92%
Fundus II	72%	94%	87%	94%
Fundus III	66%	100%	83%	83%
P value (all NS)	0.92	0.92	0.78	0.92

Obesity Surgery, 17, 317-320 *2007*

Does Pouch Size Matter?

Atul K. Madan, MD, FACS[1]; David S. Tichansky, MD, FACS[1]; Jerry C. Phillips, MD[2]

Conclusion: no correlation between pouch size and/or

Limitations

Small number of patients
Limited duration of follow-up

Fundus II	72%	94%	87%	94%
Fundus III	66%	100%	83%	83%
P value (all NS)	0.92	0.92	0.78	0.92

Comparison of Size of Proximal Gastric Pouch and Short-Term Weight Loss following Routine Upper Gastrointestinal Contrast Study after Laparoscopic Roux-en-Y Gastric Bypass

Akihiro Nishie, MD[1]; Bruce Brown, MD[1]; Thomas Barloon, MD[1]; David Kuehn, MD[1]; Isaac Samuel, MD[2]

Obesity Surgery, 17, 1183-1188

Retrospective study of 82 patients

Pouch area measured on POD1 as proxy for pouch volume

Evaluation up to 24 months post-op

Pouch size 30 ± 15 cm^2 (8-89)

No correlation found between pouch area and weight loss

Comparison of Size of Proximal Gastric Pouch and Short-Term Weight Loss following Routine Upper Gastrointestinal Contrast Study after Laparoscopic Roux-en-Y Gastric Bypass

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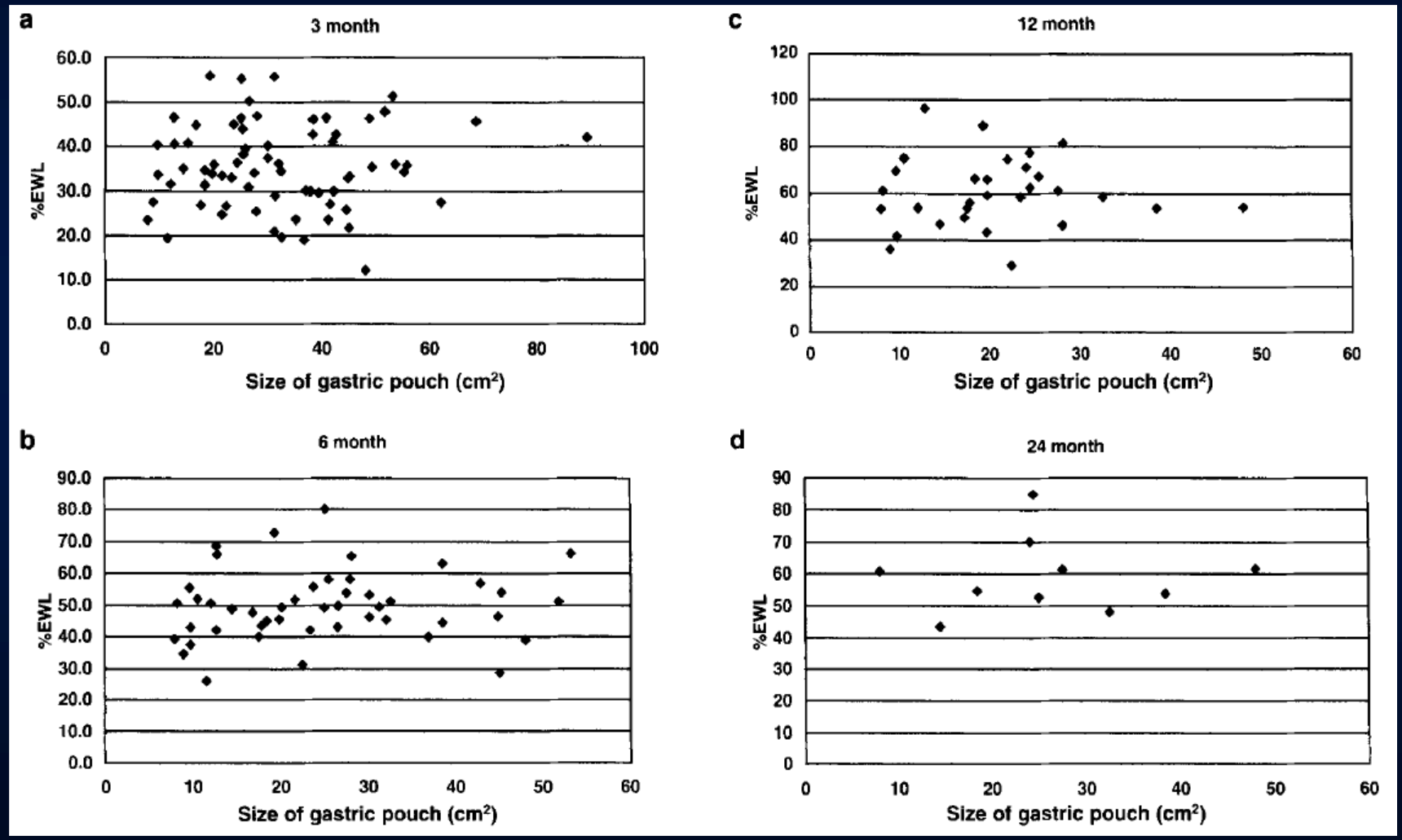

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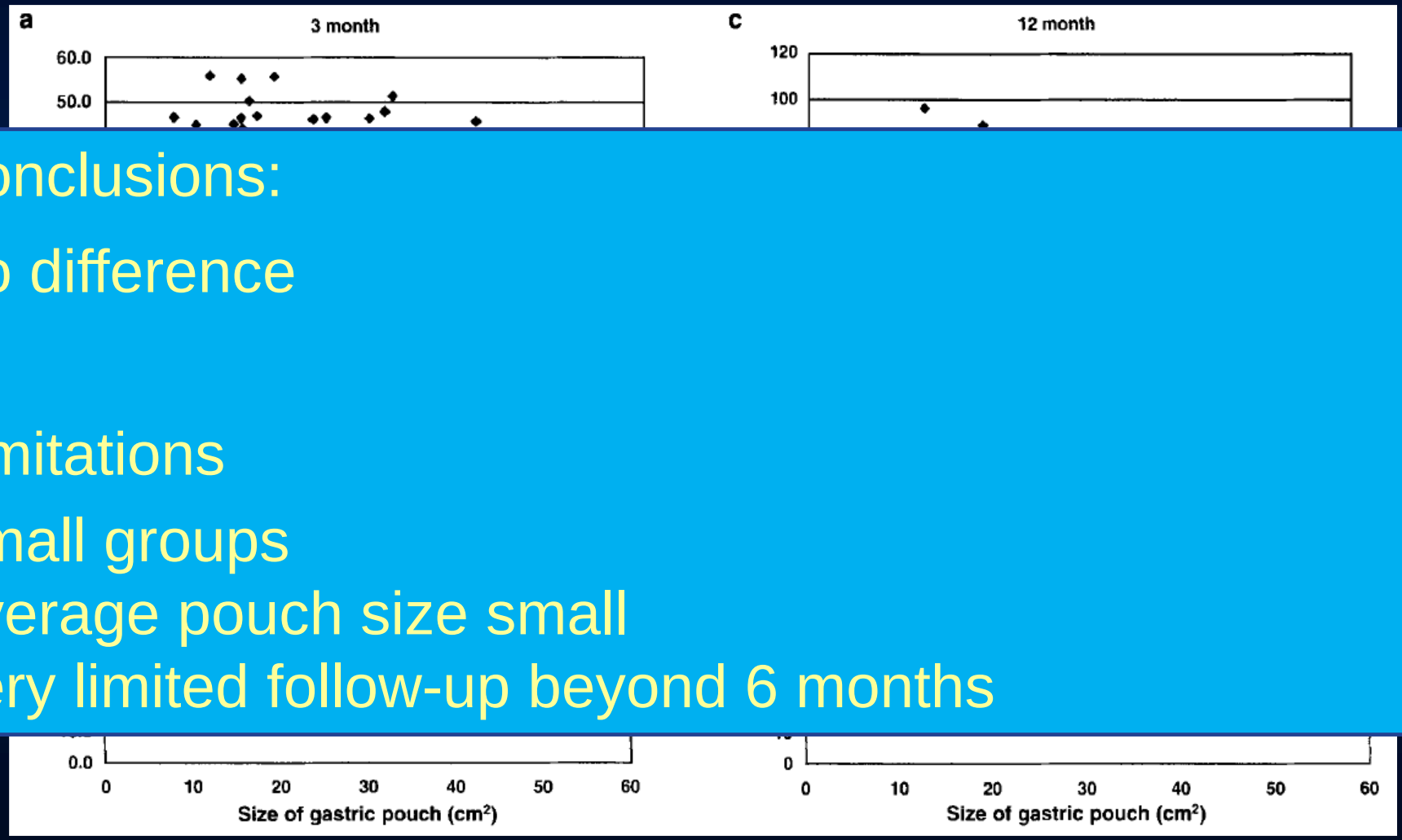

Conclusions:

No difference

Limitations

Small groups

Average pouch size small

Very limited follow-up beyond 6 months

Size matters: gastric pouch size correlates with weight loss after laparoscopic Roux-en-Y gastric bypass

K. Roberts,[1] A. Duffy,[1] J. Kaufman,[1] M. Burrell,[2] J. Dziura,[3] R. Bell[1]

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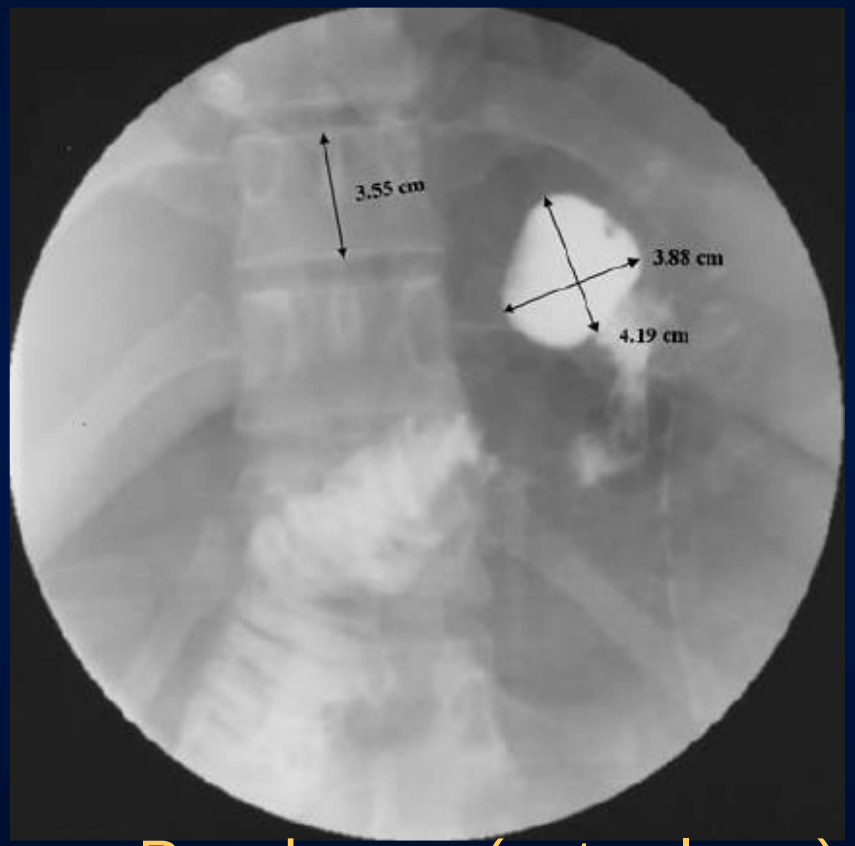
Surg Endosc (2007) 21: 1397–1402
DOI: 10.1007/s00464-007-9232-x

- 320 patients between 2002 and 2005
- Pouch size measured on POD1
- Regression between pouch size and EWL @ 6 and 12 months
- 81,6 % females
- Mean BMI = 51,1 kg/m^2
- FU 79 % @ 6 months and 53 % @ 12 months
- Mean pouch size = 64 cm^2 (9-248)



