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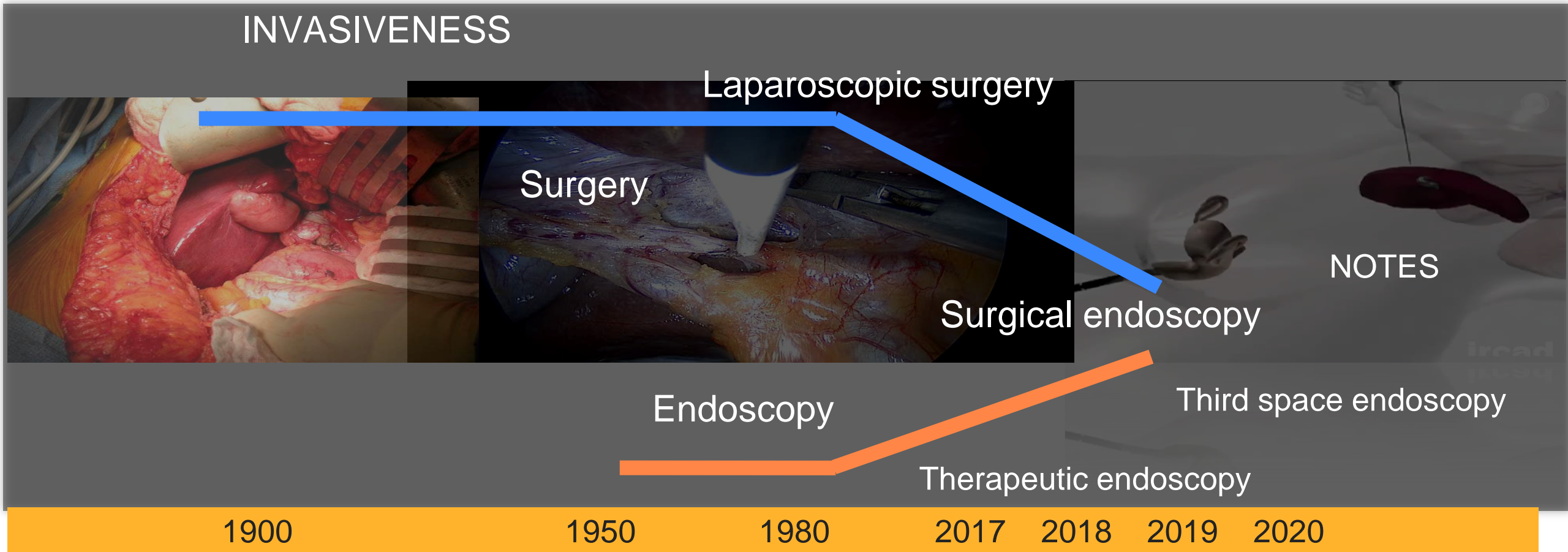
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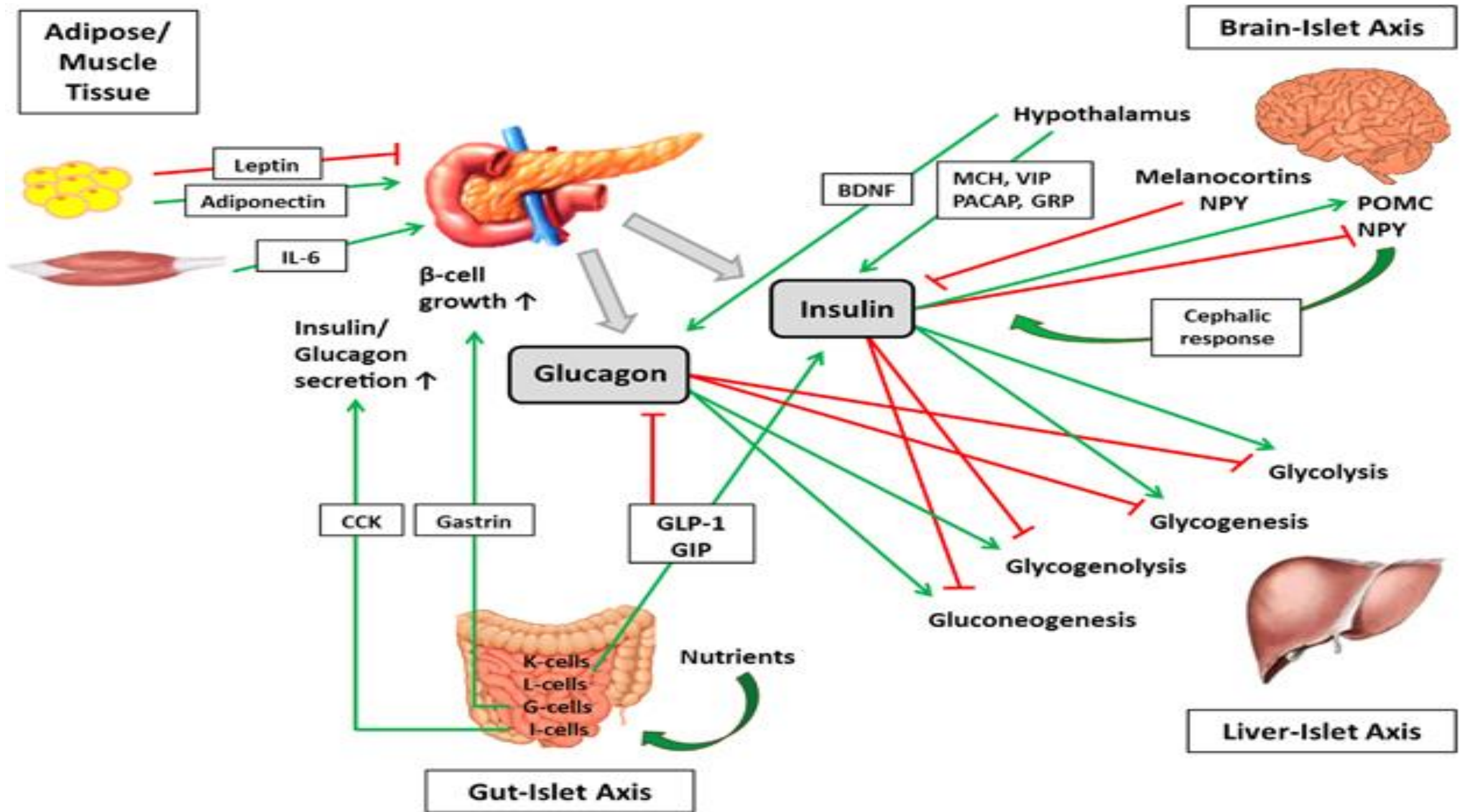
Bariatric endoscopy: the role of
the Multy Disciplinary Team

