



# Obesity Management CASES McGill Refresher Course

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# Jennifer

Age: 43 years

- BMI: 37 kg/m<sup>2</sup>
- Wants to start effective diet and lose weight immediately
- Wants to keep it off
- Needs help

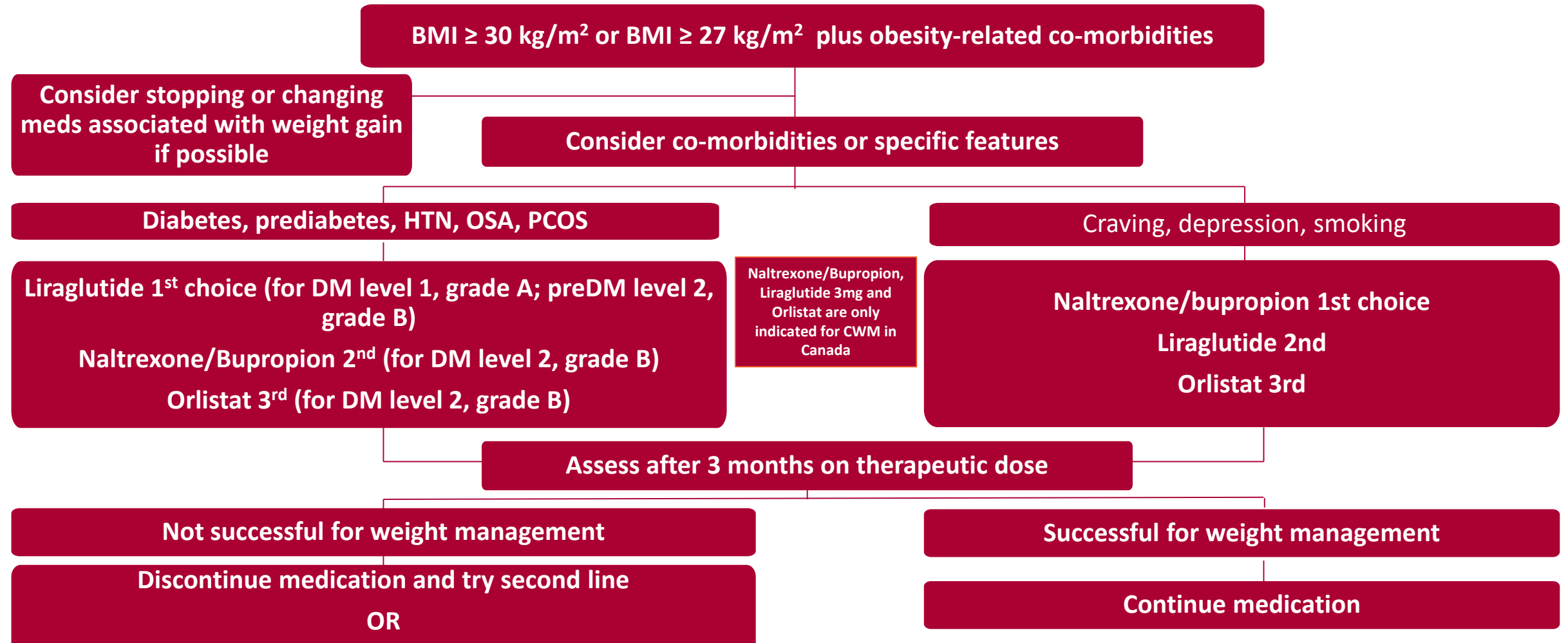


## **Mrs Karas – Age 43, BMI 37**

### **Follow the 5 As (Ask, Assess, Advise, Agree, Assist)**

- Ask – can we discuss options for treatment beyond diet and activity
  - She is already on a healthy diet and is active – she says “yes”
- Assessment - You assess her comorbidities
  - She has prediabetes, PCOS, depression and emotional eating.
  - Her only medication is an antidepressant.
- Advise on Treatment
  - She is interested in medication to help her lose weight and keep it off

# Obesity Pharmacotherapy Can Be Individualized for the Person with Obesity



# Jennifer – Age 43 years, BMI 37 kg/m<sup>2</sup>

## Outcome

### Agree

- She agrees to start on Liraglutide 3.0 mg, and counselling for her depression and emotional eating.
- She agrees that her values are based on being healthy for her family and that she will work on changing behaviors and not focus on the scale