Pouch area (not volume) determined at maximal distension

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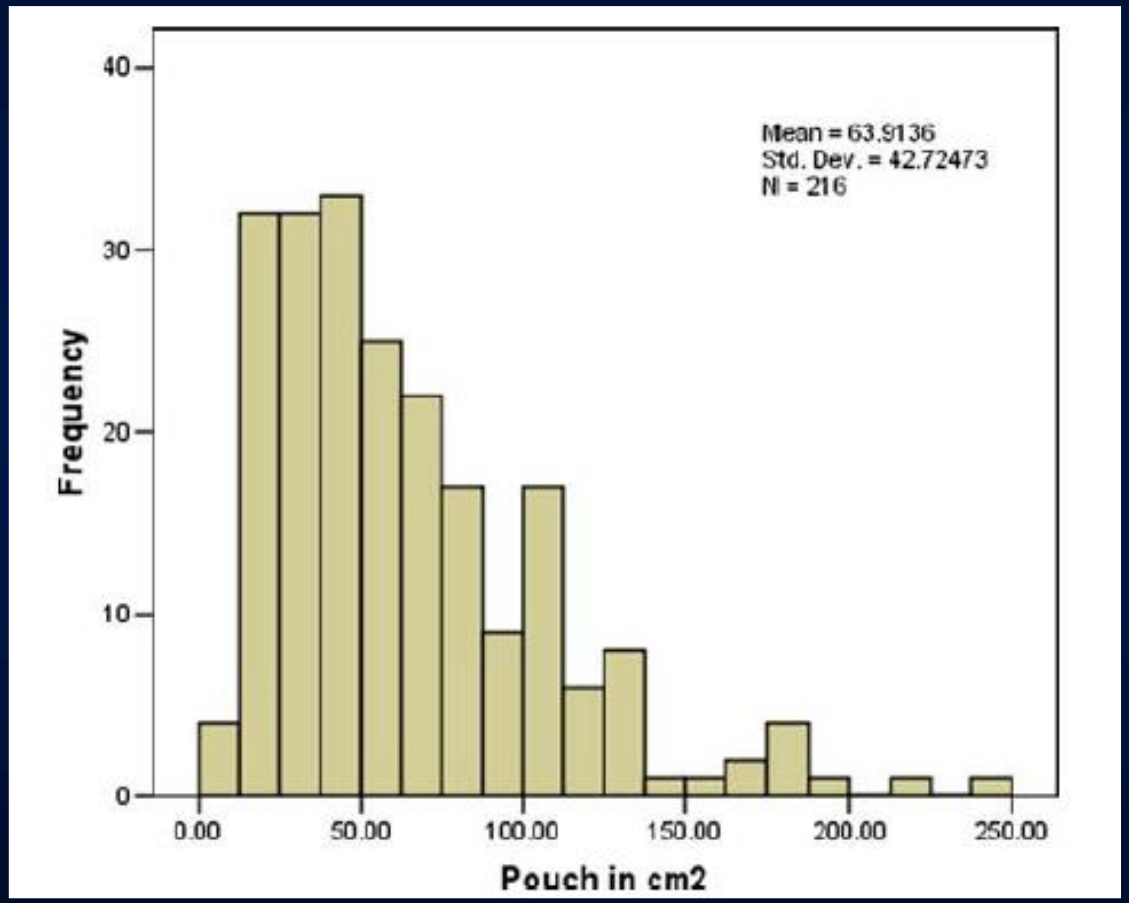

	Mean	Range	SD	*n* (%)
Age (years)	41.26	17–64	10.42	320
Females				261 (81.6)
Males				59 (18.4)
Preoperative BMI (kg/m^2)	51.14	36.9–89.9	8.74	320 (100)
Pouch size (cm^2)	63.91	8.6–248.0	63.91	216 (67.5)
%EWL at 6 months	50.46	13.4–85.8	12.27	255 (79.7)
%EWL at 12 months	62.45	14.6–98.1	16.18	170 (53.1)

Pouch size tends to be larger in high BMI and male sex patients

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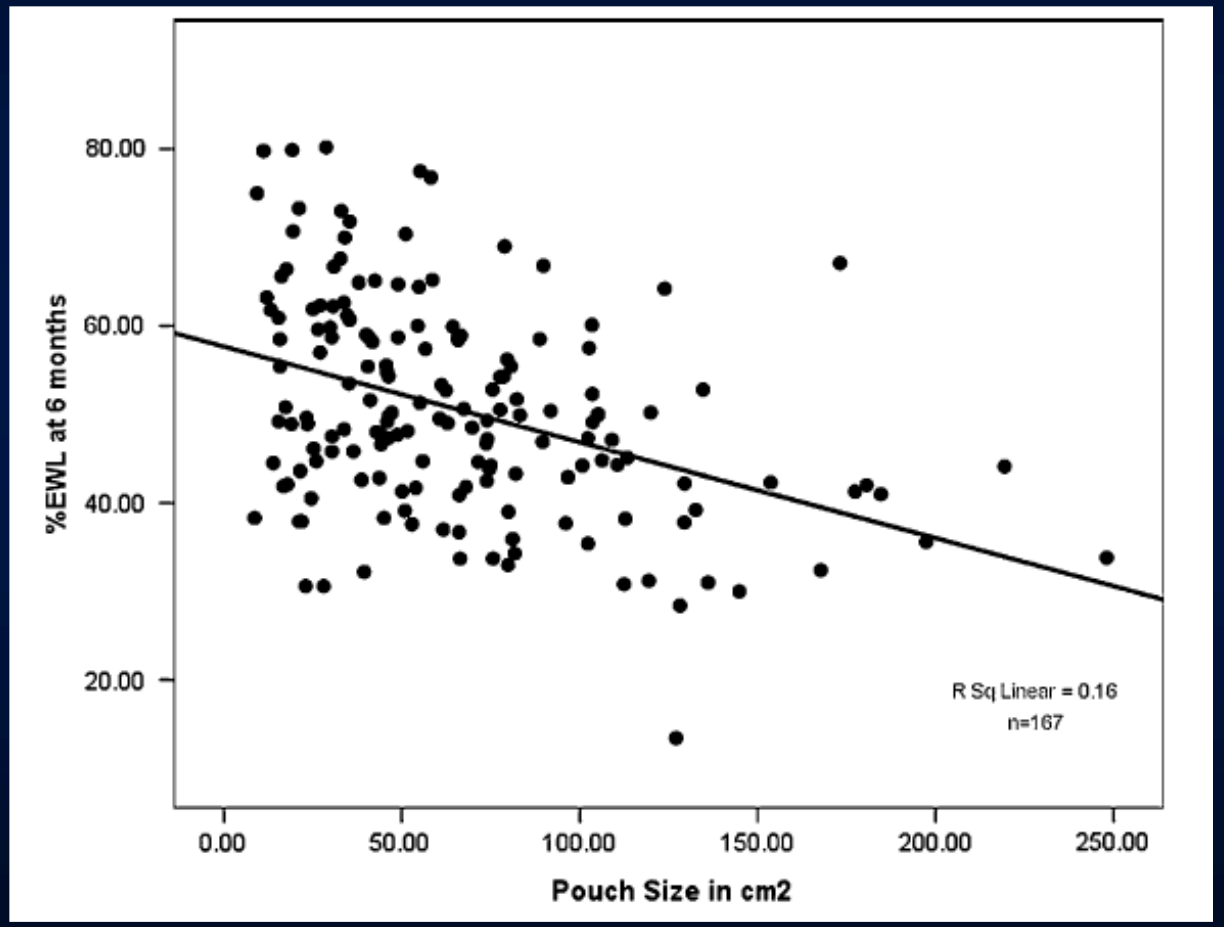

