

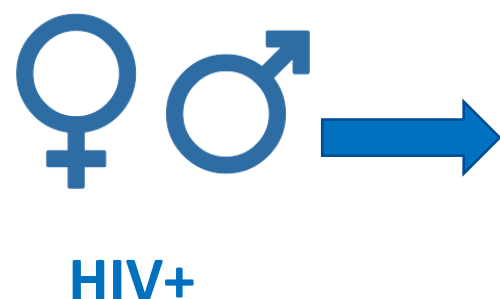
# Evolution of severe obesity and associated-comorbidities in HIV-positive patients with and without bariatric surgery: a case-control study

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**Introduction:** Obesity and related-comorbidities are increasing among patients living with HIV (PLWH). Bariatric surgery (BS) is a safe and effective procedure in the general population but only small case series are available in PLWH. This study compares the evolution of severe obesity and associated-comorbidities in PLWH with or without BS.

## Design :

- Retrospective case-control study
- PLWH followed at Saint-Pierre University Hospital HIV reference centre



### + Severe morbidity

**BMI  $\geq 40$**

**or**

**BMI  $\geq 35$  +**

**comorbidity(ies)**

- Diabetes
- Hypertension
- Sleep apnea syndrom
- Dyslipidemia

### **Bariatric surgery**

**= 27 cases**

- 13 gastric bypass (GB)
- 13 sleeve gastrectomy (SG)
- 1 gastric banding

