

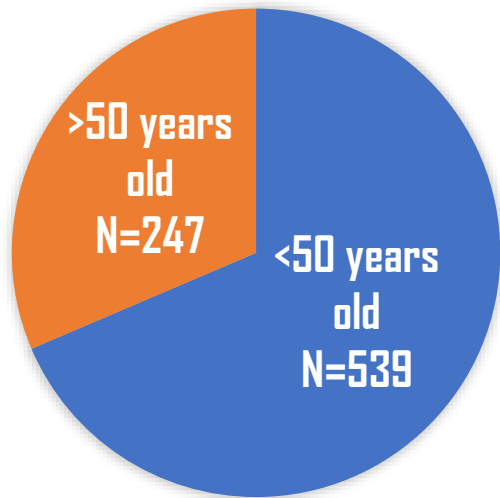
# Assessment of the effectiveness of laparoscopic sleeve gastrectomy in treating metabolic syndrome in patients over 50 years old

**Aleksander Lukaszewicz, Paulina Gluszynska, Inna Diemiszczyk, Piotr Golaszewski, Jan Chilmonczyk, Jerzy Lukaszewicz, Hady Razak Hady**

Medical University of Bialystok, 1st Clinical Dept. of General and Endocrine Surgery, Bialystok, Poland



# Test groups



**N=786**

**01.2010 – 01.2023**

|                                     | <50         | >50        | Total      |
|-------------------------------------|-------------|------------|------------|
| Men                                 | 242 (30,8%) | 112(14,2%) | 354(45,2%) |
| Women                               | 296(37,7%)  | 135(17,2%) | 431(54,8%) |
| Mean age                            | 37,6        | 56,9       | 43,7       |
| Mean preoperative BMI               | 47,7        | 47,01      | 47,5       |
| Mean preoperative weight            | 142,8 kg    | 134,8 kg   | 140,3 kg   |
| Patients with hypertension          | 164         | 157        | 321        |
| Patients with t.2 diabetes mellitus | 55          | 70         | 125        |

# Tested parameters

- BMI
- Weight loss
- Glycemia
- HbA1c
- Changes in antihypertensive treatment
- Total cholesterol, HDL, LDL and triglycerides concentrations