Ivo Boškosi, MD, PhD

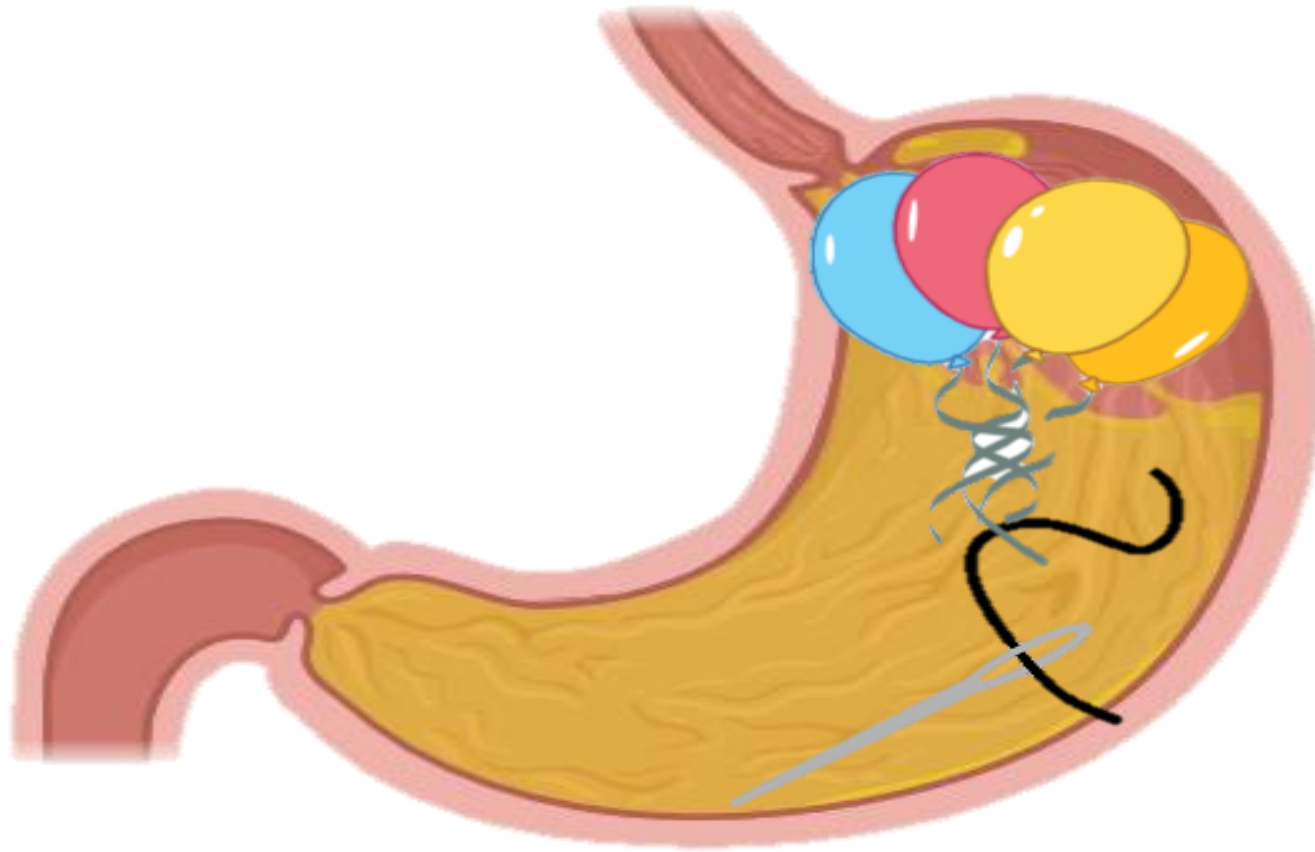
Evolution of surgery and endoscopy

INVASIVENESS

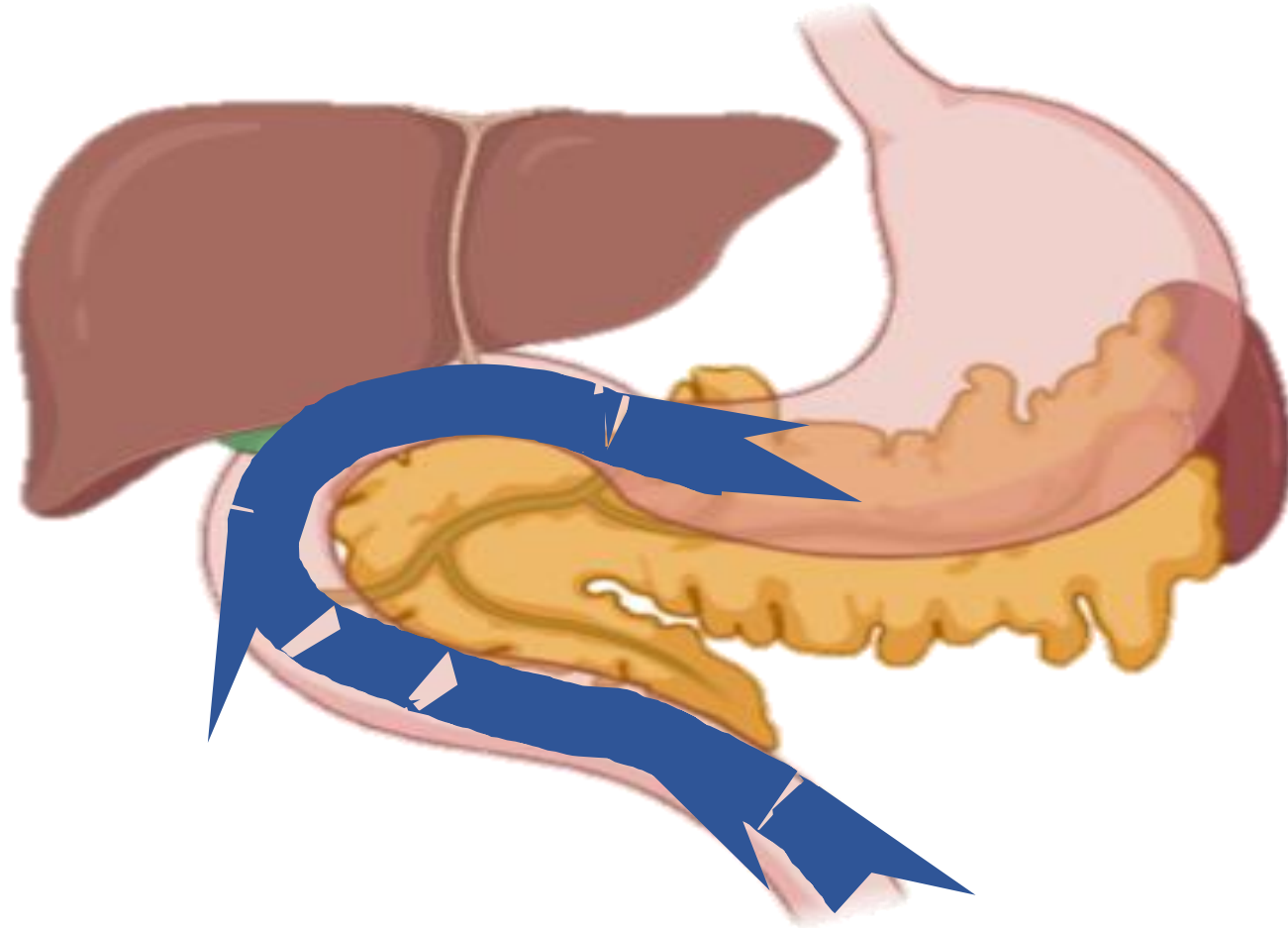




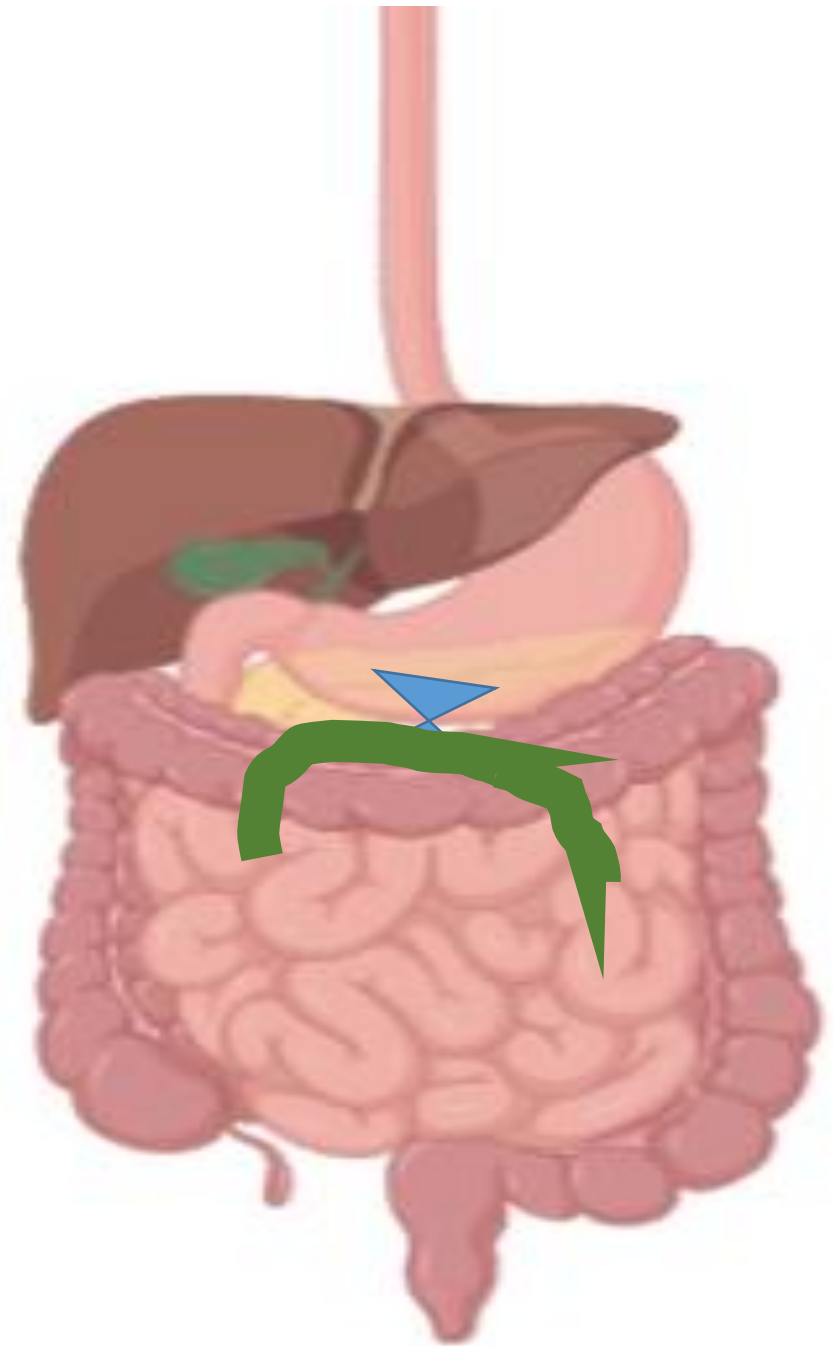