### Assist

- You continue to see her for the next few years, as she progresses
- She uses counselling from time to time
- She decides to stay on the medication long term as it helps her stay on track

# James

Age: 48 years

- BMI: 39 kg/m<sup>2</sup>
- Wants to start effective diet and lose weight immediately to minimize complications risks
- Wants to keep it off
- Needs help



## **James, Age 48, BMI 39**

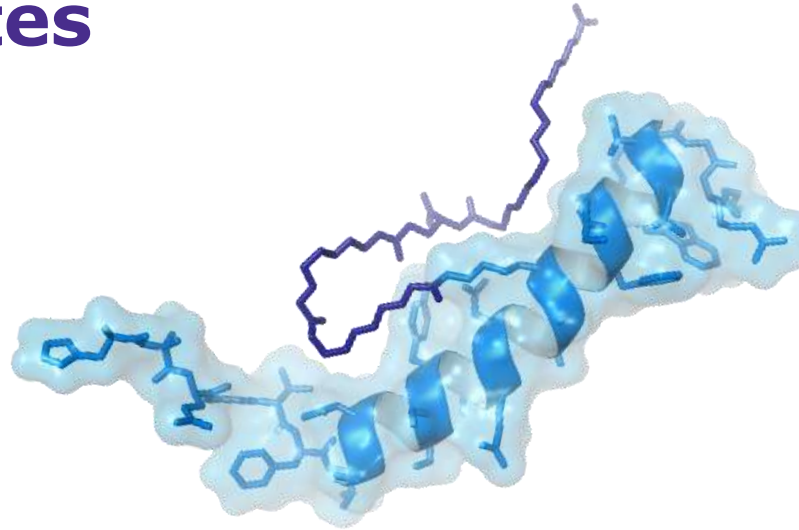
### **Follow the 5 As (Ask, Assess, Advise, Agree, Assist)**

- Ask – can we discuss options for treatment beyond diet and activity
  - You tell him that a dietitian will discuss specific healthy diets with him after your visit. You encourage a mild increase in his activity starting with walking. He says “yes” to discussing further options
- Assessment - You assess his comorbidities
  - He has fatty liver, diabetes with A1c of 6.8% on metformin
- Advise on Treatment
  - He is interested in medication to help him lose weight and keep it off

# GLP-1RAs have multifactorial effects that may benefit several disease states

## NASH

- Inflammation<sup>3</sup> ↓
- Body weight<sup>8</sup> ↓
- Lipids<sup>\*4,5</sup> ↓
- Glucose<sup>1</sup> ↓



## CV disease

- Inflammation<sup>3</sup> ↓
- Lipids<sup>#4,5</sup> ↓
- Systolic blood pressure ↓
- Heart rate<sup>6</sup> ↑

## Obesity

- Energy intake<sup>7</sup> ↓
- Appetite<sup>8</sup> ↓
- Body weight<sup>8</sup> ↓