0

3 months

12 months

1 month

6 months

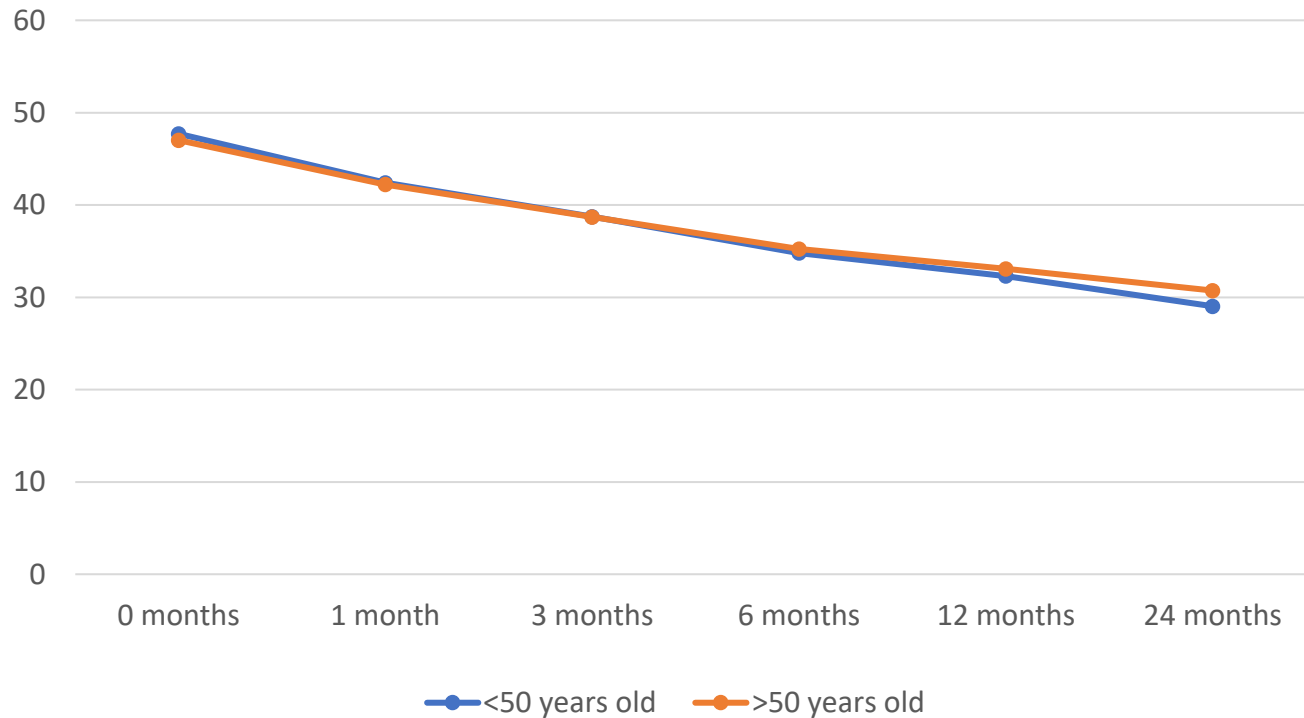
24 months



NAPOLI  
2023

# Body Mass Index

Mean BMI

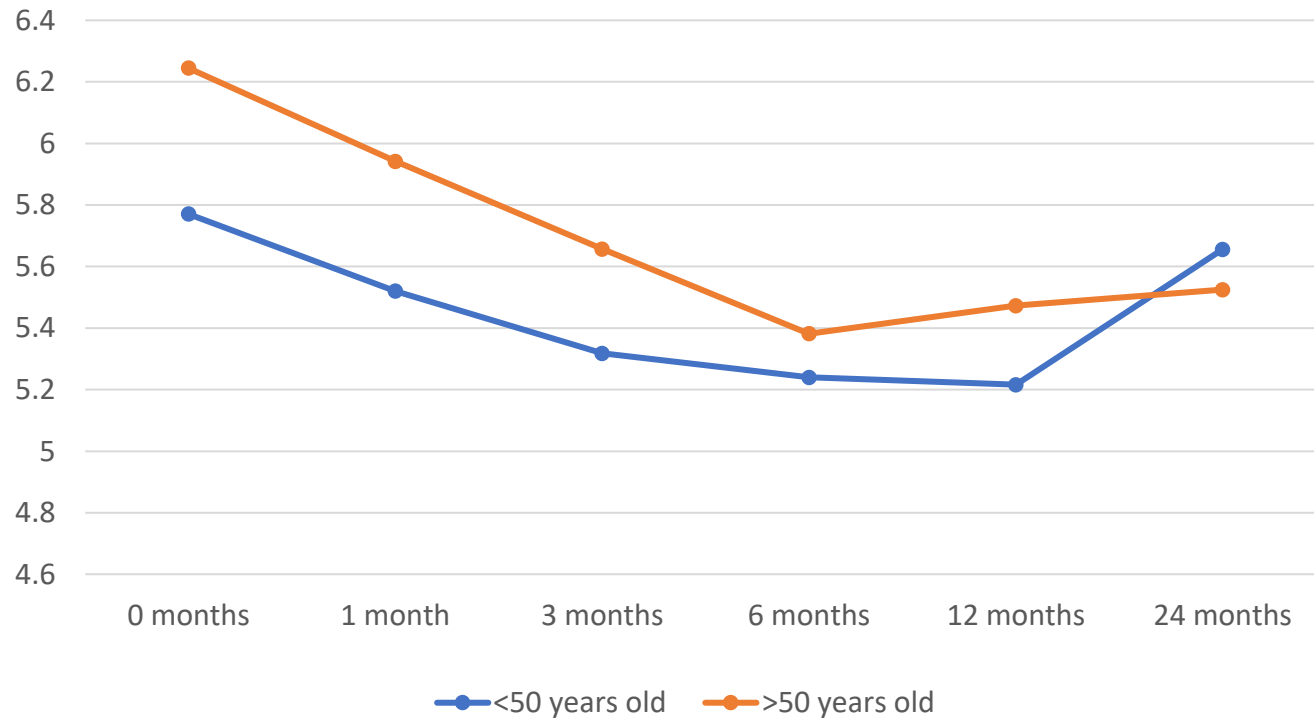


|           | <50 years old | >50 years old | P value |
|-----------|---------------|---------------|---------|
| 0 months  | 47,71         | 47,01         | >0,9999 |
| 1 month   | 42,4          | 42,22         | >0,9999 |
| 3 months  | 38,73         | 38,69         | >0,9999 |
| 6 months  | 34,79         | 35,23         | >0,9999 |
| 12 months | 32,31         | 33,09         | >0,9999 |