Restrictive Procedures



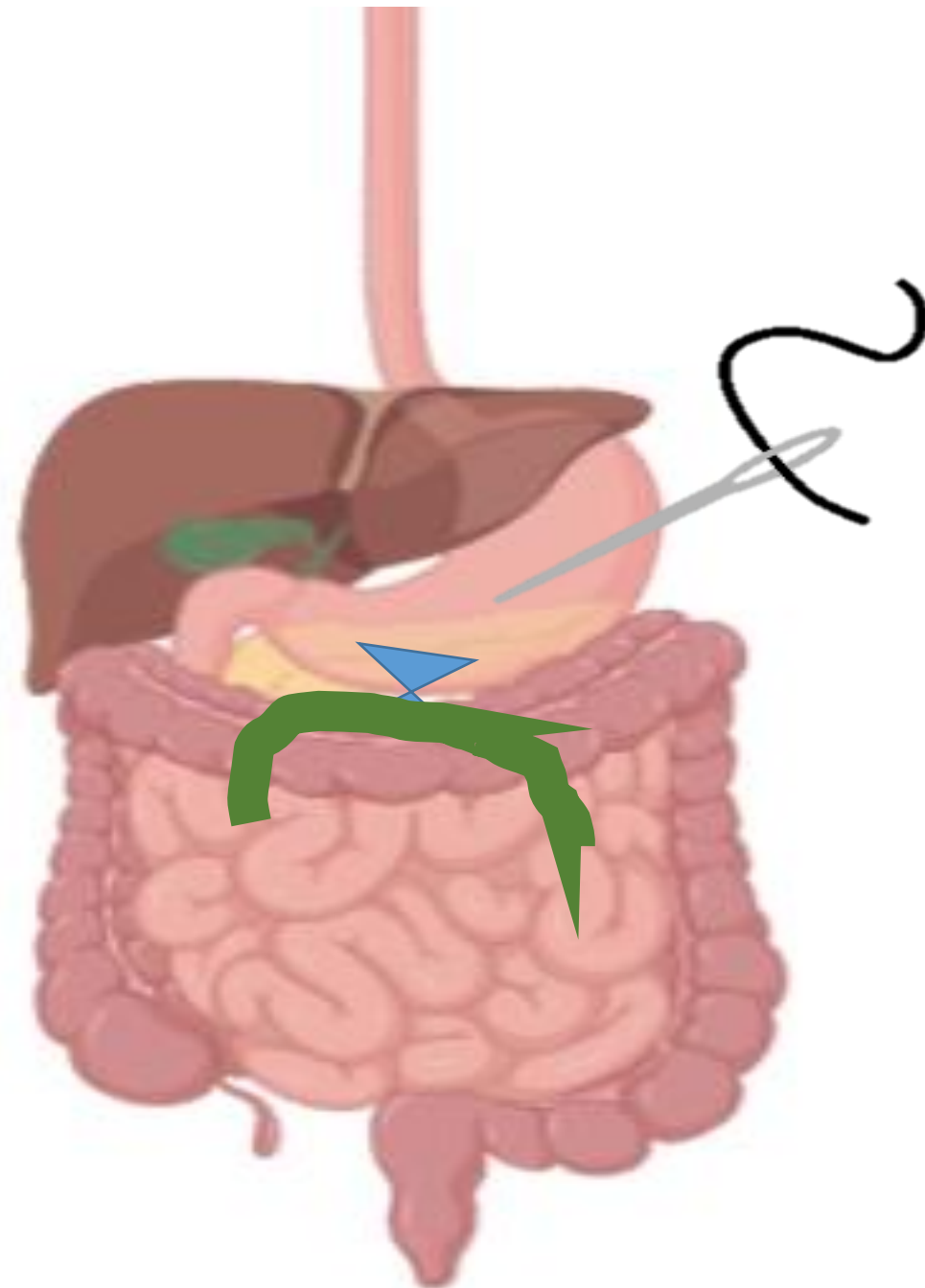
Malabsorptive Procedures

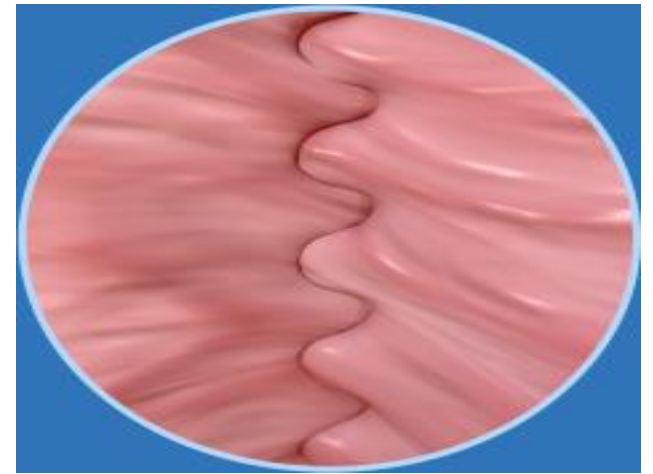
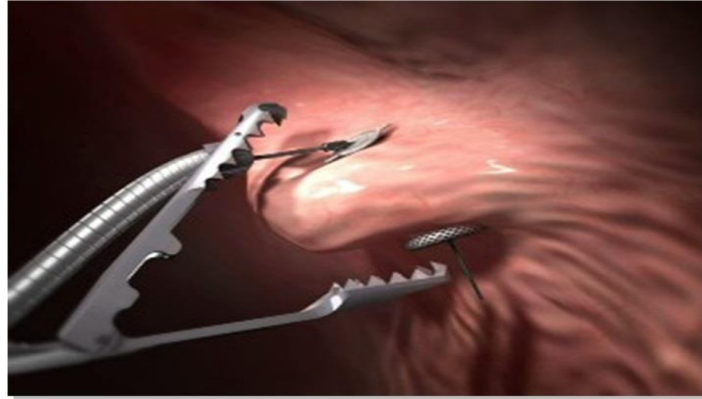
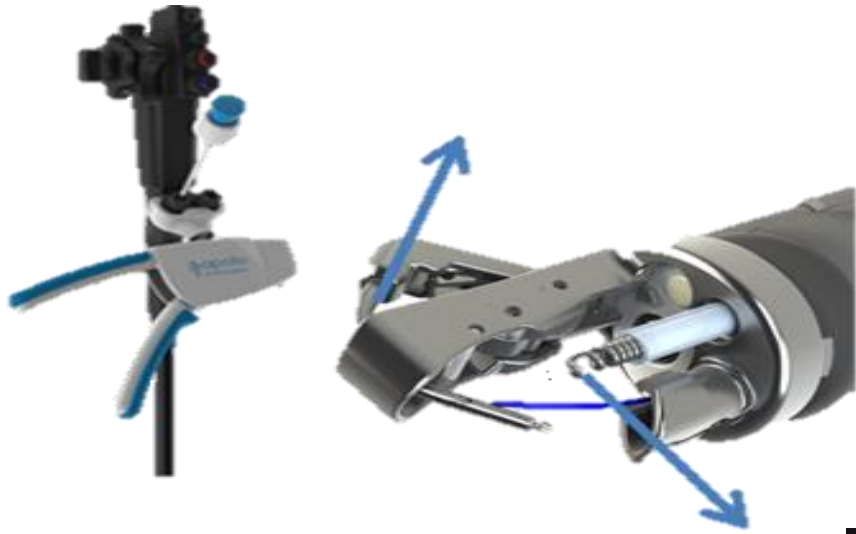