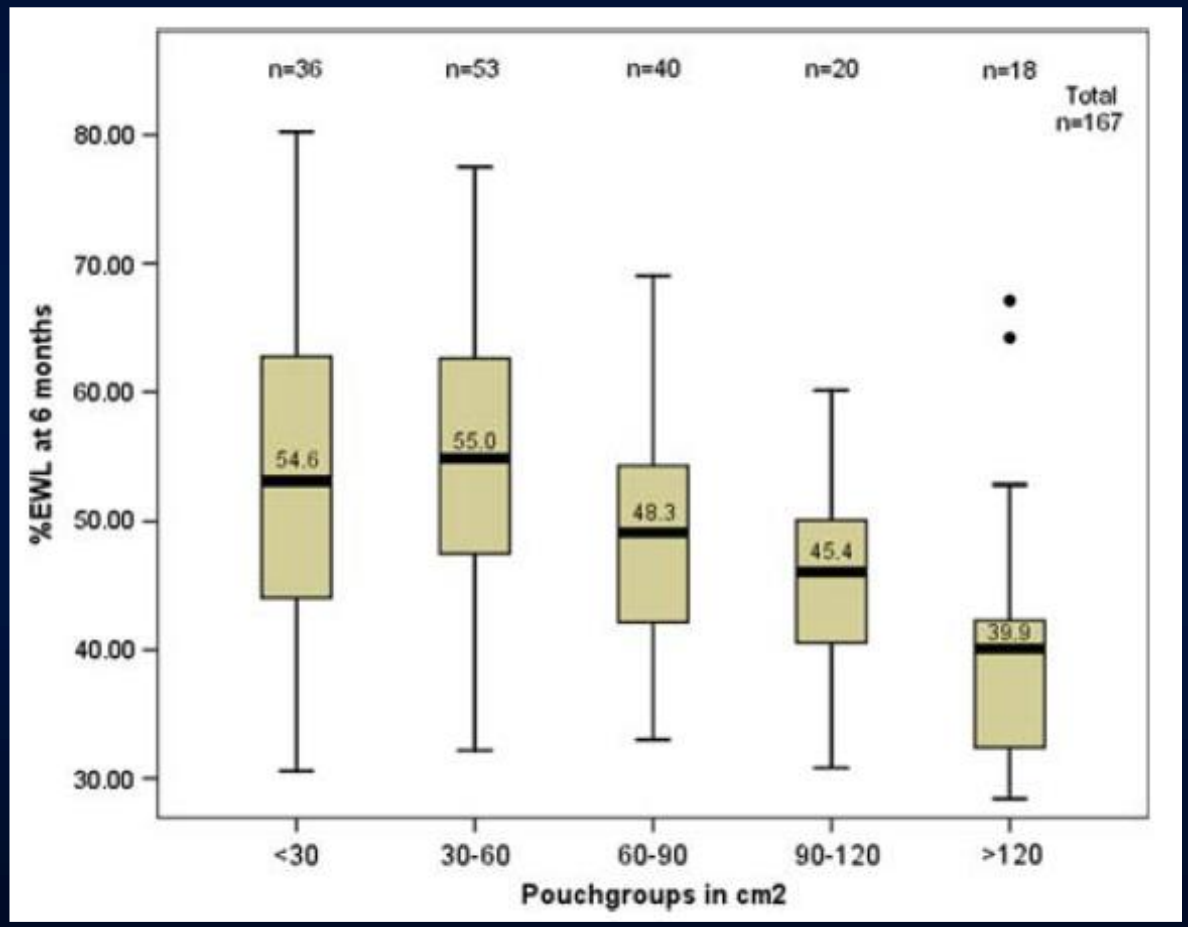

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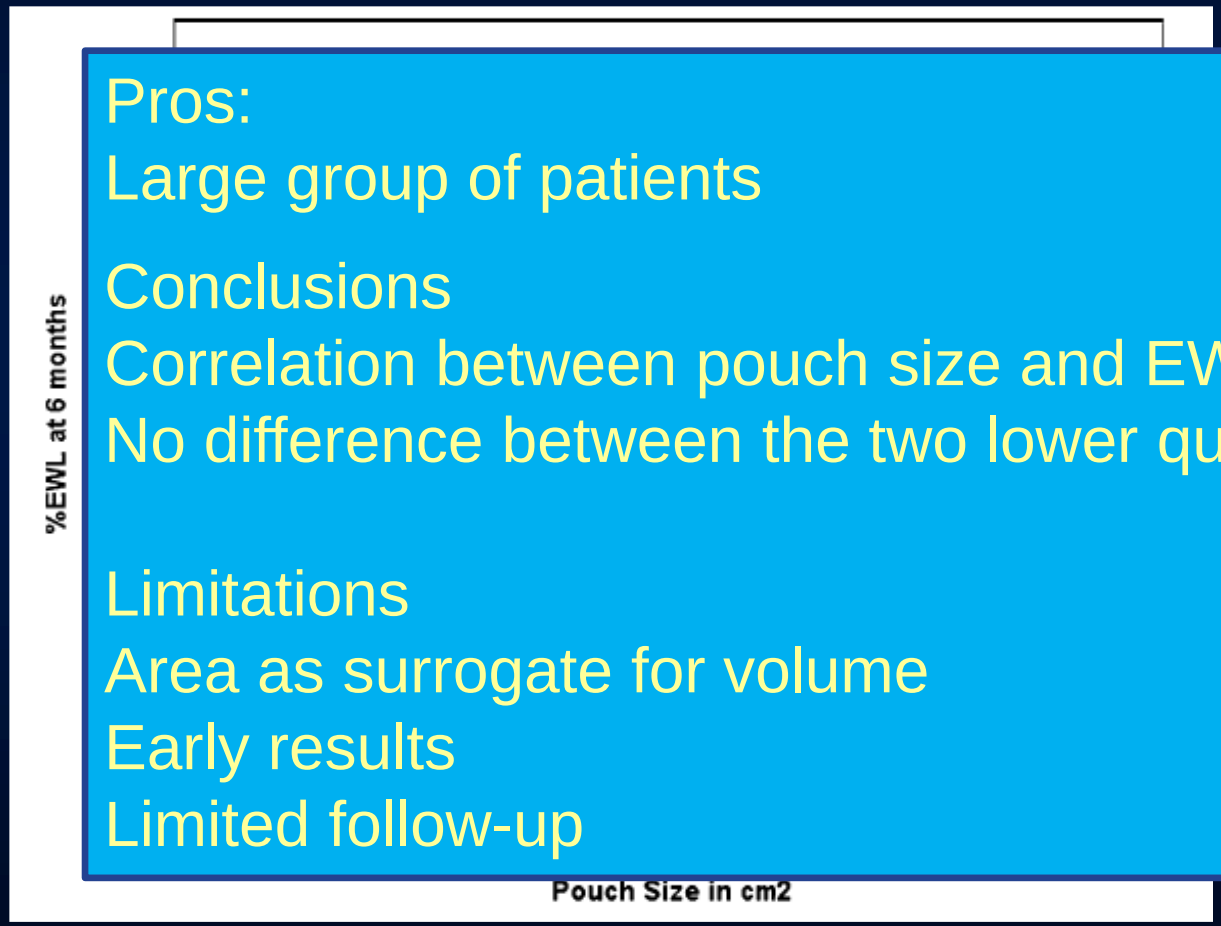

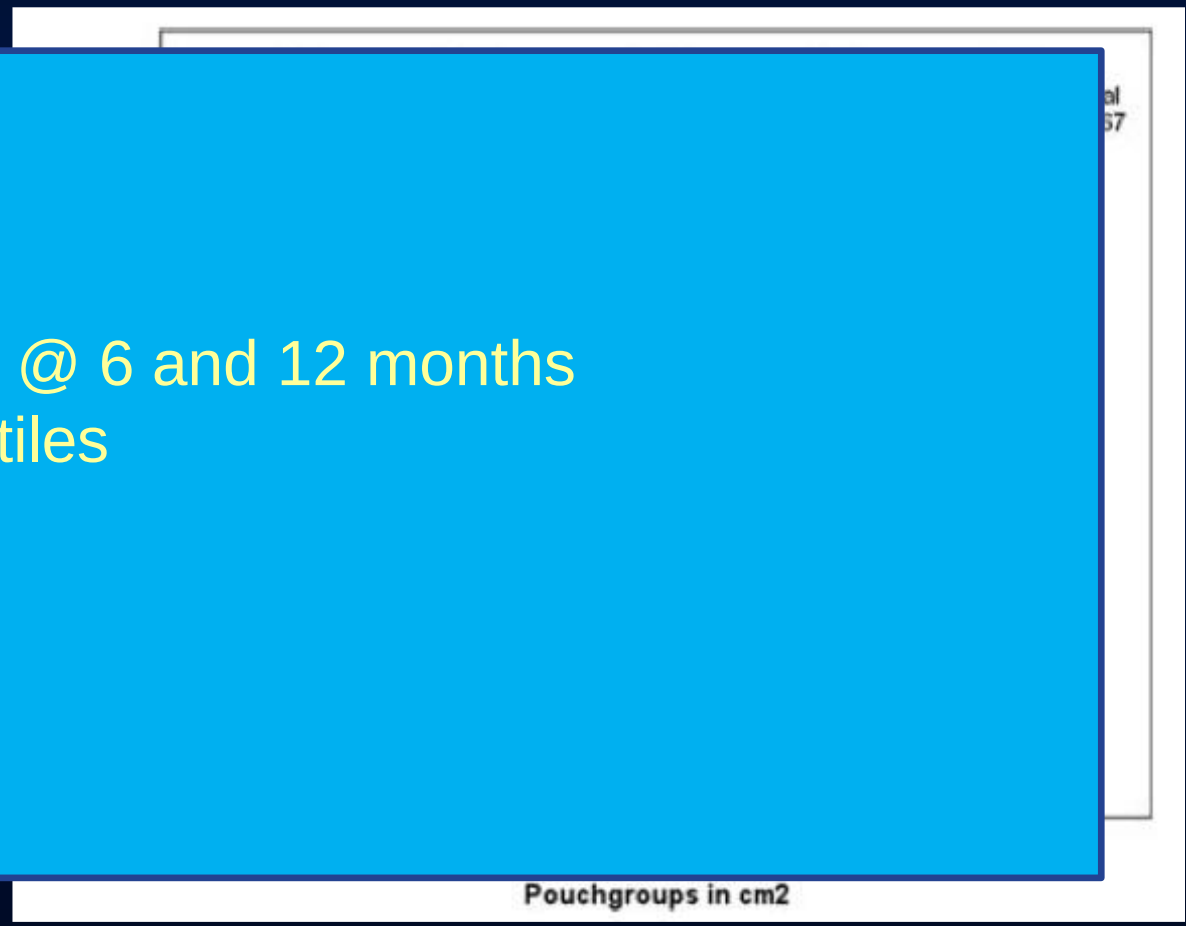

Pros:
Large group of patients

Conclusions
Correlation between pouch size and EWL @ 6 and 12 months
No difference between the two lower quintiles

Limitations
Area as surrogate for volume
Early results
Limited follow-up

Factors Associated With Weight Loss After Gastric Bypass

Guilherme M. Campos, MD[1], Charlotte Rabl, MD[1], Kathleen Mulligan, PhD[2], Andrew Posselt, MD, PhD[1], Stanley J. Rogers, MD[1], Antonio C. Westphalen, MD[3], Feng Lin, MS[4], and Eric Vittinghoff, PhD[4]

Arch Surg. 2008 ; 143(9): 877–884.

Retrospective study of 361 patients operated 2003-2006

12 months follow-up

Pouch size (area) determined on POD1

Comparison between patients with EWL > or < 40 %

86 % females

Mean BMI = 52 kg/m^2

Mean pouch size = 26 cm^2 (7 – 78)

Follow-up 85% @ 12 months

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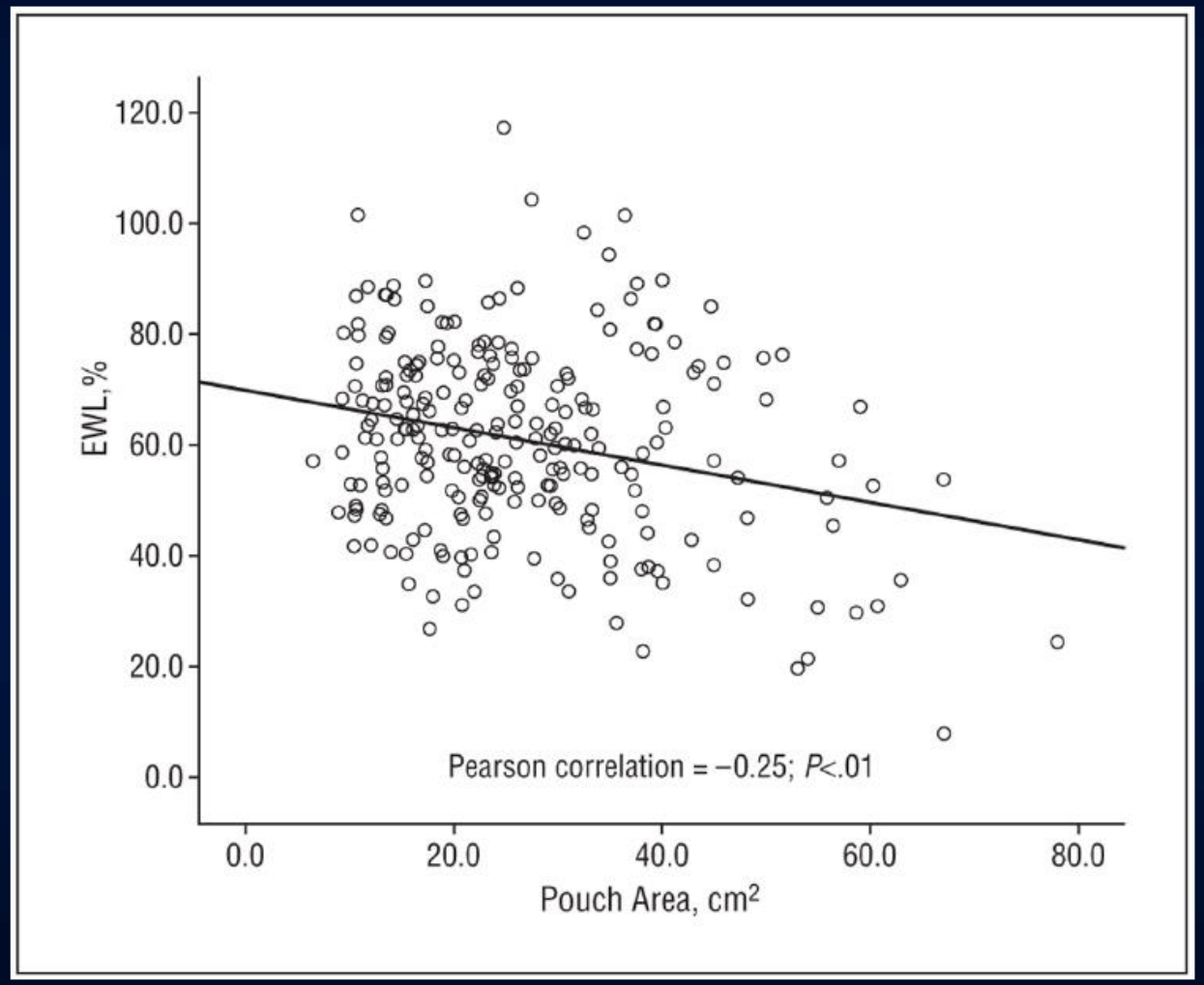