### **No bariatric surgery**

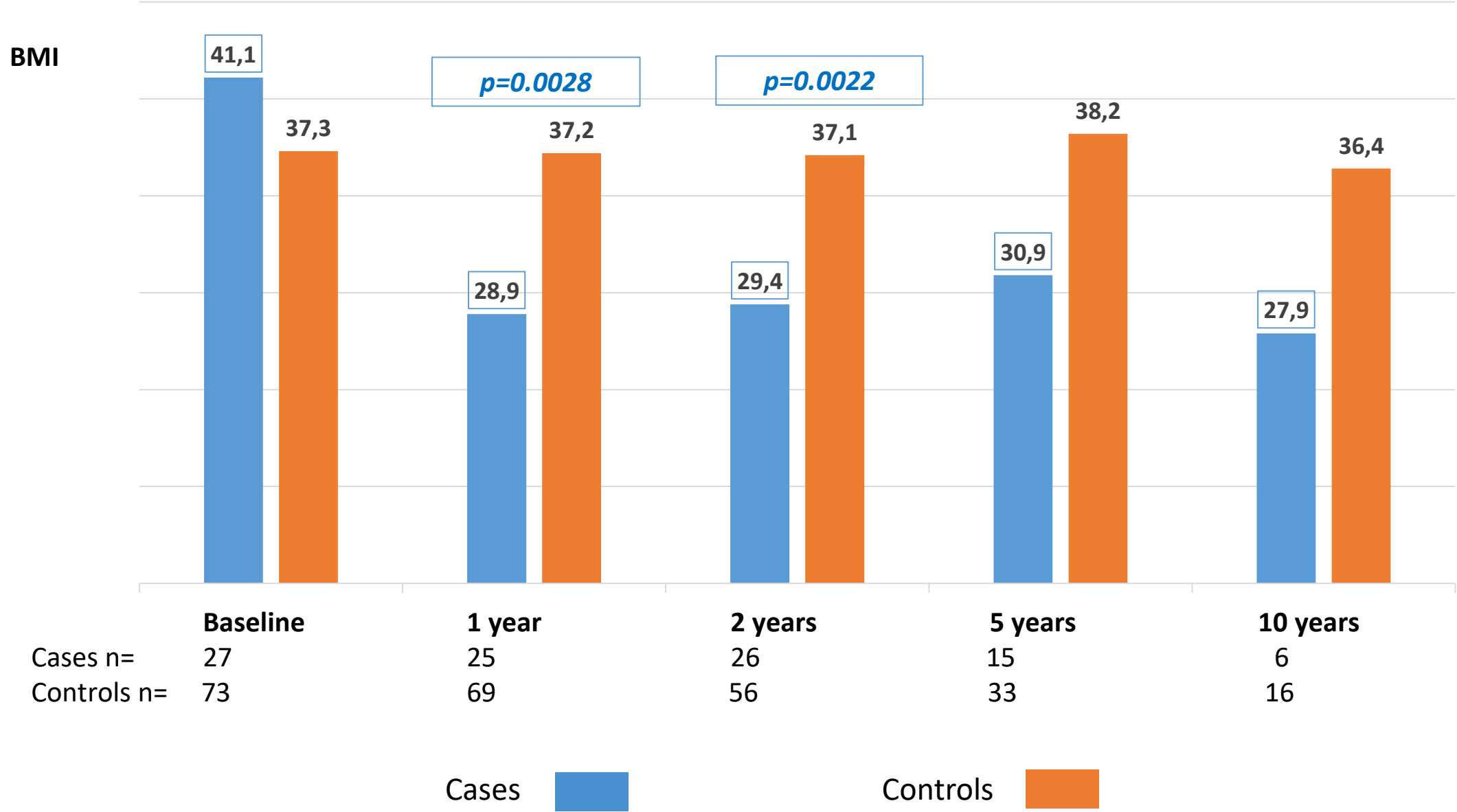
**= 73 controls**

**Matched (1/3) for age, gender, ethnicity, BMI**

Baseline characteristics	Cases with bariatric surgery ( n=27)	Controls without bariatric surgery (n=73 )	<i>p</i>
Median age (years)	42.2	44.4	NA (not applicable)
Female sex	85.2%	83.6%	NA
Sub Saharan African origin	77.8%	78%	NA
HIV heterosexually acquired	77.8%	85%	ns
HIV median CD4 count (IQR) (cells/μL)	646 (455-862)	704 (460.5-900.5)	ns
Under cART (%)	92.6%	91%	ns
Cumulative time with HIVRNA<50 cp/ml (IQR) (years)	6.7 (3.8-11.1)	5.7 (2.7-10.3)	ns
Weight (IQR) (kg)	112 (100-135)	100 (96-114)	0.0042
BMI (IQR) kg/m²	41.1 (37.8-45.4)	37.3 (36.4-39)	0.0017
BMI ≥40 kg/m² (%)	63%	19.2%	0.0004

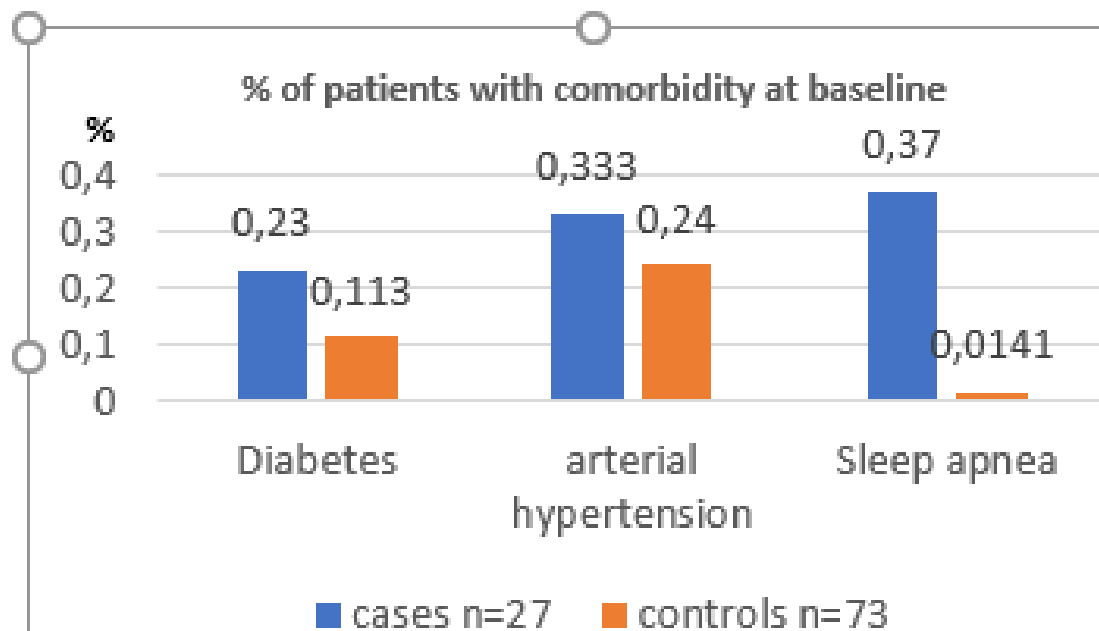
# Evolution of BMI

Same dietary advices  
Weight loss statistically significantly greater in cases.  
All cases reached BMI  $\leq 30$  at all FU times while controls remained  $>35$  kg/m<sup>2</sup>