Malabsorptive



Restrictive & Malabsorptive





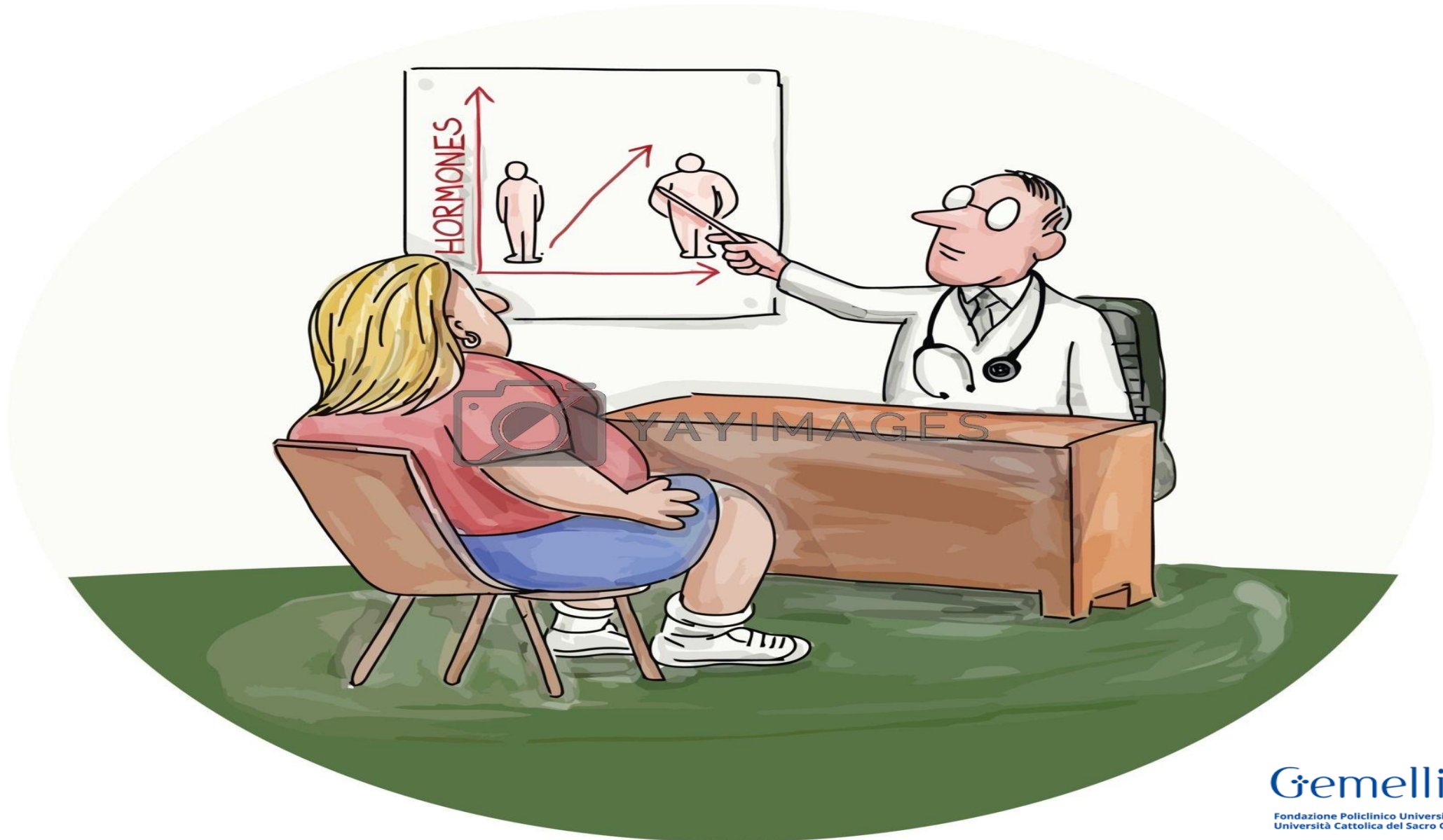


Gemelli

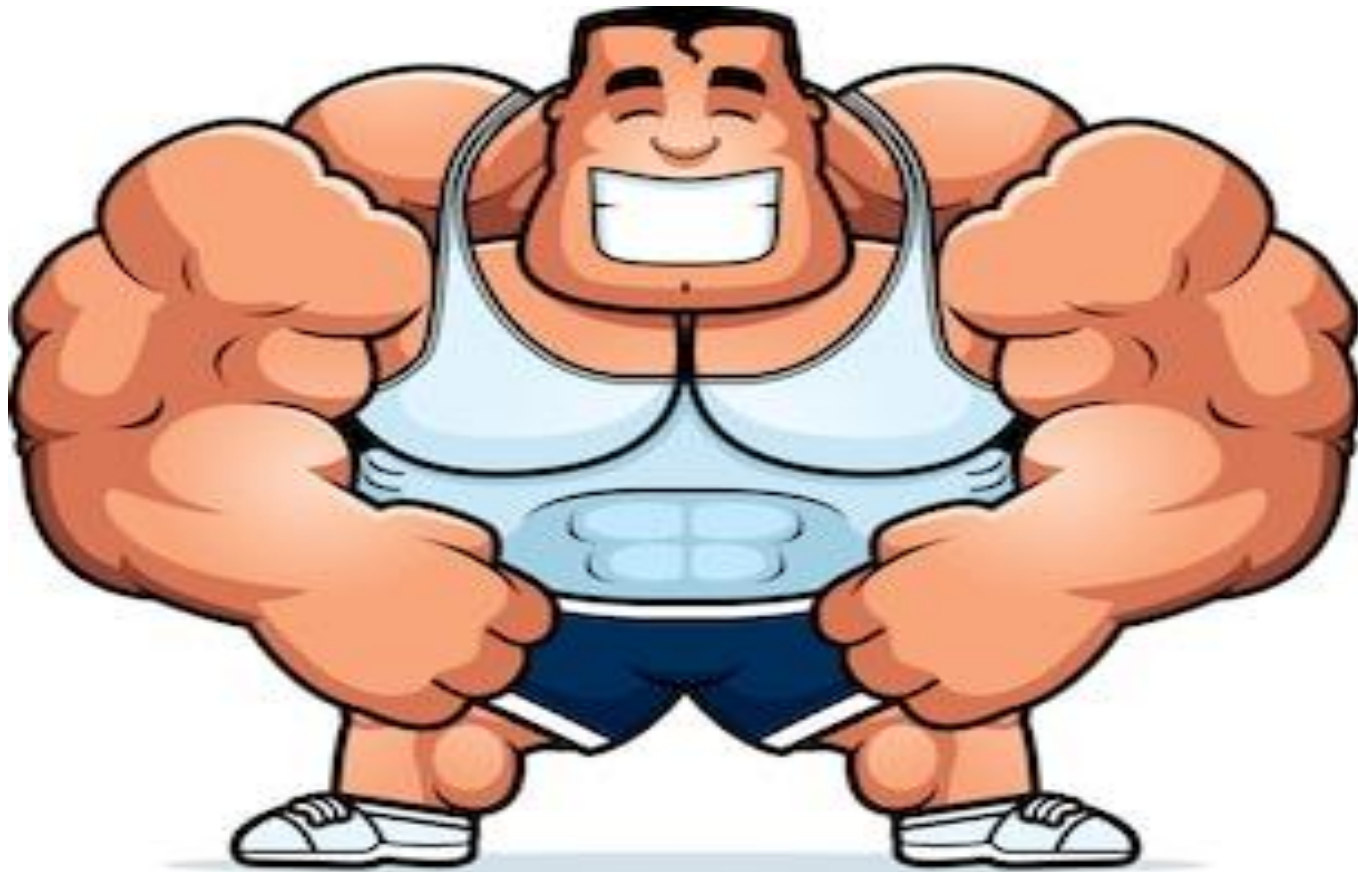


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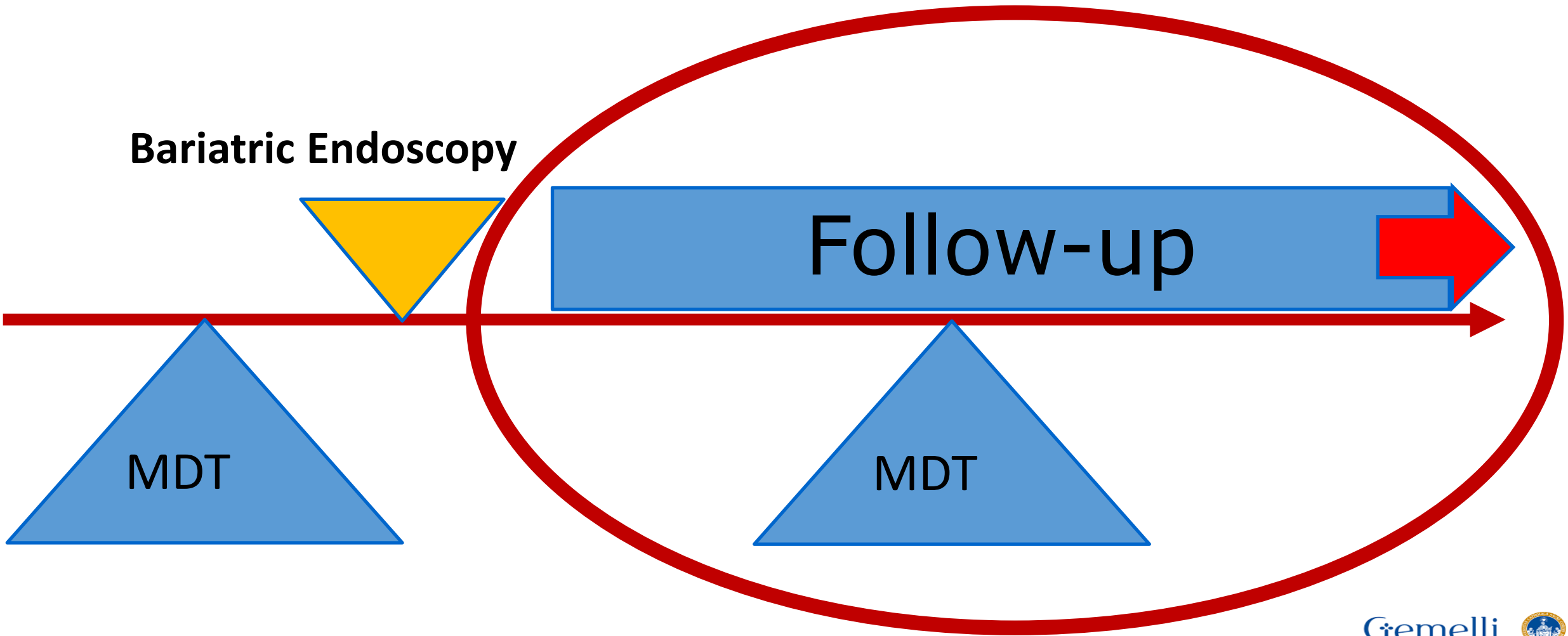
Proper Patient Selection

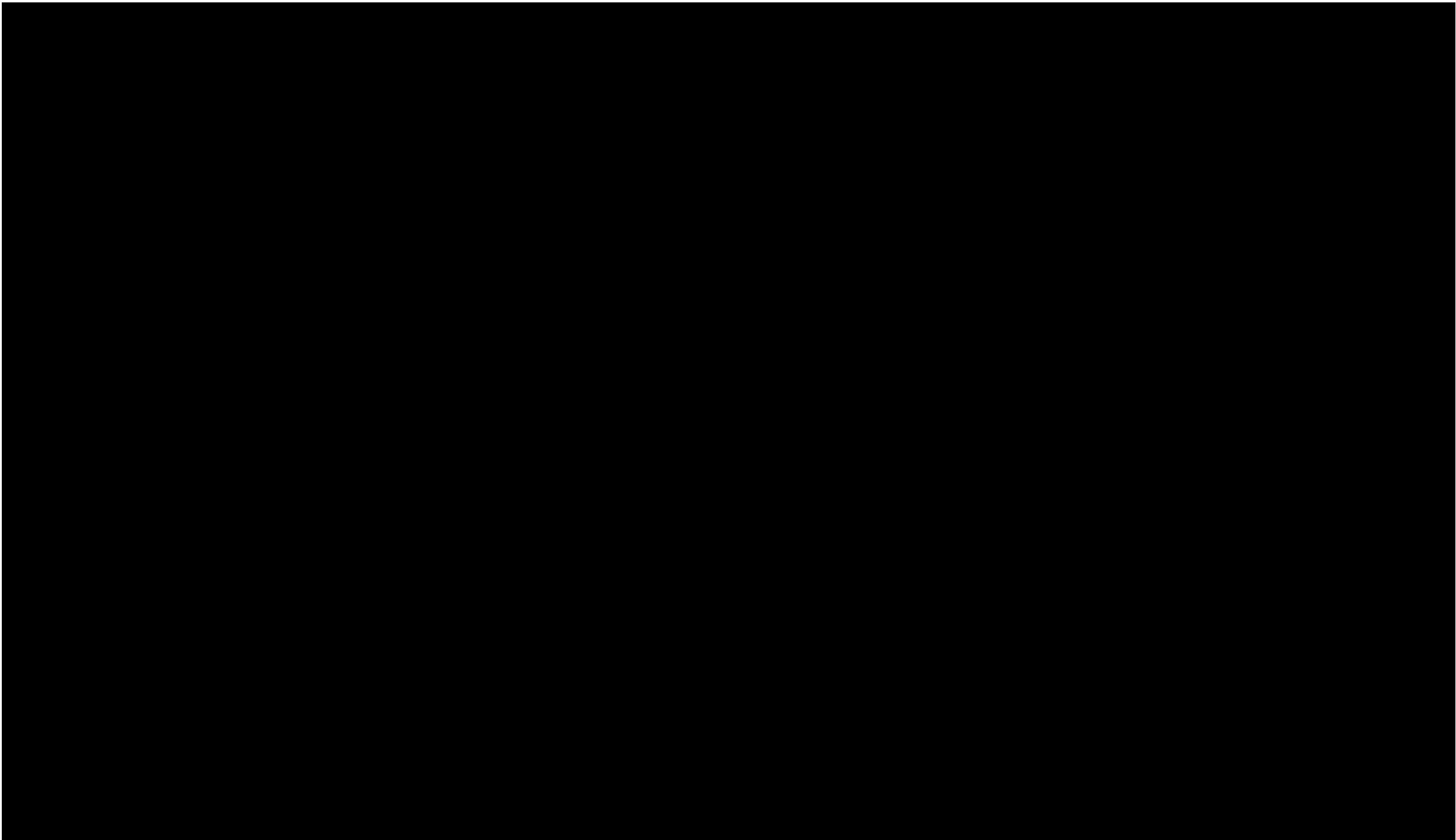


Bariatric Surgery vs Endoscopy




Bariatric Endoscopy







Brazilian Consensus on Endoscopic Sleeve Gastroplasty

Manoel Galvão Neto^{1,2} • Lyz Bezerra Silva³ • Luiz Gustavo de Quadros^{2,4} • Eduardo Grecco^{1,2} • Admar Concon Filho^{2,5} • Artagnan Menezes Barbosa de Amorim⁶ • Marcelo Falcao de Santana⁷ • Newton Teixeira dos Santos⁸ • Joao Henrique Felicio de Lima⁹ • Thiago Ferreira de Souza^{1,2} • Helmut Wagner Poti de Moraes¹⁰ • Felipe Matz Vieira¹¹ • Rena Moon¹² • André F. Teixeira¹²  • for the Brazilian Endoscopic Sleeve Gastroplasty Collaborative

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The ideal BMI range for ESG was 30–40 kg/m² (100%)—according to the participants, better results were achieved in these patients. The minimum BMI is 27 kg/m² (73.2%) with no maximum BMI and each patient should be evaluated individually according to clinical conditions (100%).