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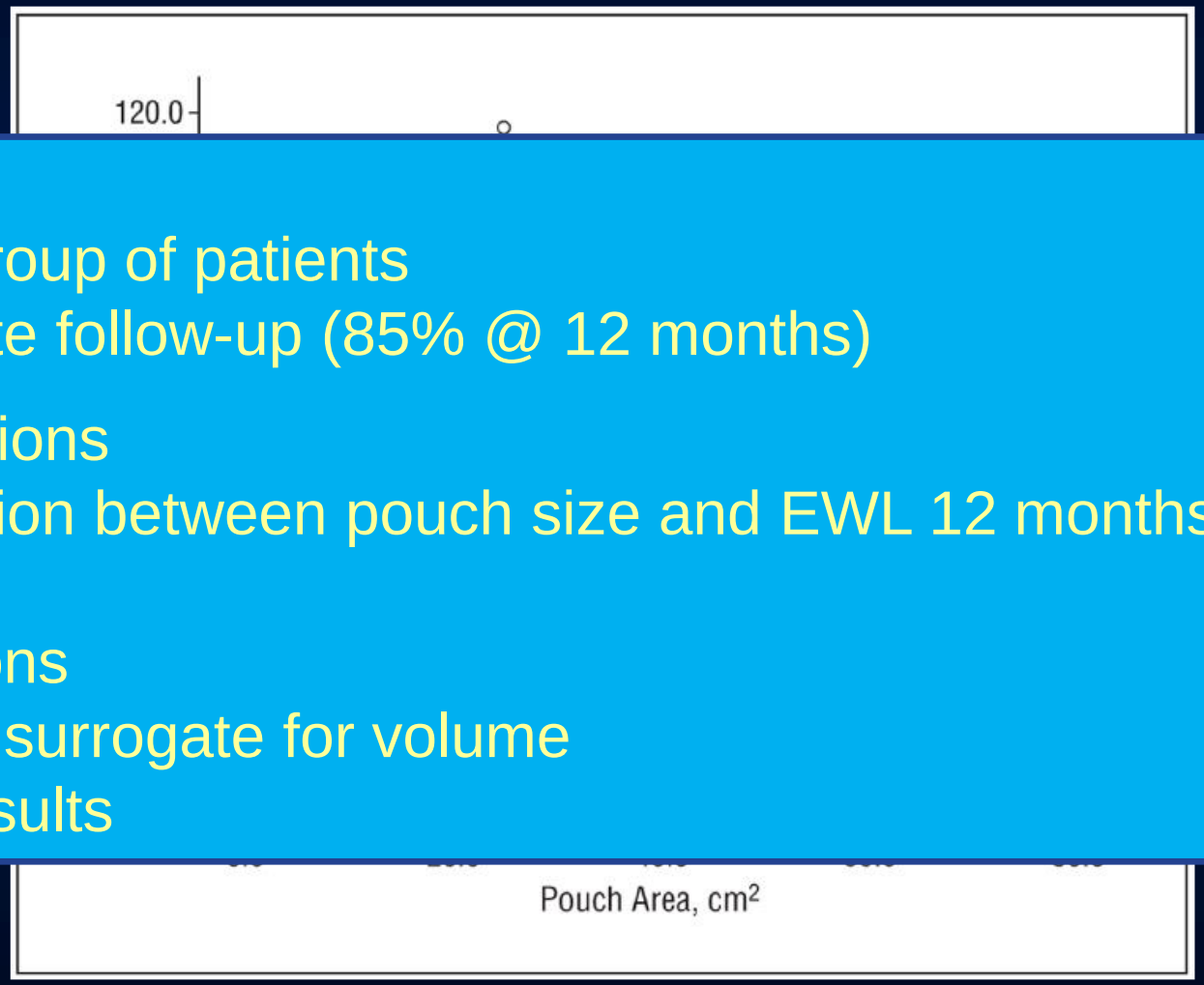

Pros:
Large group of patients
Adequate follow-up (85% @ 12 months)

Conclusions
Correlation between pouch size and EWL 12 months

Limitations
Area as surrogate for volume
Early results

Original article

Lack of correlation between variation in small-volume gastric pouch size and weight loss after laparoscopic Roux-en-Y gastric bypass

Elizabeth A. O'Connor, M.D., Arthur M. Carlin, M.D.

Department of Surgery, Henry Ford Hospital, Detroit, Michigan

Received May 12, 2007; revised November 18, 2007; accepted December 26, 2007

Surgery for Obesity and Related Diseases 4 (2008) 399–403

- 231 patients operated between 2004 and 2005
- 90 % females
- Mean BMI = 48
- Hand-sewn gastrojejunostgomy calibrated at 11 mm
- Pouch size calculated based on length of vertical staple line (number of 45 mm cartridges used) with calibration tube
- Follow-up @ 12 months

Original article

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Table 1
Gastric pouch volume correlated with %EWL*

Gastric pouch volume (cm^3)	Patients (n)	%EWL at 1 yr
10	4	68.5 ± 22
12.5	54	66.9 ± 16
15	135	65.3 ± 16
17.5	26	66.0 ± 14
20	12	62.0 ± 14

%EWL = percentage of excess weight loss.
* $P = .875$.

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Table 1

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Gastric pouch volume (cm^3)	Patients (n)	%EWL at 1 yr
20	12	62.0 ± 14

%EWL = percentage of excess weight loss.

* $P = .875$.

Conclusions

With small pouches < 20 cm^3, the size does not affect weight loss after 12 months

Effect of Roux-en-Y Gastric Bypass with Different Pouch Size in Chinese T2DM Patients with BMI 30–35 kg/m^2

Yixing Ren · Wah Yang · Jingge Yang · Cunchuan Wang

OBES SURG (2015) 25:457–463
DOI 10.1007/s11695-014-1411-y

- Prospective RCT
- 76 patients with obesity and T2D
- Small and large pouches determined using the scale on stapler
  - Small pouch: 10-20 ml
  - Large pouch: 25-35 ml
- BMI: 30-35 kg/m^2
- Age: 25-60 years
- End-points: weight loss, BMI, HbA_1c, glucose @ 12 months

Height
Small: 5 cm
Large: 6 cm

Width
Small: 3 cm
Large: 5 cm

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Characteristic	Smaller pouch (*N*=38)	Larger pouch (*N*=38)	*P* value
Age—yr	45.1±5.5	44.4±5.8	0.570
Male sex—no. (%)	15 (39)	18 (47)	0.488
Body mass index			
Value	33.7±0.9	33.6±1.0	0.771
Body weight—kg	89.8±8.4	88.9±8.8	0.642
Waist circumference—cm	120.5±19.4	116.3±7.2	0.216
Duration of diabetes—yr	5.1±2.3	4.9±2.3	0.726
Use of insulin—no. (%)	13 (34)	11 (29)	0.622
Metabolic syndrome—no. (%)	35 (92)	36 (95)	1.000
History of dyslipidemia—no. (%)	34 (89)	33 (87)	1.000
History of hypertension—no. (%)	28 (74)	27 (71)	0.798

Groups similar @ baseline

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End point	Smaller pouch (N=36)	Larger pouch (N=33)	P value
Body weight—kg			
Baseline	89.8±8.4	88.9±8.8	0.642
Month 12	74.1±8.3	75.8±8.0	0.399
Change from baseline	−15.8±4.2	−13.7±4.4	0.046
Glycated hemoglobin			
≤6 % baseline—no. (%)	2 (5)	2 (6)	1.000
≤6 % month 12—no. (%)	13 (36)	10 (30)	0.609
Baseline—%	9.7±1.6	9.5±1.4	0.607
Month 12—%	6.2±0.8	6.7±. 08	0.025
Change from baseline—percentage points	−3.5±1.1	−2.8±1.1	0.016
Fasting plasma glucose			
Baseline—mmol/L	10.6±2.6	9.7±1.7	0.082
Month 12—mmol/L	5.4±0.6	5.6±0.5	0.040
Change from baseline	−5.2±2.4	−4.1±1.4	0.017

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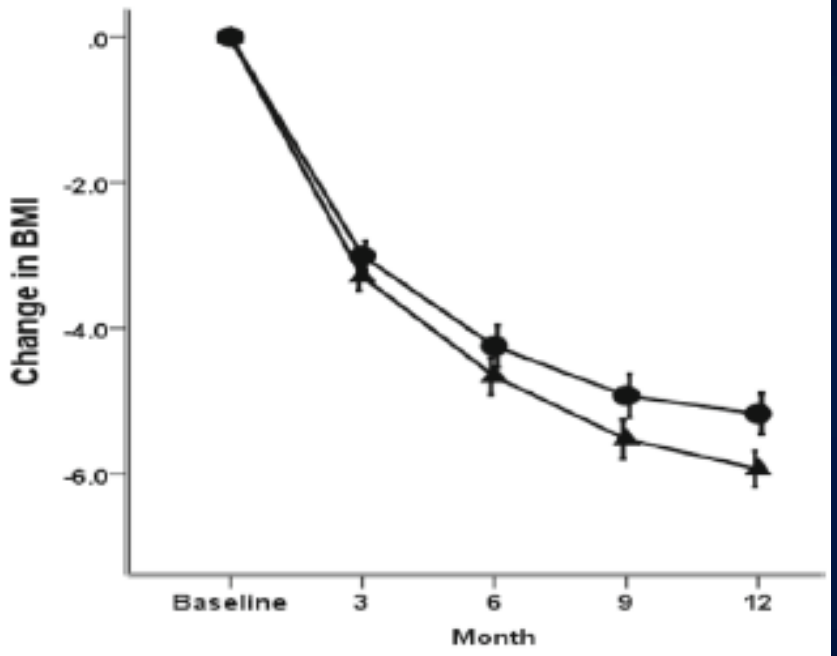
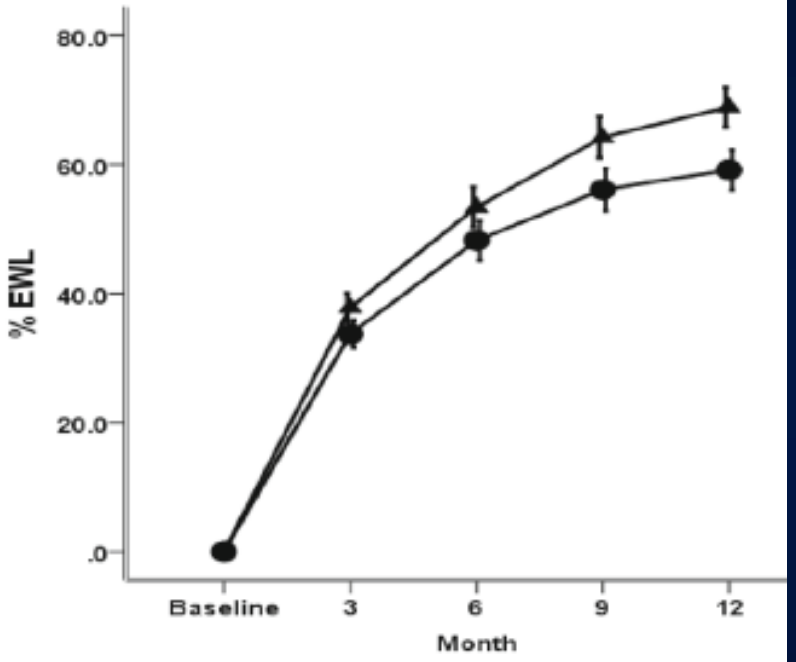
B Change in BMI



Value at Visit					
Larger pouch size group	33.8	30.8	29.6	28.9	28.6
Smaller pouch size group	33.7	30.4	29.0	28.1	27.7

C Percentage of Excess Weight-Loss



Value at Visit				
Larger pouch size group	33.7	48.2	56.1	59.1
Smaller pouch size group	37.8	53.4	64.2	68.9

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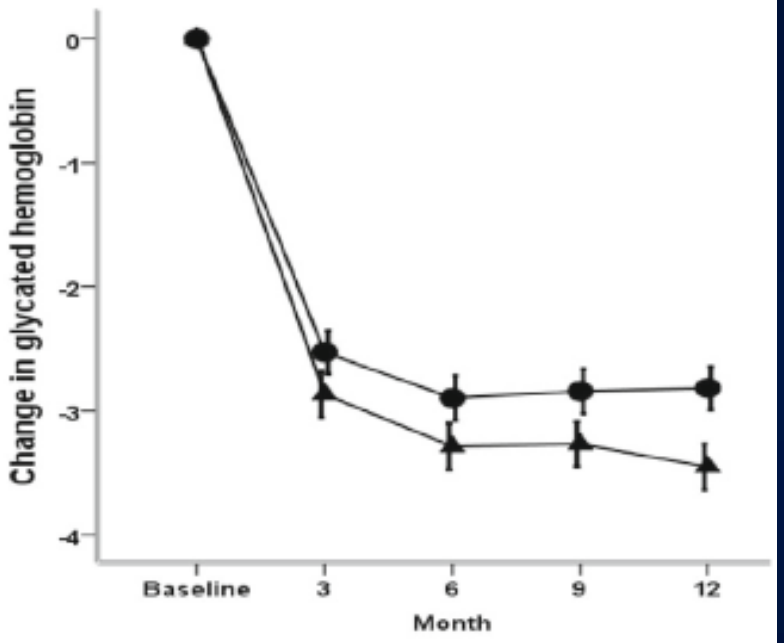
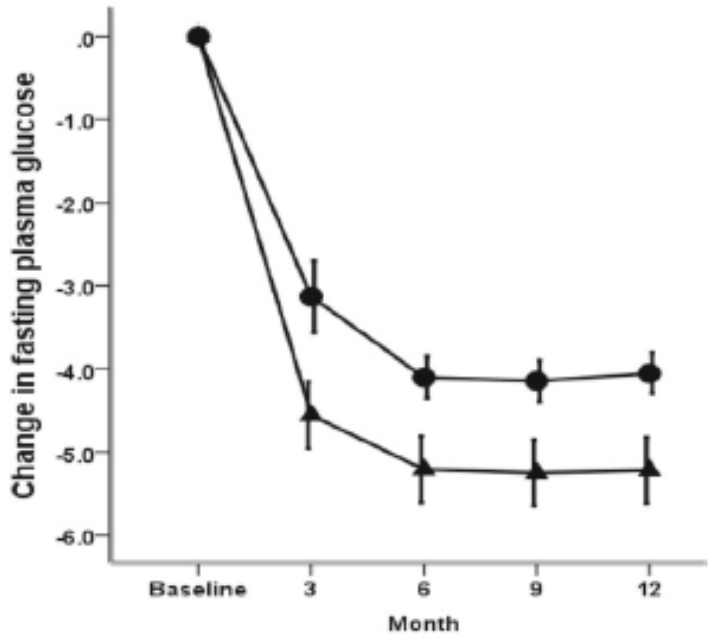
A Change in G lycated Hemoglobin