## Kidney disease

- Inflammation<sup>3</sup> ↓
- Systolic blood pressure<sup>6</sup> ↓

## Diabetes

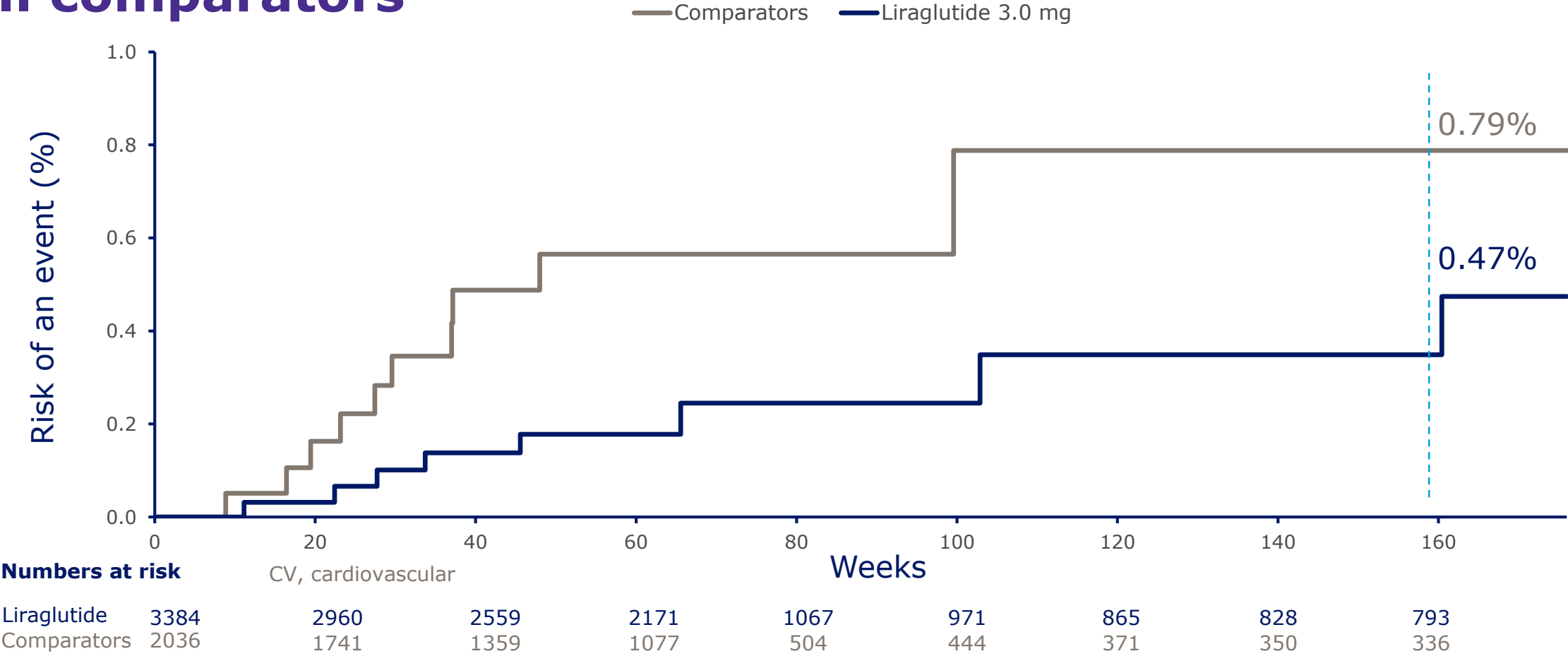
- Insulin<sup>1</sup> ↑
- $\beta$ -cell function<sup>1</sup> ↑
- Glucagon<sup>1</sup> ↓
- Gastric emptying<sup>2</sup> ↓

GLP-1RA, glucagon-like peptide-1 receptor agonist; NASH, non-alcoholic steatohepatitis \*Fasting and postprandial lipids

1. Campbell JE and DJ Drucker. *Cell Metab* 2013;17:819–37; 2. Tong J and D'Alessio D. *Diabetes* 2014;63:407–9; 3. Hogan AE et al. *Diabetologia* 2014;57:781–4;  
4. Hermansen K et al. *Diabetes Obes Metab* 2013;15:1040–8; 5. Ahrén B et al. *Lancet Diabetes Endocrinol* 2017;5:341–54; 6. Ryan D and Acosta A. *Obesity* 2015;23:1119–29;  
7. Bagger JI et al. *J Clin Endocrinol Metab* 2015;100:4541–52; 8. Flint A et al. *J Clin Invest* 1998;101:515–20



# 58% ns RRR in Time to first MACE for liraglutide 3.0 mg vs. All comparators



Davies et al. Diabetes Obes Metab 2018;20:734–9

## James– Age 48, BMI 39

### Outcome

#### Agree

- He agrees to start on Liraglutide 3.0 mg for his diabetes and his weight.
- He agrees that he can consider bariatric surgery if things do not go well with Liraglutide 3.0 mg

#### Assist

- You continue to follow him for the next few years and send him for cardiac testing due to his high risk. He passes all tests.
- He stays on Liraglutide 3.0 mg, his A1c decreases to 5.9% and his BMI decreases to 32 kg/m<sup>2</sup>.