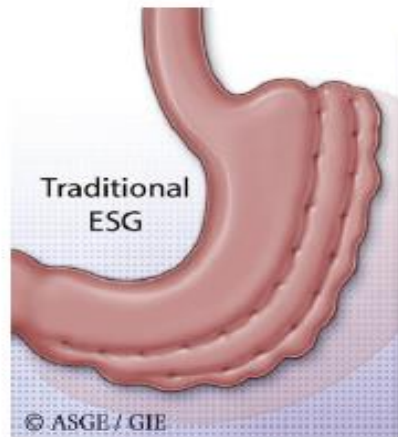
Endoscopic sleeve gastropasty in the management of overweight and obesity: an international multicenter study CME



Sérgio Barrichello, MD,¹ Diogo Turiani Hourneaux de Moura, MD, MSc, PhD,^{2,3} Eduardo Guimaraes Hourneaux de Moura, MD, MSc, PhD,² Pichamol Jirapinyo, MD, MPH,³ Anna Carolina Hoff, MD,⁴ Ricardo José Fittipaldi-Fernandez, MD,⁴ Giorgio Baretta, MD, PhD,⁵ João Henrique Felício Lima, MD, PhD,⁵ Eduardo N. Usuy, MD,¹ Leonardo Salles de Almeida, MD,⁶ Flavio M. Ramos, MD,⁷ Felipe Matz, MD,⁷ Manoel dos Passos Galvão Neto, MD,⁸ Christopher C. Thompson, MD, MSc, FASGE, FACG, AGAF³

Sao Paulo, Rio de Janeiro, Curitiba, Belo Horizonte, Brazil; Boston, Massachusetts; Miami, Florida, USA

GRAPHICAL ABSTRACT



Primary outcomes results				
Variables	Initial (n=193)	6 months (n=181)	1 year (n=121)	p-value
Weight (Kg)	93.4 ± 10.31 Kg	79.9 ± 8.13 Kg	78.52 ± 8.62 Kg	< 0.05
Overweight	80.00 ± 0.0 Kg	71.90 ± 0.0 Kg	72.42 ± 0.6 Kg	< 0.05
Obesity class 1	90.33 ± 7.95 Kg	78.26 ± 7.79 Kg	77.64 ± 7.79 Kg	< 0.05
Obesity class 2	98.41 ± 9.80 Kg	82.75 ± 7.60 Kg	81.06 ± 9.43 Kg	< 0.05
Obesity class 3	111.60 ± 16.12 Kg	88.95 ± 9.97 Kg	89.54 ± 13.07 Kg	< 0.05
% TWL	-	14.25% ± 5.26%	15.06 ± 5.22%	-
Overweight	-	10.13% ± 0.0%	8.91% ± 0.3%	-
Obesity class 1	-	13.33% ± 5.00%	13.92% ± 5.76%	-
Obesity class 2	-	15.71% ± 5.58%	16.22% ± 7.9%	-
Obesity class 3	-	20.11% ± 2.61%	19.01% ± 0.95%	-
BMI	34.11 ± 2.97	29.21 ± 2.64	28.91 ± 2.99	< 0.05

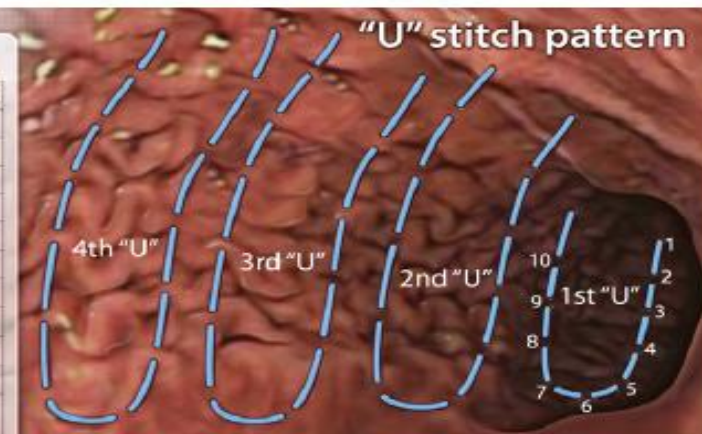


TABLE 1. Follow-up protocol

	Before procedure	1 month	2 months	3 months	6 months	9 months	12 months
Endoscopist	Yes	Yes	No	Yes *	Yes	Yes *	Yes
Nutritionist	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Psychologist	Yes	Yes	No	Yes*	Yes	No	Yes
Physical educator*	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*Not required in all centers.

ORIGINAL RESEARCH

Endoscopic sutured gastroplasty in addition to lifestyle modification: short-term efficacy in a controlled randomised trial




Vincent Huberty ¹, Ivo Boskoski ², Vincenzo Bove,² Pauline Van Ouytsel,¹ Guido Costamagna,² Marc A Barthet ³, Jacques Devière¹

Table 1 Patient data

Parameter			
Group	Treatment	Control	P value
N	49	22	–
Age, mean (<u>years</u>)	37.6	45.3	0.005
SD	9.9	11.7	
Weight, mean (<u>kg</u>)	93.3	94.7	0.554
SD	8.8	9.5	
BMI, mean	34.8	34.2	0.367
SD	2.7	2.5	
Female, n	46	20	0.651
%	94	91	

Indications to bariatric endoscopy

- BMI > 40 kg/m² (***Bridge to surgery*** and in super obese patients)

- BMI > 35 kg/m² with diabetes not controlled by medical therapy

- BMI > 30 kg/m² with comorbidities BMI < 40

- Poor surgical candidates

Wentworth JM et al. Lancet Diabetes Endocrinol 2014

Parikh M et al. Ann Surg 2014

Musella M et al. Obes Surg 2016

Zorron R et al Endoscopy 2018

TABLE 1. Serious adverse events across all major endoscopic sleeve gastroplasty reports totaling 1607 cases³⁻⁷

Serious Adverse Event	Number of Occurrences (%)
Intraabdominal collection	7 (0.4%)
Hemorrhage requiring transfusion or endoscopic intervention	6 (0.4%)
Refractory symptoms requiring ESG reversal	3 (0.2%)
Pneumoperitoneum and pneumothorax	1 (0.1%)
Pulmonary embolism	1 (0.1%)
Perforation or death	0 (0%)
Total	18 (1.1%)

ESG, Endoscopic sleeve gastroplasty.

The number 1 BEt

- Be less invasive
- Be effective
- Be repeatable
- Be easy to perform
- Be cost-effective
- Be fast to perform
- Be available
- Be reversible
- Be attractive
- etc...