| 24 months | 29,03         | 30,73         | >0,9999 |

**N=786**

# Glycated hemoglobin

Mean HbA1C

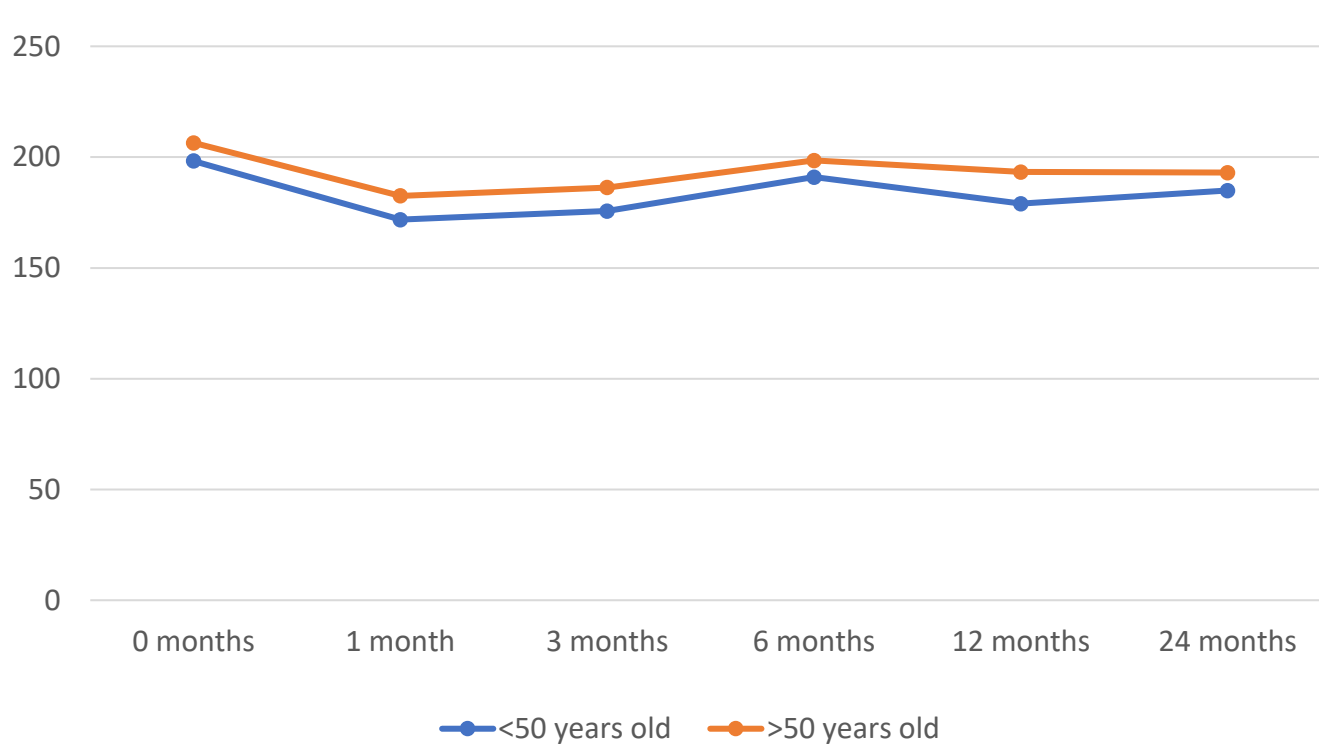


|           | <50 years old | >50 years old | P value |
|-----------|---------------|---------------|---------|
| 0 months  | 5,771         | 6,245         | <0,0001 |
| 1 month   | 5,52          | 5,942         | <0,0001 |
| 3 months  | 5,318         | 5,657         | <0,0001 |
| 6 months  | 5,24          | 5,382         | 0,0099  |
| 12 months | 5,216         | 5,473         | 0,0008  |
| 24 months | 5,656         | 5,525         | >0,9999 |