## Ruth

Age: 40 years

- BMI: 34 kg/m<sup>2</sup>
- Tried diet after diet and finally gastric sleeve surgery. Lost some weight but regained it
- Wants to lose weight and keep it off
- Needs help



## **Ruth, age 40 years, BMI 34 kg/m<sup>2</sup>**

### **Follow the 5 As (Ask, Assess, Advise, Agree, Assist)**

Ask – can we discuss options for treatment beyond diet and activity

- She has already started another diet, a keto-diet and is active.
- She says “yes” to discussing further options

Assessment - You assess her comorbidities

- She failed the gastric sleeve. Her BMI 4 years ago was 36 kg/m<sup>2</sup>, then decreased to 26 kg/m<sup>2</sup> afterwards and regained to 34 kg/m<sup>2</sup>

Advise on Treatment

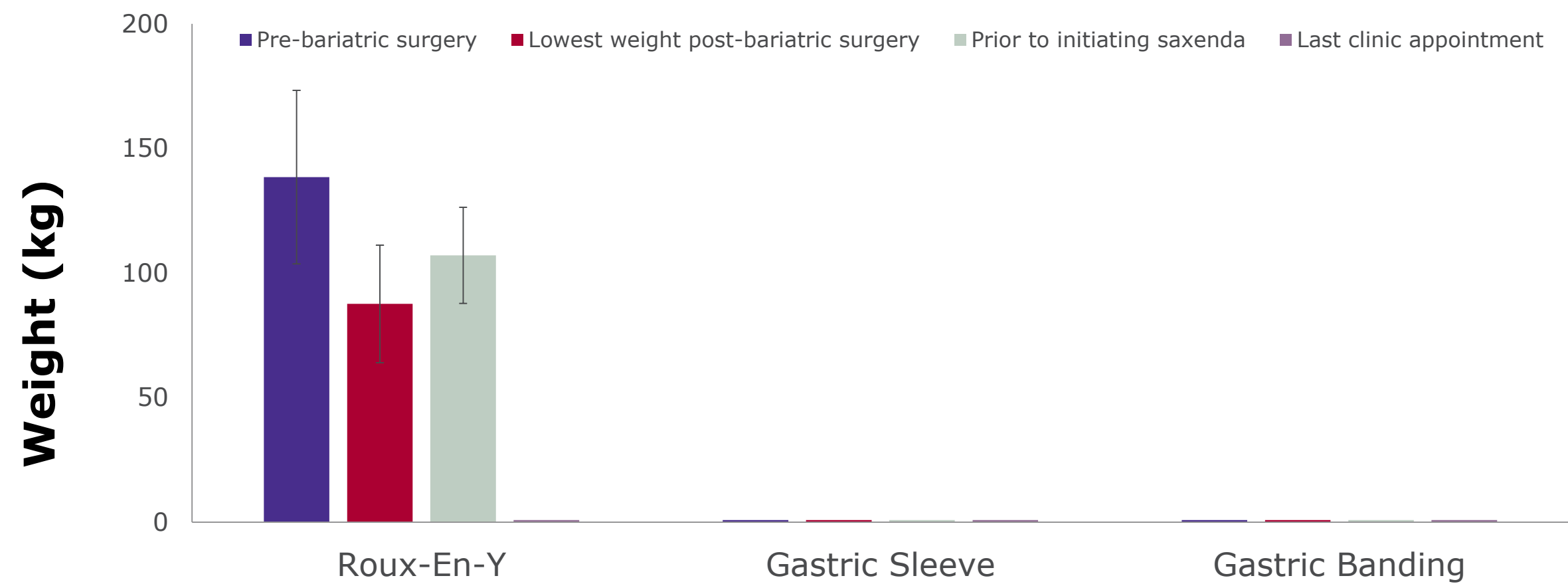
- She is interested in medication to help her lose weight and keep it off

# Patients who regain weight after bariatric surgery

## Can we use medications to help?



# 117 pts Post Op Weight Regain – Liraglutide 3.0mg Treatment



<sup>†</sup>Significant change in weight from previous time point ( $P<0.05$ )  
<sup>‡</sup>Significantly different from Roux-En-Y at same time point ( $P<0.05$ )    Wharton et al. Clinical Obesity May 2019



# Ruth – Age 40 years, BMI 34 kg/m<sup>2</sup>

## Outcome

### Agree

- She agrees to start Liraglutide 3.0 mg to help decrease weight post failed bariatric surgery
- She remains on the keto-diet, she is active and is taking her vitamins

### Assist

- You monitor her progress, and she is now able to maintain the diet while on the Liraglutide 3.0 mg
- Her BMI decreases below 30 kg/m<sup>2</sup>.

# Summary

- Follow the 5 As
  - Ask, Assess, Advise, Agree and Assist
- Real world examples and studies demonstrate that Liraglutide 3.0 mg is effective when added to lifestyle interventions
- Liraglutide 3.0 mg can be used post bariatric surgery assist with continued weight management