Value at Visit

Larger pouch size group	9.5	7.0	6.6	6.7	5.6
Smaller pouch sizeg roup	9.7	6.8	6.4	6.4	5.4

B Change in F asting Plasma Glucose



Value at Visit

Larger pouch size group	9.7	6.0	5.6	5.5	5.6
Smaller pouch size group	10.6	6.0	5.4	5.3	5.4

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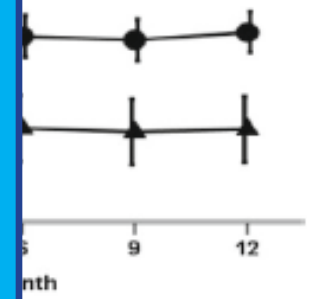

Conclusions

Smaller pouches are more effective in terms of weight loss and control of diabetes @ 12months

Limitations:
Small groups
Short-term
Limited follow-up

Value at Visit

Larger pouch size group	9.5	7.0	6.6	6.7	5.6
Smaller pouch sizeg roup	9.7	6.8	6.4	6.4	5.4

Value at Visit

Larger pouch size group	9.7	6.0	5.6	5.5	5.6
Smaller pouch size group	10.6	6.0	5.4	5.3	5.4

Importance of pouch size in laparoscopic Roux-en-Y gastric bypass: a cohort study of 14,168 patients

David Edholm[1] · Johan Ottosson[2] · Magnus Sundbom[1]

Surg Endosc (2016) 30:2011–2015
DOI 10.1007/s00464-015-4432-2

- 14’168 patients from SOREG registry
- 76 % females
- Mean Age = 41,6 years
- Mean BMI = 42,4 kg/m^2
- Total stapler length used as proxy for pouch size. Mean = 145 mm
- End-points: %EBMIL and marginal ulcer rate @ 6 weeks and 12 months

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Table 3 Multivariate analysis showing correlation between variables and EBMIL% at 6 weeks and 1 year, respectively

	EBMIL% at 6 weeks		EBMIL% at 1 year	
	p	Coefficient (95 % confidence interval)	*p*	Coefficient (95 % confidence interval)
Male gender	<.001	2.81 (2.35–3.27)	<.001	−6.4 (−7.16 to −5.67)
Age at surgery (years)	<.001	−.080 (−.098 to −.062)	<.001	−.34 (−.37 to −.31)
Preoperative BMI (kg/m^2)	<.001	−1.0 (−1.1 to .97)	<.001	−2.09 (−2.15 to −2.03)
Diabetes	.025	.65 (.082–1.22)	<.001	−6.45 (−7.37 to −5.53)
Length of staplers used for pouch (cm)	<.001	−.16 (−.22 to −.09)	.29	−.05 (−.16 to .051)

BMI Body mass index

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Table 2 Presence of marginal ulcer at 6 weeks or 1 year, correlated with gender, age, preoperative BMI, diabetes and stapler length by multivariate logistic regression

	After 6 weeks		After 1 year	
	p	Odds ratio with (95 % confidence interval)	*p*	Odds ratio with (95 % confidence interval)
Male gender	.18	.67 (.37–1.20)	.96	.98 (.95–1.02)
Age at surgery (years)	.34	.99 (.96–1.01)	.53	1.01 (.99–1.02)
Preoperative BMI (kg/m^2)	.65	.99 (.95–1.03)	.31	.98 (.95–1.02)
Diabetes	.29	1.39 (.74–2.59)	.27	1.30 (.82–2.05)
Length of staplers used for pouch (cm)	<.001	1.10 (1.03–1.18)	<.001	1.14 (1.09–1.20)

BMI Body mass index

Importance of pouch size in laparoscopic Roux-en-Y gastric bypass: a cohort study of 14,168 patients

David Edholm[1] · Johan Ottosson[2] · Magnus Sundbom[1]

Surg Endosc (2016) 30:2011–2015
DOI 10.1007/s00464-015-4432-2

Conclusions

Pouch size does not seem to play a role in %EBMIL 12 months after RYGB, and other factors are probably more important
The risk of marginal ulcer is increased with larger pouches

Limitations:

Registry: number of staplers does not necessarily match the total length of the staple line
Most pouches relatively small
Short-term
Limited follow-up

The impact of gastric pouch size, based on the number of staplers, on the short-term weight outcomes of Roux-en-Y gastric bypass

Neda Haghighat [a], Hooman Kamran [a], Mohammad Naser Moaddeli [a], Babak Hosseini [a], Ali Karimi [a], Iman Hesameddini [a], Masoud Amini [a], Seyed Vahid Hosseini [a,b], Abtin Vahidi [a], Nader Moeinvaziri [a,*]

[a] Laparoscopy Research Center, Shiraz University of Medical Sciences, Shiraz, Iran
[b] Colorectal Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

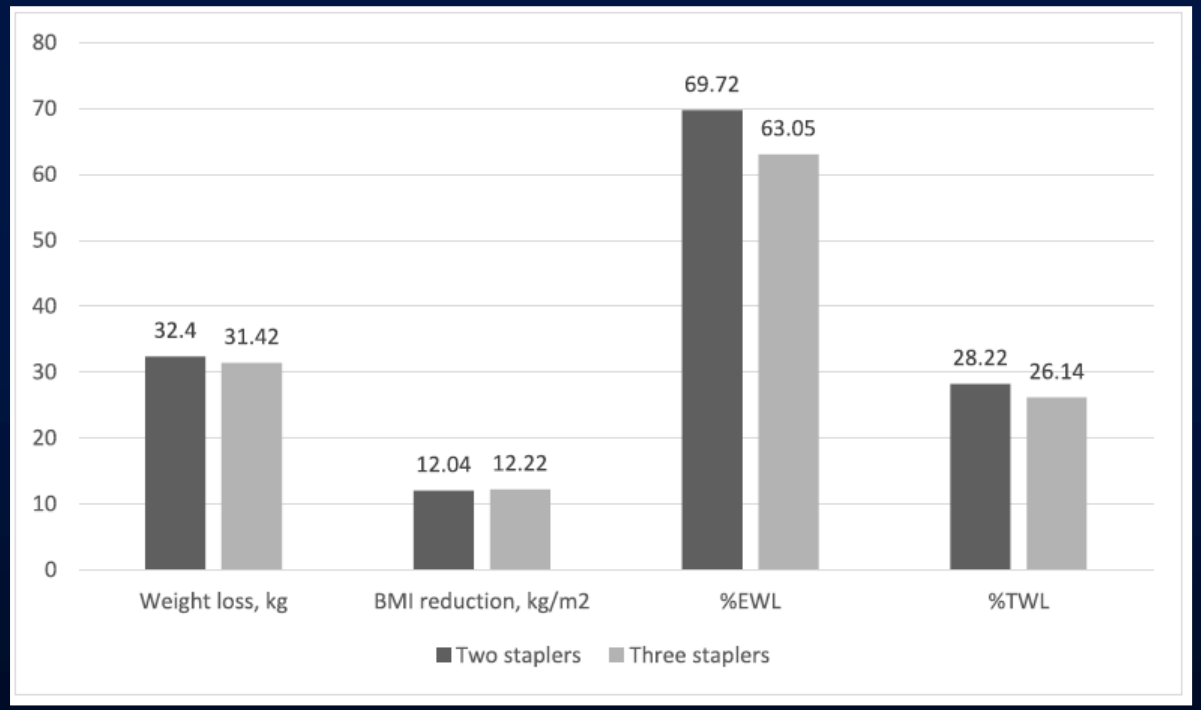
Annals of Medicine and Surgery 84 (2022) 104914

Retrospective study comparing pouch made with two or three 60mm staplers

50 patients in each group

FU @ 6 months

No difference



An Extended Pouch in a Roux-En-Y Gastric Bypass Reduces Weight Regain: 3-Year Results of a Randomized Controlled Trial

Obesity Surgery (2020) 30:3–10
https://doi.org/10.1007/s11695-019-04156-0

Abel Boerboom [1] · Mellody Cooiman [1] · Edo Aarts [1] · Theo Aufenacker [1] · Eric Hazebroek [1] · Frits Berends [1]

RCT: 132 patients randomized to short or long gastric pouch

- Short pouch 5 cm long
- Long pouch 10 cm long

In both groups, gastric section initially with 60 mm stapler

Evolution of weight loss (%TWL and %EWL)

Evolution of comorbidities, GERD, complications, QOL

Follow-up 3 years (90 % FU rate)

No difference in morbidity (early and late) between groups

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Table 2 Weight loss parameters

		S-GB	EP-GB	*p* value
Weight, kg	12 months	88 ± 15	87 ± 16	0.687
	24 months	89 ± 17	86 ± 16	0.308
	36 months	92 ± 17	86 ± 17	0.061
BMI, kg/m^2	12 months	30 ± 4	30 ± 5	0.731
	24 months	30 ± 5	30 ± 5	0.344
	36 months	32 ± 5	30 ± 5	*0.035*
%EWL	12 months	74 ± 20	75 ± 20	0.696
	24 months	73 ± 24	77 ± 23	0.331
	36 months	65 ± 23	76 ± 25	*0.023*
%TBWL	12 months	31 ± 7	31 ± 8	0.728
	24 months	30 ± 10	32 ± 10	0.327
	36 months	27 ± 9	31 ± 11	*0.023*

Comorbidities

Diabetes: no difference

HTN: EP slightly better (p=0,04)

Dyslipidemia: no difference

GERD: no difference

QOL: no difference

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Table 2

Weight,				
BMI, kg				
%EWL				
%TBWL				
	24 months	30 ± 10	32 ± 10	0.527
	36 months	27 ± 9	31 ± 11	*0.023*

Conclusions

An extended gastric pouch contributes to better weight loss @ 3 years possibly due to reduced weight regain

Limitations

Limited follow-up. Longer-term results not published
Difference clinically meaningful ?