N=786

# Total Cholesterol Concentration

Mean total cholesterol concentrations

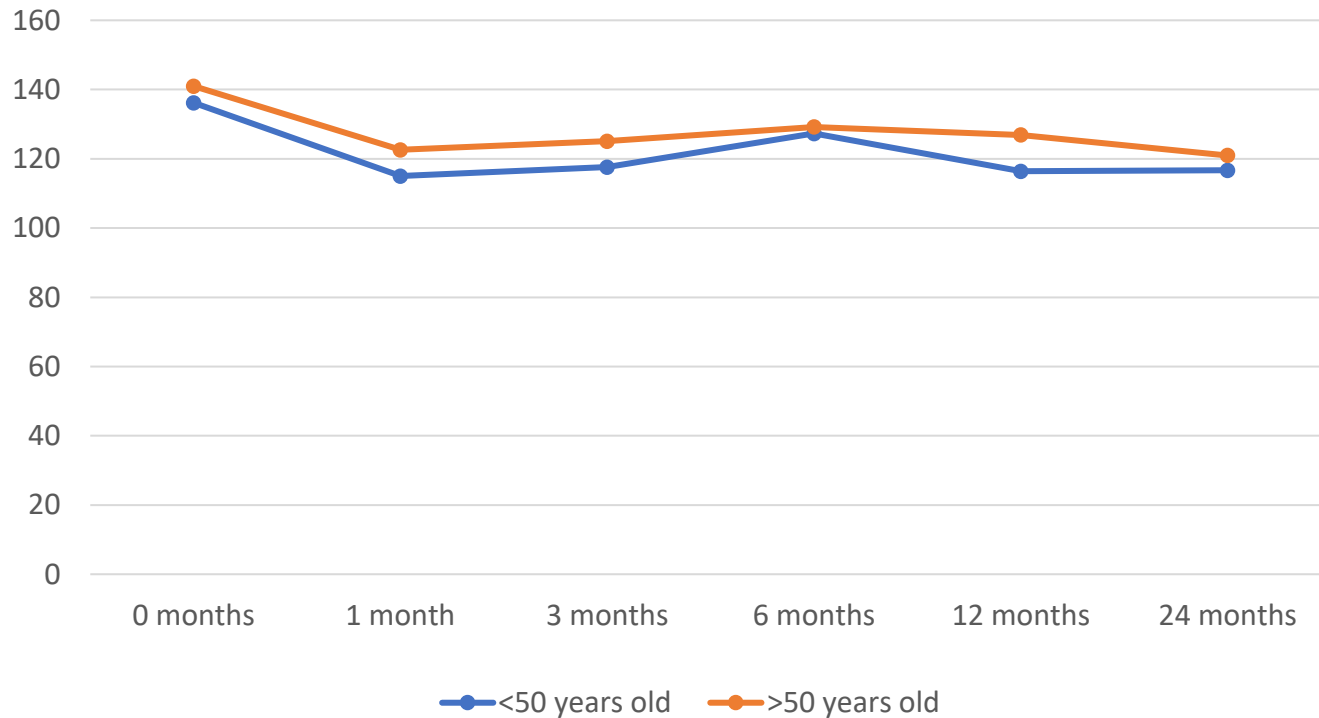


|           | <50 years old | >50 years old | P value       |
|-----------|---------------|---------------|---------------|
| 0 months  | 198,3         | 206,4         | >0,9999       |
| 1 month   | 171,8         | 182,5         | >0,9999       |
| 3 months  | 175,7         | 186,3         | 0,6697        |
| 6 months  | 191,0         | 198,5         | >0,9999       |
| 12 months | 179,0         | 193,3         | <b>0,0340</b> |
| 24 months | 184,9         | 193,0         | >0,9999       |