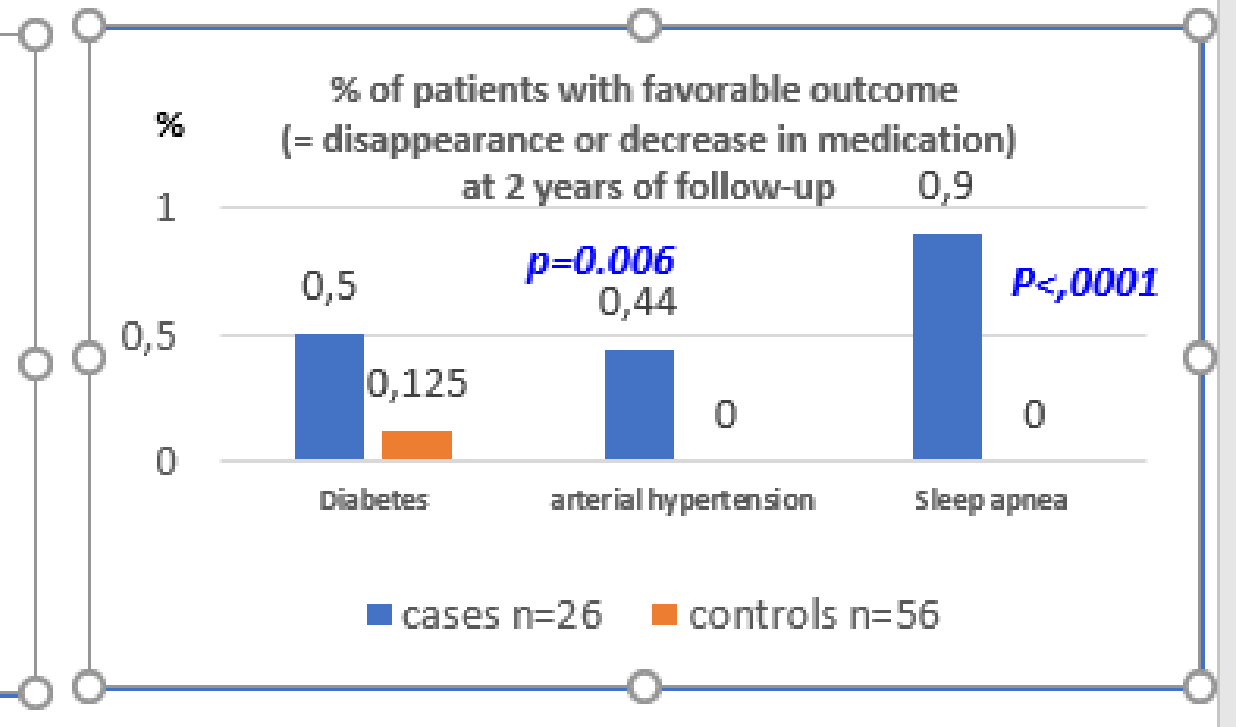


# Comorbidities

Baseline



Evolution of comorbidities



# Evolution of severe obesity and associated-comorbidities in HIV-positive patients with and without bariatric surgery: a case-control study

- Major Surgery complications rate was 11% and 2 cases needed a second BS because of weight regain, similarly to what is described in the literature in the general population.
- HIVRNA suppression was maintained in all but 1 patient with transient dysphagia after SG; after switching cART for a smaller pill, HIVRNA became undetectable again
- Exposure to different cART that could have impact on weight (Tenofovir disoproxil or alafenamide/Integrase Inhibitors/Rilpivirine) was similar in cases and controls both at baseline and during follow up .
- **Conclusion: Bariatric surgery among PLWH is safe and effective both on severe obesity and related comorbidities with no impact on viral suppression.**