QOL: no difference

Small-Volume, Fast-Emptying Gastric Pouch Leads to Better Long-Term Weight Loss and Food Tolerance After Roux-en-Y Gastric Bypass

Daniel Ricciopo[1] · Marco Aurelio Santo[1] · Manoel Rocha[2] · Carlos Alberto Buchpiguel[3] · Marcio Augusto Diniz[4] · Denis Pajecki[1] · Roberto de Cleva[1] · Flavio Kawamoto[1]

OBES SURG (2018) 28:693–701

Evaluation of 67 patients 3-5 years after RYGB (mean 47 months)

Measurement of pouch volume by CT volumetry

Evaluation of pouch emptying by scintigraphy

Evaluation of food tolerance

Mean pouch volume: 28 ml (13 – 81)

Cut-off established for pouch volume at 40 ml

Cut-off established for gastric emptying

Relation between pouch volume and weight loss

Relation between gastric emptying and weight loss and pouch volume

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OBES SURG (2018) 28:693–701

Table 2 Data of the analysis of gastric pouch categorized by volume

Variable	Volume ≤ 40	Volume > 40	*p* value
Age	51 (40–56)	52 (41.7–59.7)	0.286
BMI	51.4 (47.2–55.6)	50.41 (44.5–58.2)	0.671
Initial weight	132 (119–147)	128 (114–155.5)	0.671
Nadir F-U time	13 (10–18)	16.5 (10.5–19.5)	0.214
Actual F-U time	48 (36–61)	44 (36–64.2)	0.927
Pouch volume	21 (13–30)	56.5 (48.7–81.2)	< **0.001**
Nadir %EWL	58.7 (53.4–70.6)	64.2 (53.9–78.9)	0.412
%EWL regained	15.8 (4.2–36.3)	16.9 (9–48.4)	0.195
%Ret1	6 (1–23)	44 (12–57.5)	**0.009**
%Ret2	2 (1–7)	13.5 (2–19.7)	**0.045**
%Ret4	1 (0–2)	1 (0–4.5)	0.456
Suter score	22 (17–24)	19.5 (17–22.5)	0.414

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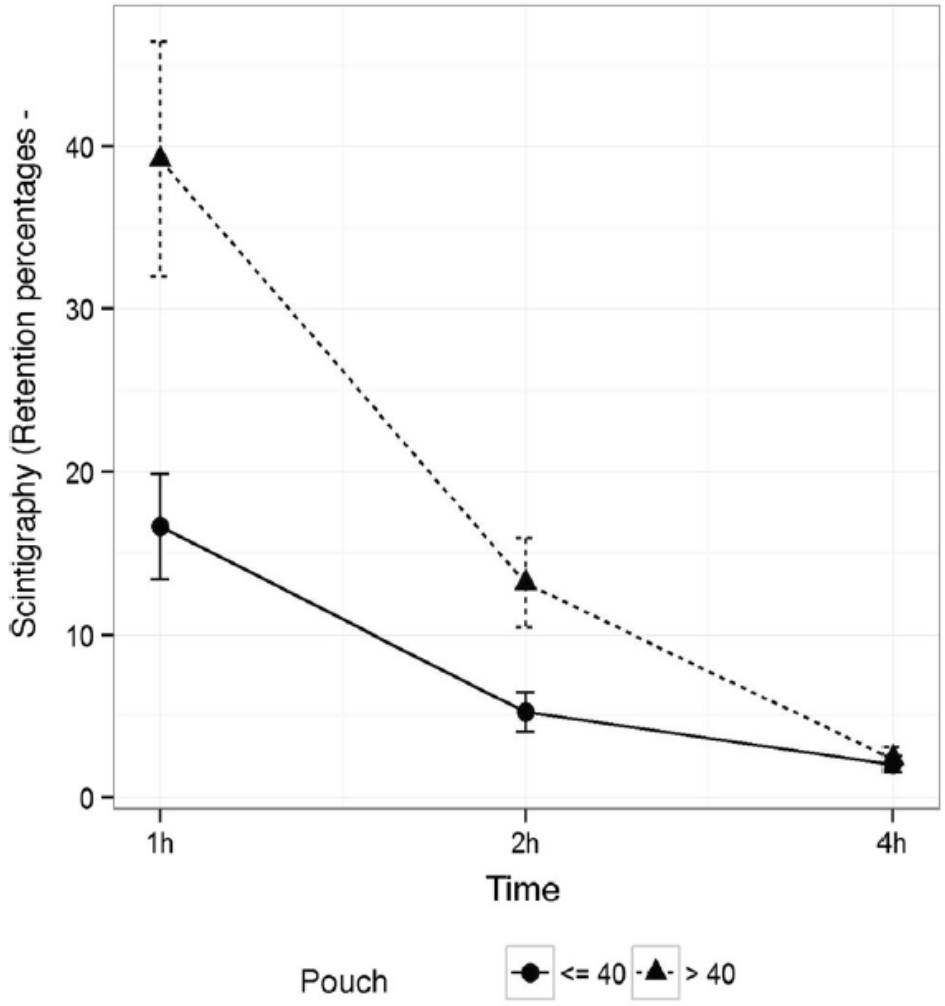

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OBES SURG (2018) 28:693–701

Variable	%Ret1 ≤ 12	12 < %Ret1 < 25	%Ret1 ≥ 25	*p* value
Age	51 (39.5–60)	51 (44.2–57)	50 (39.2–54)	0.638
BMI	51.4 (47.3–54.5)	49.9 (46–54.3)	52.1 (45–60)	0.738
Initial weight	135 (120–147)	122.2 (117.2–127.5)	131 (121.5–160)	0.303
Nadir F-U time	13 (9–18)	19 (13.5–23.7)	12.5 (10.5–15.7)	0.169
Actual F-U time	43 (35.5–60)	45 (34.5–72.7)	48 (38.5–59.7)	0.95
Pouch volume	24 (15.5–37.1)	30.5 (13–40.2)	33.9 (18.2–66)	0.272
Nadir %EWL	66.5 (54.1–76.1)	60.8 (55.2–77.9)	57.9 (49–63.8)	0.319
Regained %EWL	11.7 (3.2–23.9)	13.6 (6.6–39.1)	29.8 (15.8–43.2) *	**0.036**
%Ret1	2 (1–5.5)	17 (13.7–22.2) *	50.5 (43–72.7) * ◊	**< 0.001**
%Ret2	1 (0–2)	7 (2.2–7.7) *	17.5 (8.2–26.7) * ◊	**< 0.001**
%Ret4	0 (0–1)	2.5 (0.2–3)	4 (1–7.7) *	**< 0.001**
Suter score	22 (20–24)	21.5 (17–23.7)	17 (15.2–21) *	**0.007**

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Small-Volume, Fast-Emptying Gastric Pouch Leads to Better Long-Term Weight Loss and Food Tolerance After Roux-en-Y Gastric Bypass

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OBES SURG (2018) 28:693–701

Suter score	22 (20–24)	21.5 (17–23.7)	17 (15.2–21) *	0.007

Conclusions:

Pouch emptying is faster if the pouch is small
Food tolerance better if pouch empties fast
Earlier emptying associated with less RWG
No direct association between pouch volume and results

Limitations:
Small numbers
Pouch volume not estimated at surgery

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HÔPITAL RIVIERA-CHABLAIS VAUD-VALAIS

Original article

Influence of pouch and stoma size on weight loss after gastric bypass

Helen M. Heneghan, M.D., Panot Yimcharoen, M.D., Stacy A. Brethauer, M.D., Matthew Kroh, M.D., Bipan Chand, M.D.*

Bariatric and Metabolic Institute, Cleveland Clinic Foundation, Cleveland, Ohio

Received April 13, 2011; accepted September 13, 2011

Surgery for Obesity and Related Diseases 8 (2012) 408–415

380 patients referred for endoscopy for symptoms or RWG

Mean duration of FU since RYGB: 5,9 ± 4 years (range 1-32 years)

Evaluation of pouch volume (length x width) and stoma size

Pouch abnormal: length > 6 cm or diameter > 5 cm

Stoma too large: > 20 mm

2 groups based on weight loss: Good: EWL > 50% or BMI < 30

Poor: EWL < 50 % or BMI > 30

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Variable	Total (n = 380)	Group A (optimal weight loss; n = 175)	Group B (weight regain; n = 205)	*P* value*
Age (yr)	47.8 ± 10.3	48.5 ± 10.5	47.2 ± 10.1	.228
Gender (%)				.777
Male	13.7	13.1	14.1	
Female	86.3	86.9	85.9	
BMI before primary RYGB (kg/m^2)				<.001
Mean ± SD	52.2 ± 10.5	49.4 ± 9.5	54.3 ± 10.7	
Range	28–105	28–96	36–105	
Interval from RYGB to UE (yr)				<.001
Mean ± SD	5.9 ± 4.0	4.7 ± 4.0	6.9 ± 3.7	
Range	1–32	1–32	1–27	

Gastric pouch and stoma dimensions in patients with successful weight loss versus weight regain

Weight loss outcome after RYGB	Pouch length (cm)	Pouch width (cm)	Pouch volume (cm^2)	Stoma diameter (cm)
Group A (successful weight loss)	5.0 ± 2.4	3.7 ± 1.4	21.8 ± 22.4	2.1 ± 0.8
Group B (weight regain)	5.8 ± 2.6	4.0 (1.7) cm	26.0 ± 22.9	2.5 ± 1.0
P value	.005	.221	.077	<.001

RYGB = Roux-en-Y gastric bypass.

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Gender (				.777
Male				
Femal				
BMI bef				<.001
Mean				
Range				
Interval f				<.001
Mean				
Range				

Correlation of %EWL with gastric pouch and stoma dimensions

Correlation with %EWL	Pearson's correlation coefficient (*P* value)
Pouch length	−.149 (.008)
Pouch width	−.129 (.030)
Pouch volume	−.127 (.022)
Stoma diameter	−.114 (.045)

Gastric p

Weight l				a diameter
RYGB				)
Group A				± 0.8
Group B (weight regain)	5.8 ± 2.6	4.0 (1.7) cm	26.0 ± 22.9	2.5 ± 1.0
P value	.005	.221	.077	<.001

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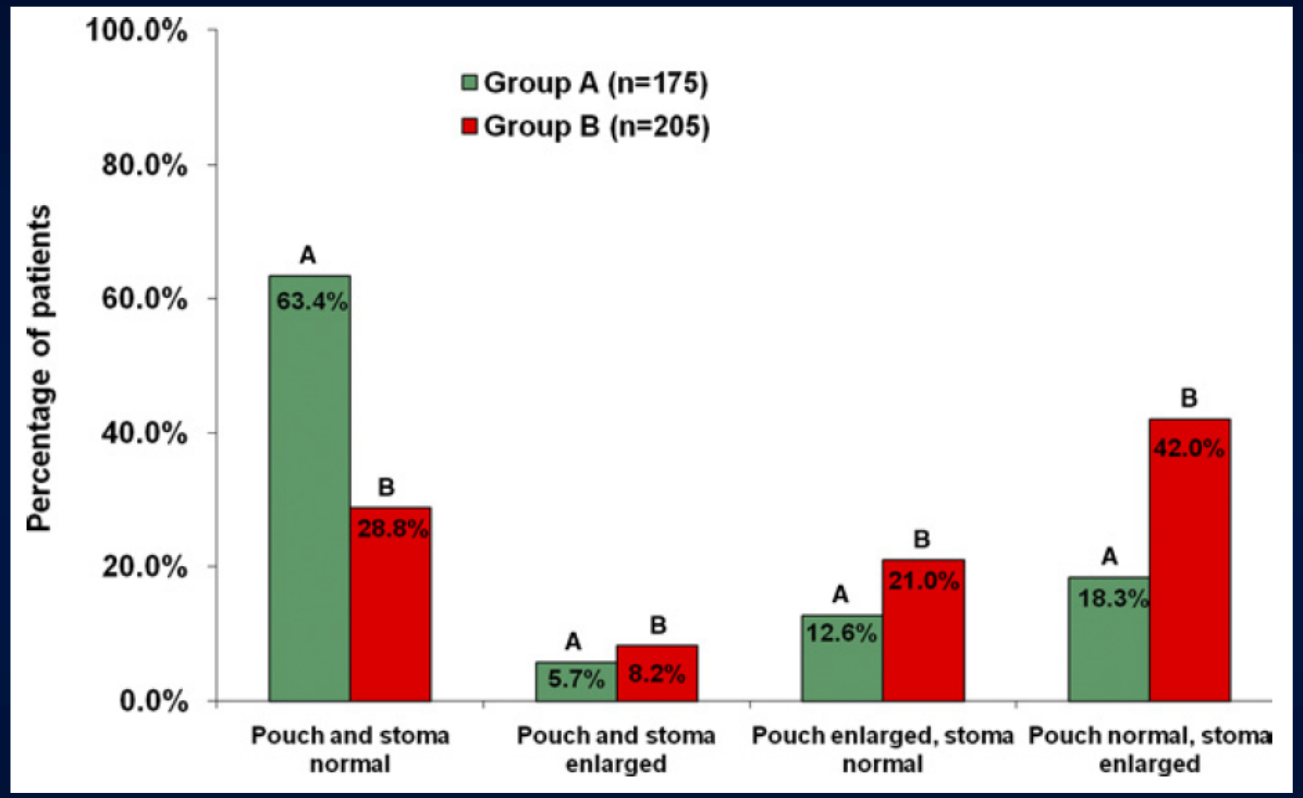