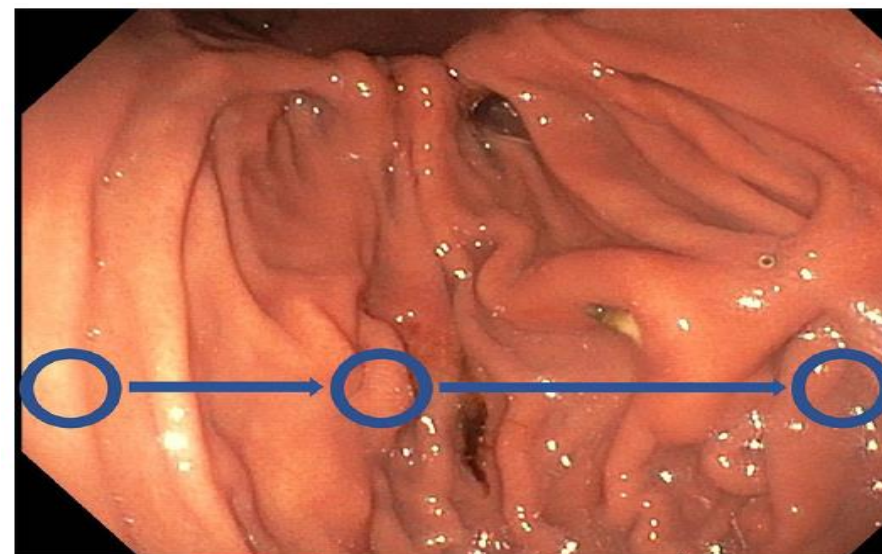


From 2017 > 260 pts ESG with Apollo Overstitch @ Gemelli

N°	Baseline BMI	Mean age	12m %TBWL	24m %TBWL	30m %TBWL
43 (31 F)	30-35	47.3	21.4±8.2	16.2±7.6	14.2±0.4
57 (46 F)	35-40	44.3	14.2±7.4	18.4±11.3	18.9±14.8
41 (19 F)	>40	45.8	19.1±7.4	19.7±8.9	16.1±11.2

Redo endoscopic sleeve gastroplasty: technical aspects and short-term outcomes

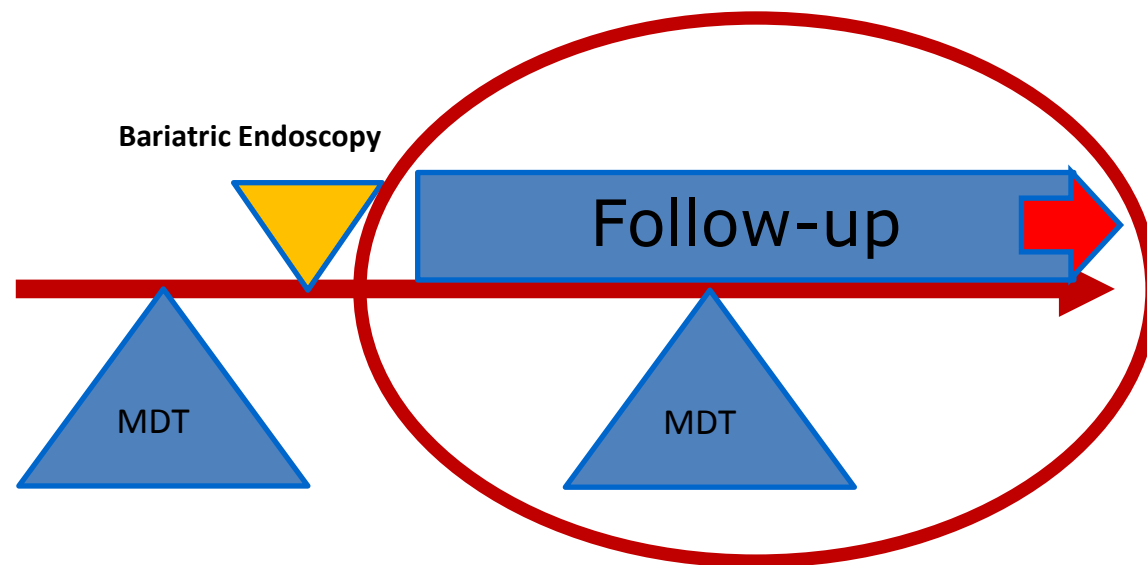
Ivo Boškosi , Valerio Pontecorvi, Camilla Gallo, Vincenzo Bove, Lucrezia Laterza and Guido Costamagna



Repeatable and reversible





The future

- **ESG in BMI 30 > without comorbidities**



ORIGINAL RESEARCH

Small intestinal metabolism is central to whole-body insulin resistance

Giulia Angelini ,^{1,2} Serenella Salinari,³ Lidia Castagneto-Gissey,⁴
Alessandro Bertuzzi,⁵ James Casella-Mariolo,⁶ Sofie Ahlin,⁷ Ivo Boskoski ,^{1,2}
Melania Gaggini,⁸ Marco Raffaelli,^{1,2} Guido Costamagna,^{1,2} Giovanni Casella,⁴
Pier Luigi Marini,⁶ Amalia Gastaldelli ,⁸ Stefan Bornstein,^{9,10}
Geltrude Mingrone ^{1,2,9}

Proximal gut plays a crucial role in controlling insulin sensitivity through a distinctive metabolic signature involving hepatic gluconeogenesis and muscle insulin resistance.

Bypassing the jejunum is beneficial in terms of insulin-mediated glucose disposal in obesity.