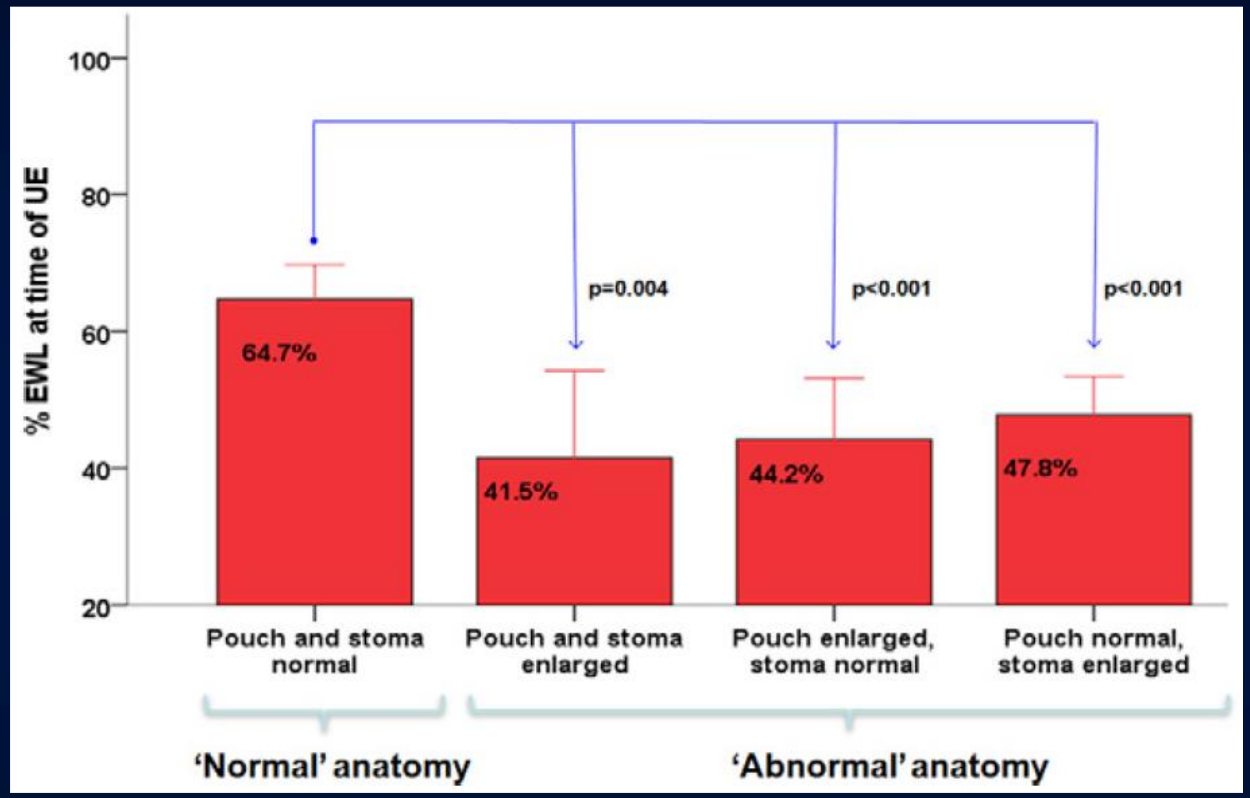

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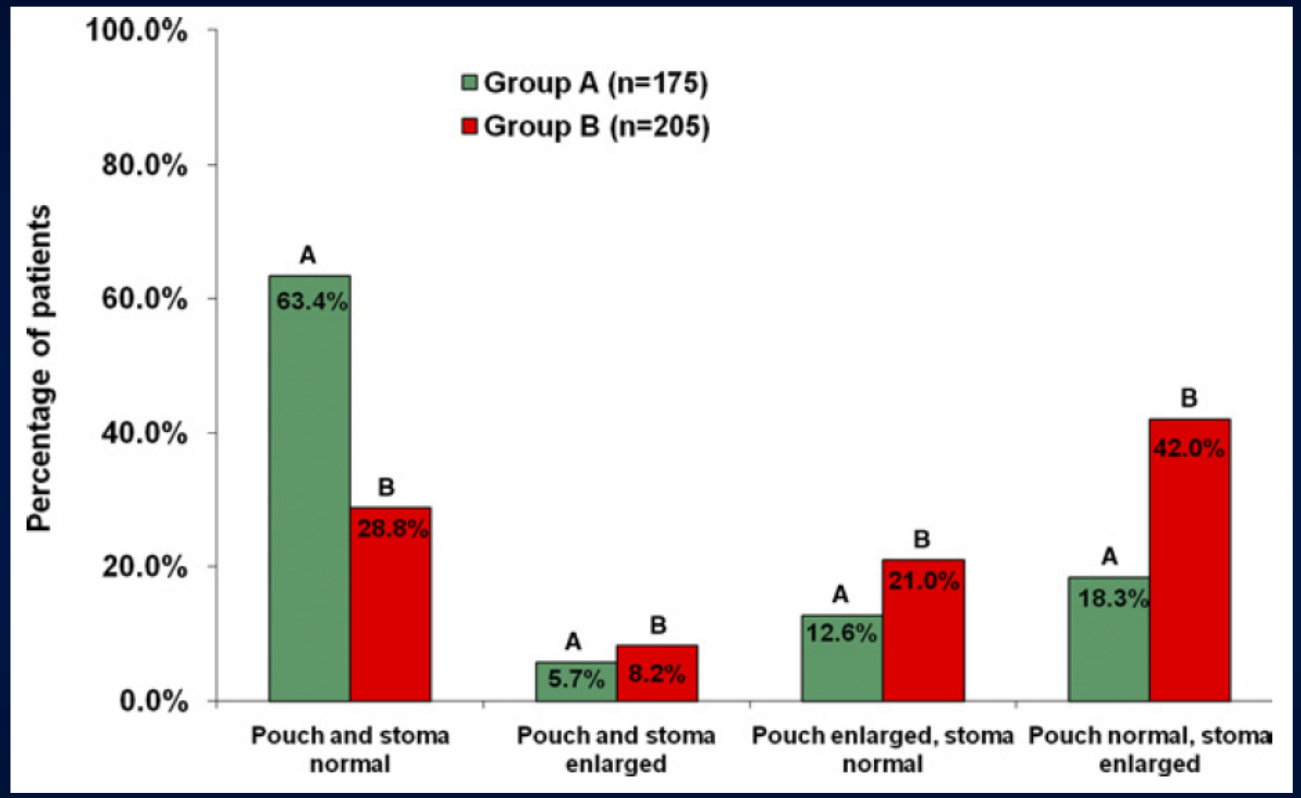

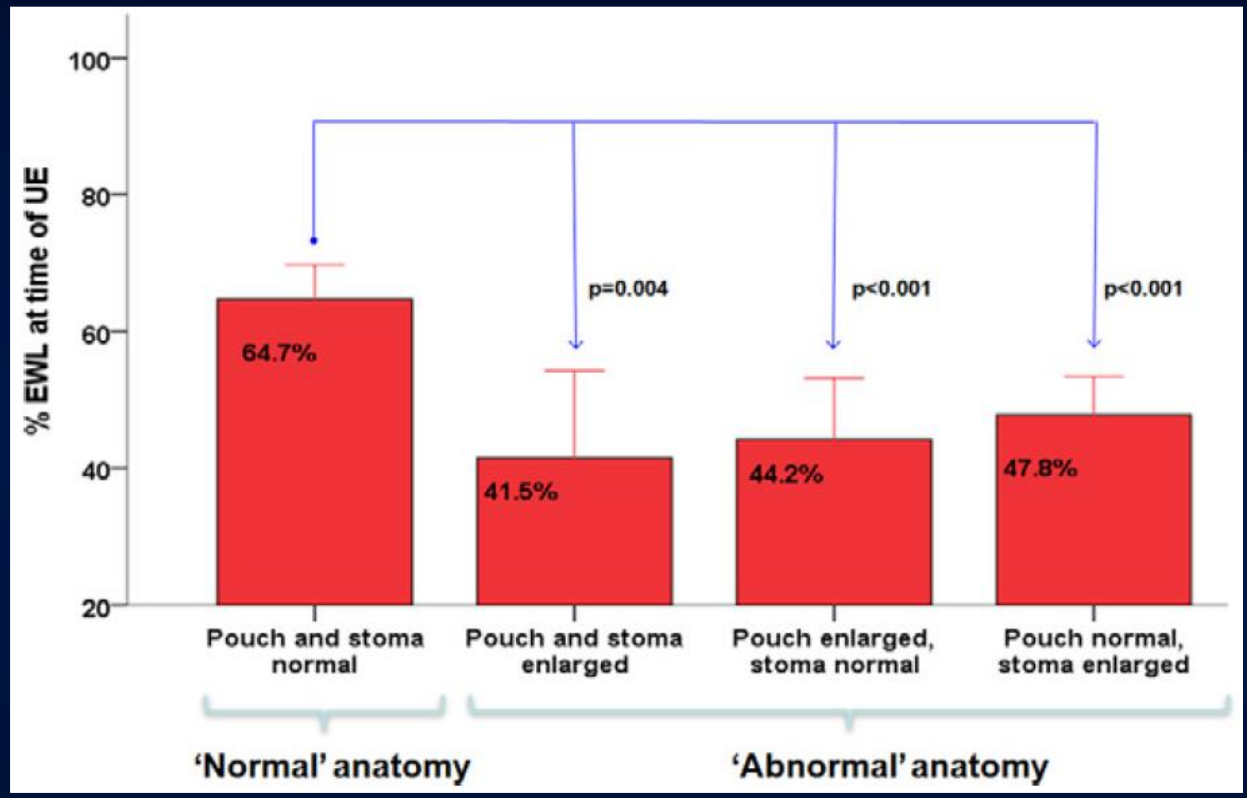

Limitations: Groups different @ baseline, no evaluation of pouch size @ baseline, wide range of FU duration, different surgical techniques

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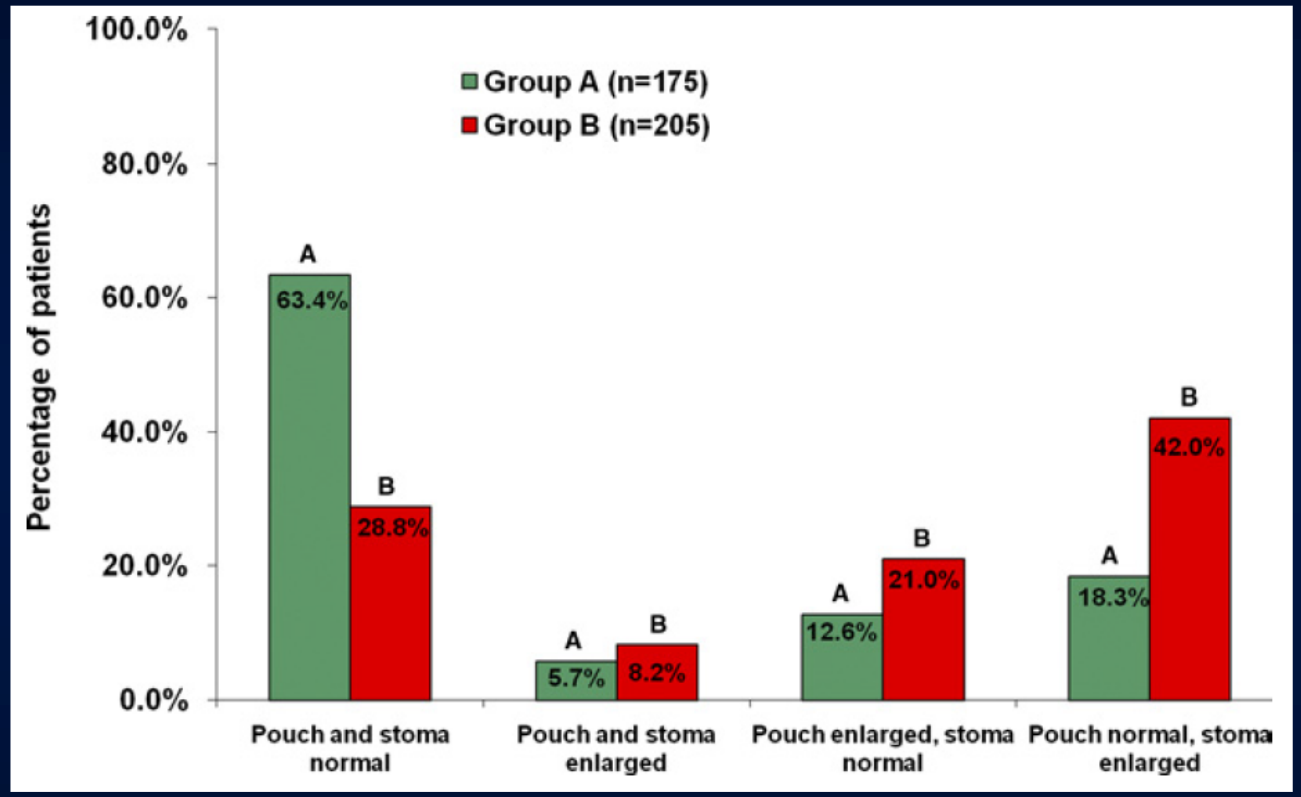

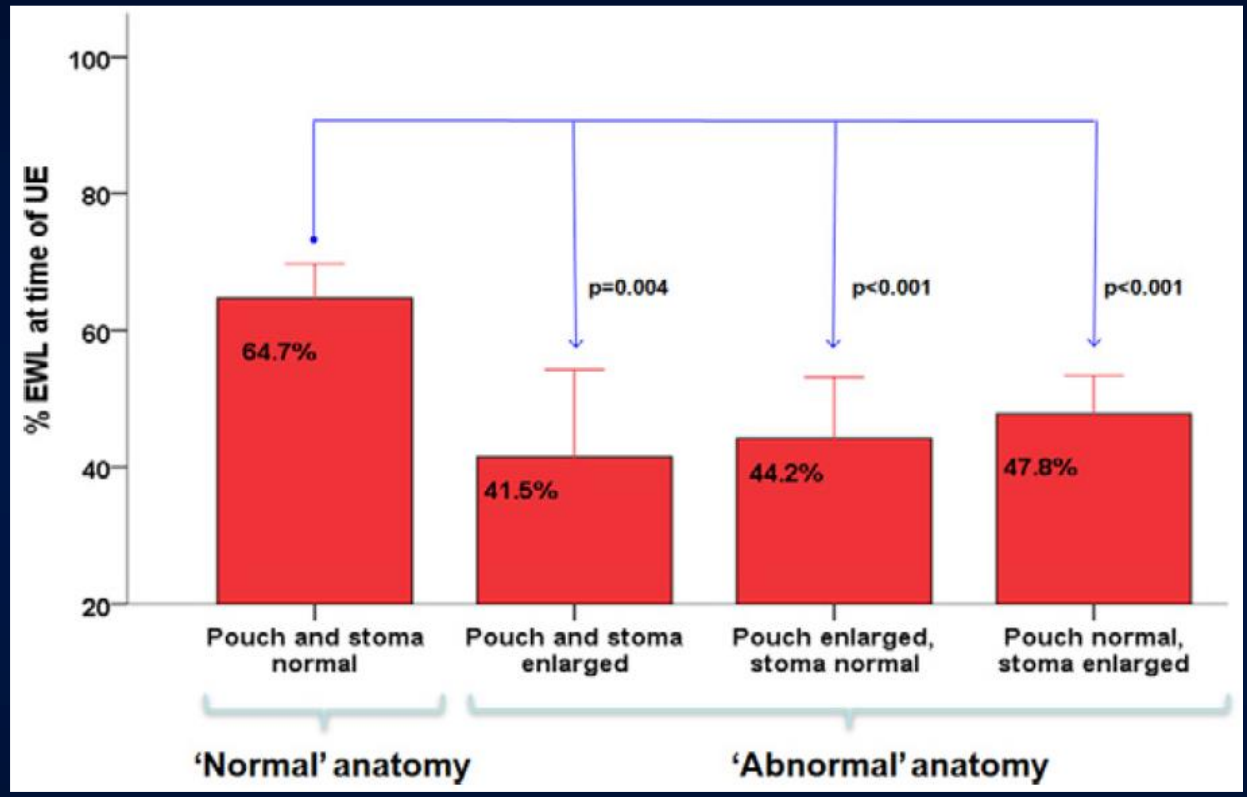

Limitations: Groups different @ baseline, no evaluation of pouch size @ baseline, wide range of FU duration, different surgical techniques

Is pouch size the cause of RWG or is over-eating the cause of pouch/stoma dilation and RWG ???

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A systematic review of the effect of gastric pouch and/or gastrojejunostomy (stoma) size on weight loss outcomes with Roux-en-Y gastric bypass

Kamal Mahawar[1,2] · Alistair J. Sharples[3] · Yitka Graham[1,2]

Surgical Endoscopy (2020) 34:1048–1060
https://doi.org/10.1007/s00464-019-07277-w

24 studies reviewed

14 studies evaluated relationship between pouch size and weight loss

2 RCT

Results:
- 9 studies show that pouch size does not affect results
- 5 studies show that larger pouch is associated with reduced weight loss
- 2 RCT with different pouch sizes at baseline show that larger pouch is associated with reduced weight loss
- No study shows that larger pouch provides better weight loss

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Limitations:

- Except the 2 RCT, no prospective study where pouch intentionnally constructed in different ways
- Pouch size measurements very variable between studies
  - Upper GI series on POD 1
  - Cottage cheese test
  - CT volumetry
  - Endoscopy
  - Number of cartridges used
- Pouch size measured early or late after RYGB
- Most studies use surface instead of volume

Pouch size: does it really matter ?

- Provided the pouch is made small (< 50 ml (?) < 30 ml (?), its size probably does not affect results in terms of weight loss
- Small pouches empty earlier and faster
- Larger pouches are associated with reduced weight loss and/or more RWG
- Larger pouches are associated with more marginal ulcers
- A larger pouch is more prone to enlarge than a small pouch (more tension on pouch wall due to increased diameter)
- No study (except Boerboom @ 3 years) has shown benefit from larger pouch

Conclusion

Small pouch very likely better

Debate still open

Thank you for your attention

An Extended Pouch in a Roux-En-Y Gastric Bypass Reduces Weight Regain: 3-Year Results of a Randomized Controlled Trial

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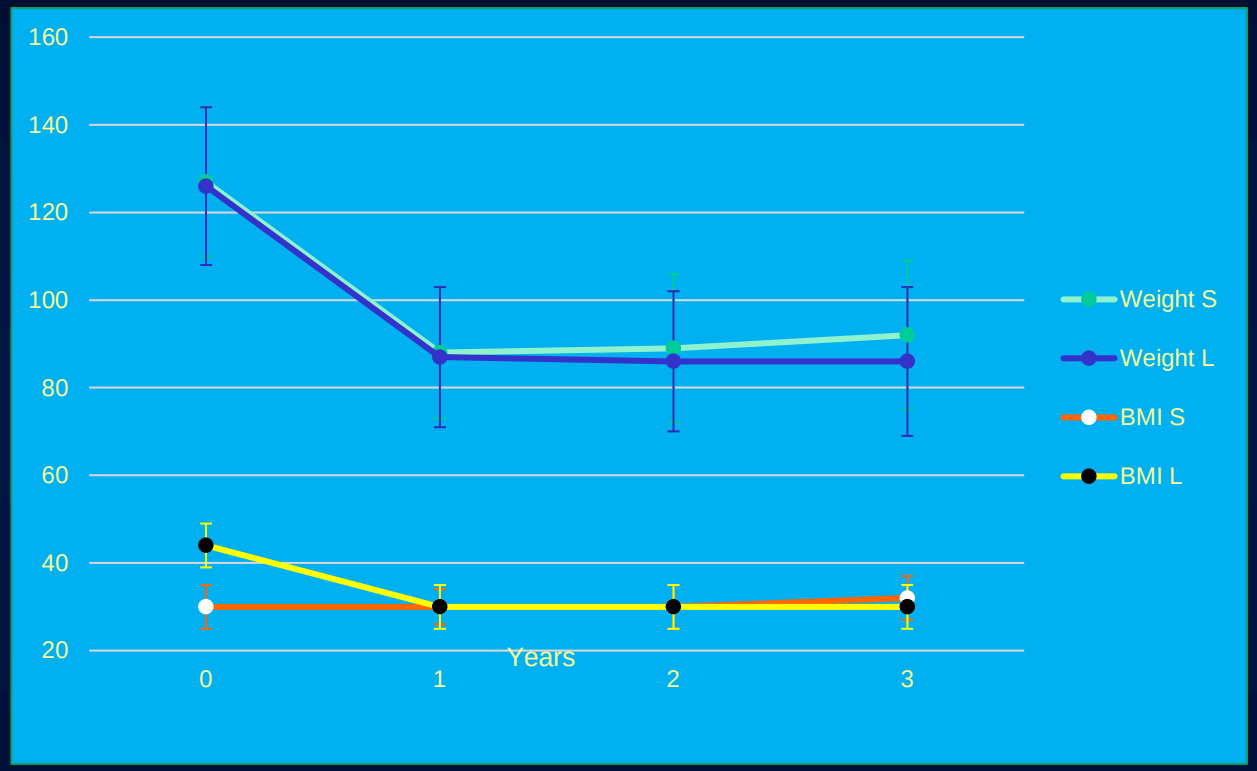

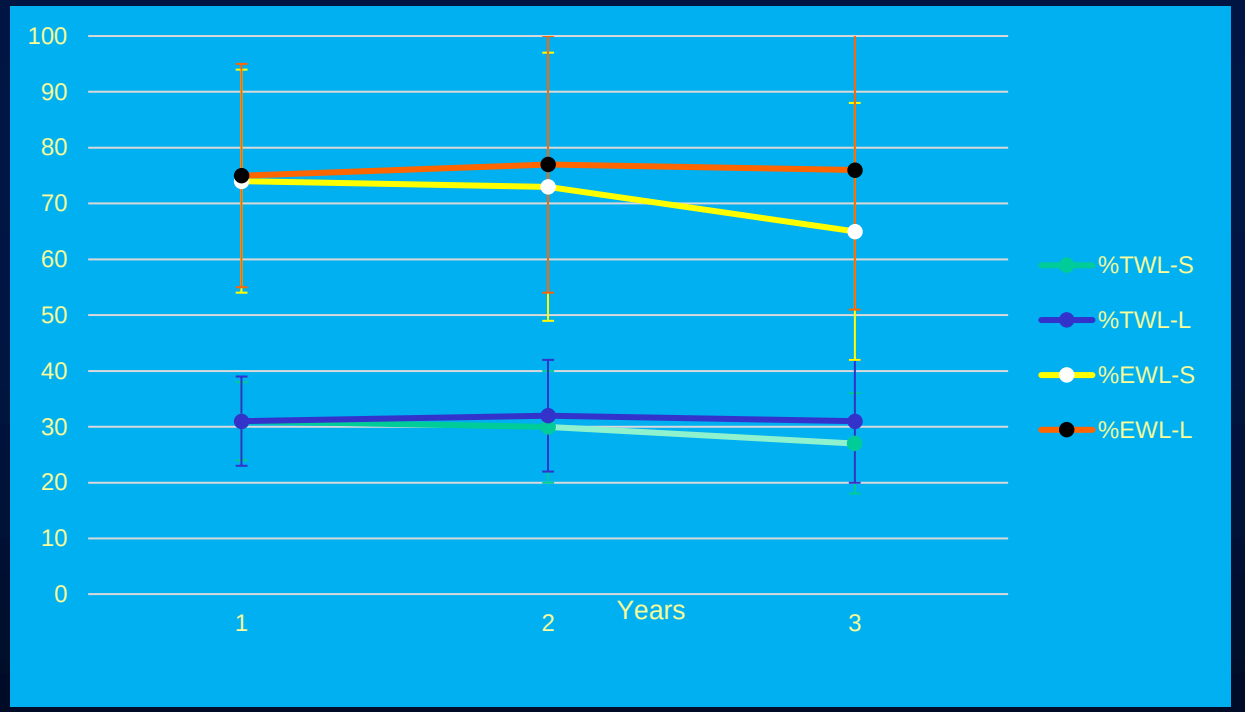

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