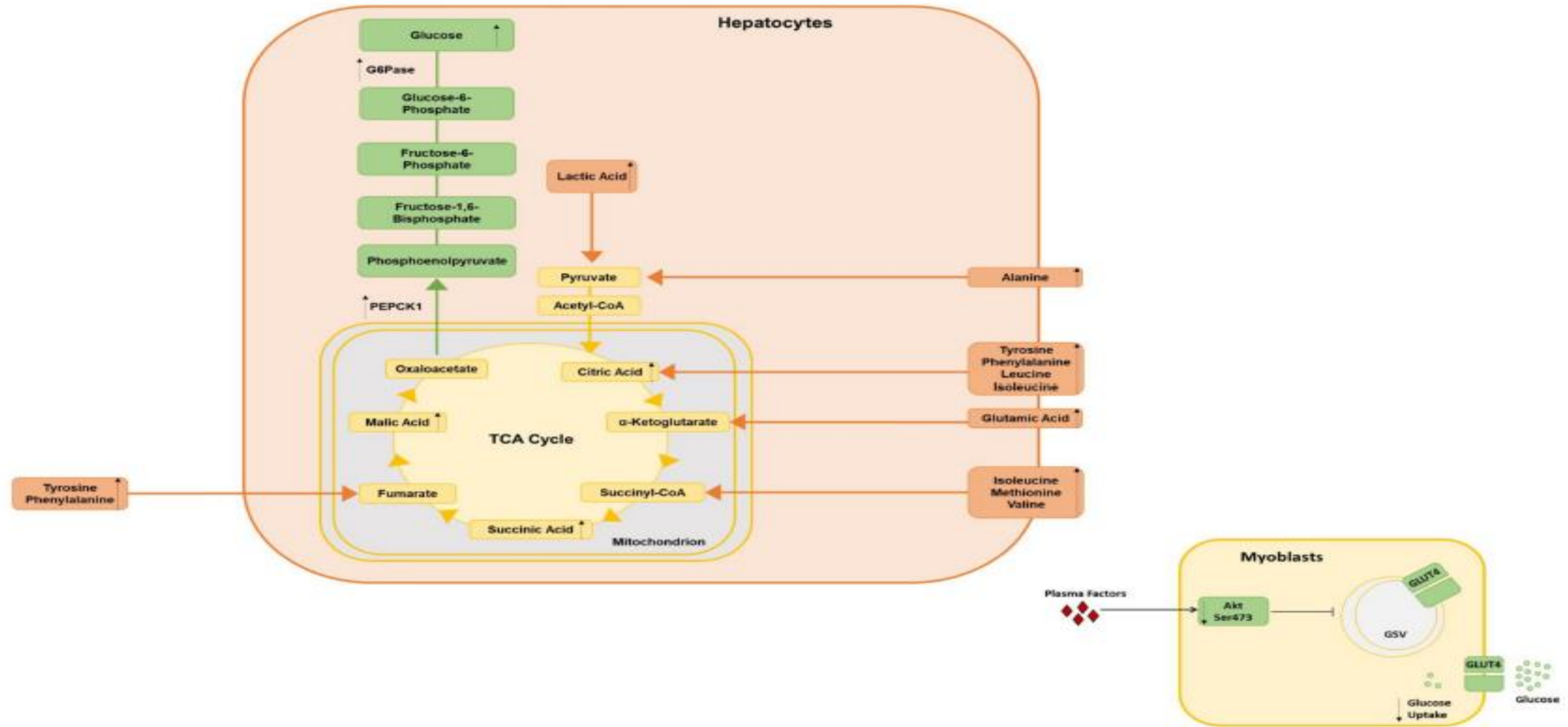
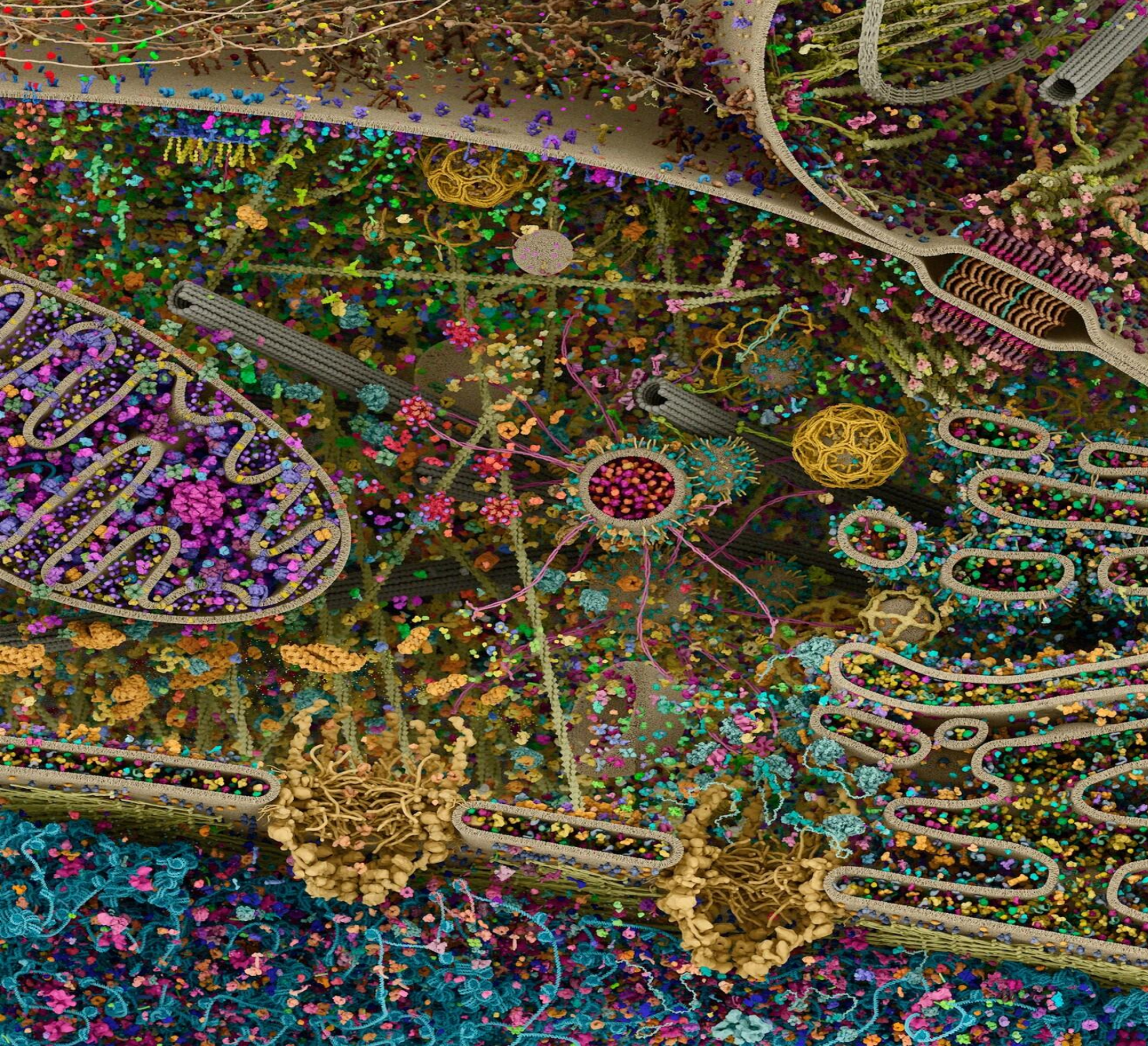
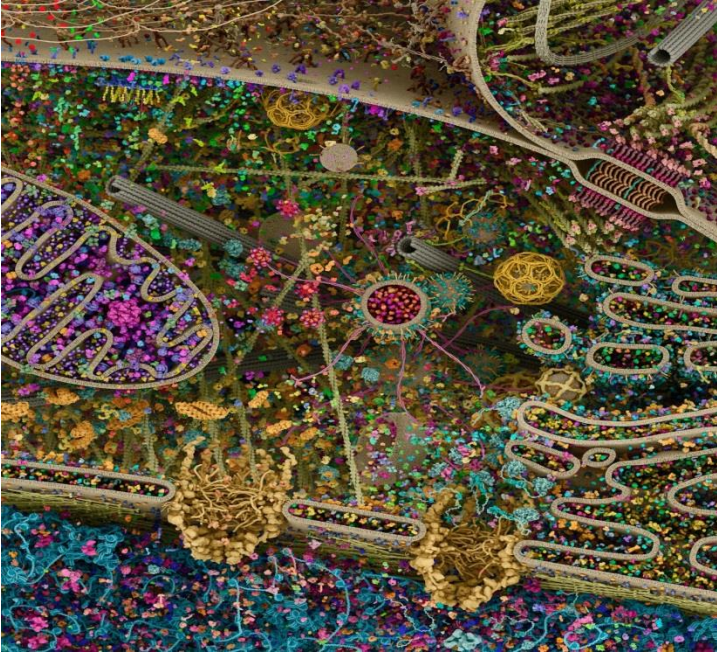


Figure 7 Metabolic pathways related to the metabolites identified in human and pig plasma. The figure shows plasma metabolites that were higher when glucose was administered before BPD as well as in the Thiry-Vella loop as compared with post-BPD or gastric glucose administration following jejunectomy conditions. Some of these metabolites are gluconeogenic precursors (in orange) promoting liver gluconeogenesis through increased expression of PEPC1 and G6Pase. The gluconeogenesis pathway and the TCA are schematically represented. Plasma factor/s impair Akt Ser473

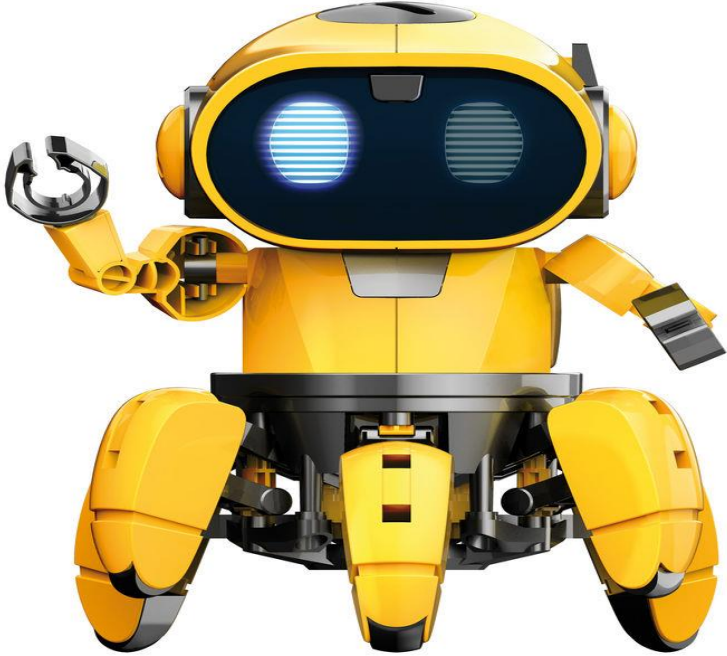


Created for Cell Signaling Technology, Inc., and inspired by the stunning art of **David Goodsell**, this 3D rendering of a eukaryotic cell is modeled using X-ray, nuclear magnetic resonance (NMR), and cryo-electron microscopy datasets for all of its molecular actors.

The future of Endoscopic bariatric and metabolic therapies



+





Gemelli



Fondazione Policlinico Universitario A. Gemelli
Università Cattolica del Sacro Cuore

Thanks and stay safe!

ivo.boskoski@policlinicogemelli.it