N=786

# LDL

Mean LDL concentrations

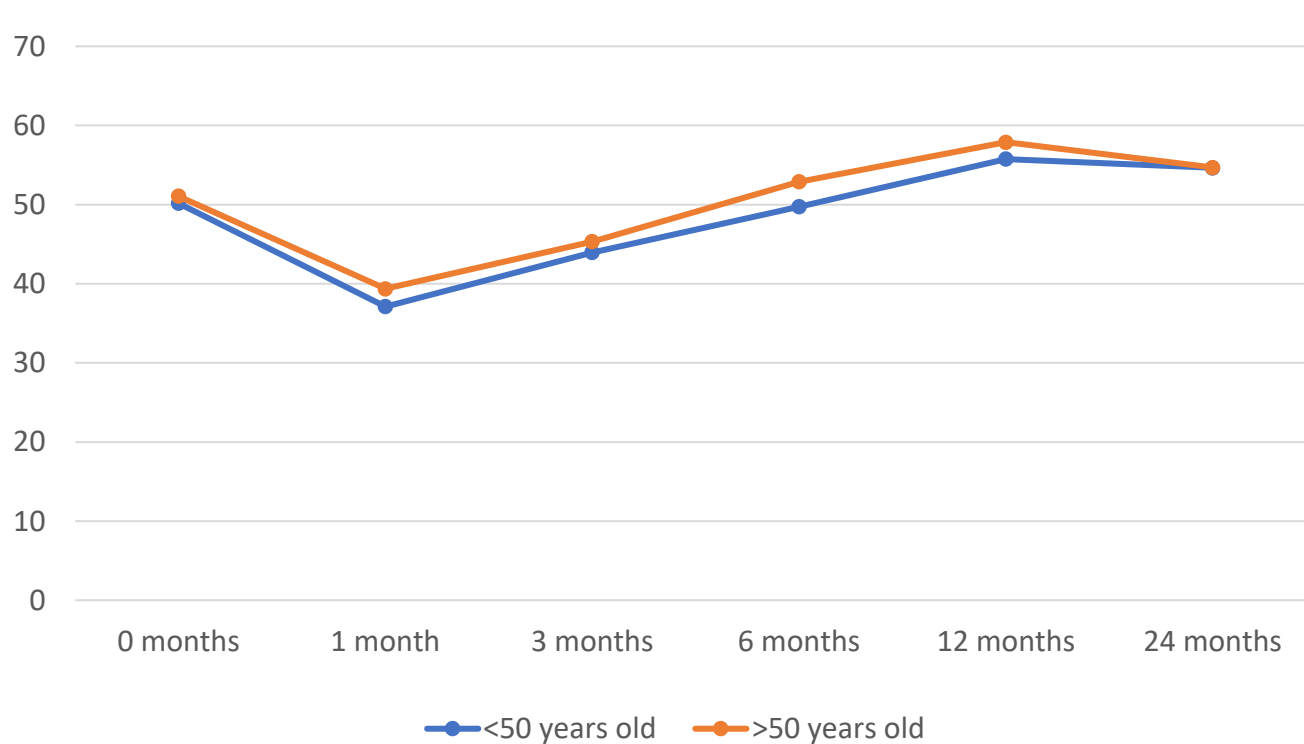


|           | <50 years old | >50 years old | P value |
|-----------|---------------|---------------|---------|
| 0 months  | 136,2         | 141,0         | >0,9999 |
| 1 month   | 115,0         | 122,6         | >0,9999 |
| 3 months  | 117,6         | 125,1         | >0,9999 |
| 6 months  | 127,33        | 129,2         | >0,9999 |
| 12 months | 116,4         | 126,9         | 0,1857  |
| 24 months | 116,7         | 121,0         | >0,9999 |

**N=786**

# HDL

Mean HDL concentrations



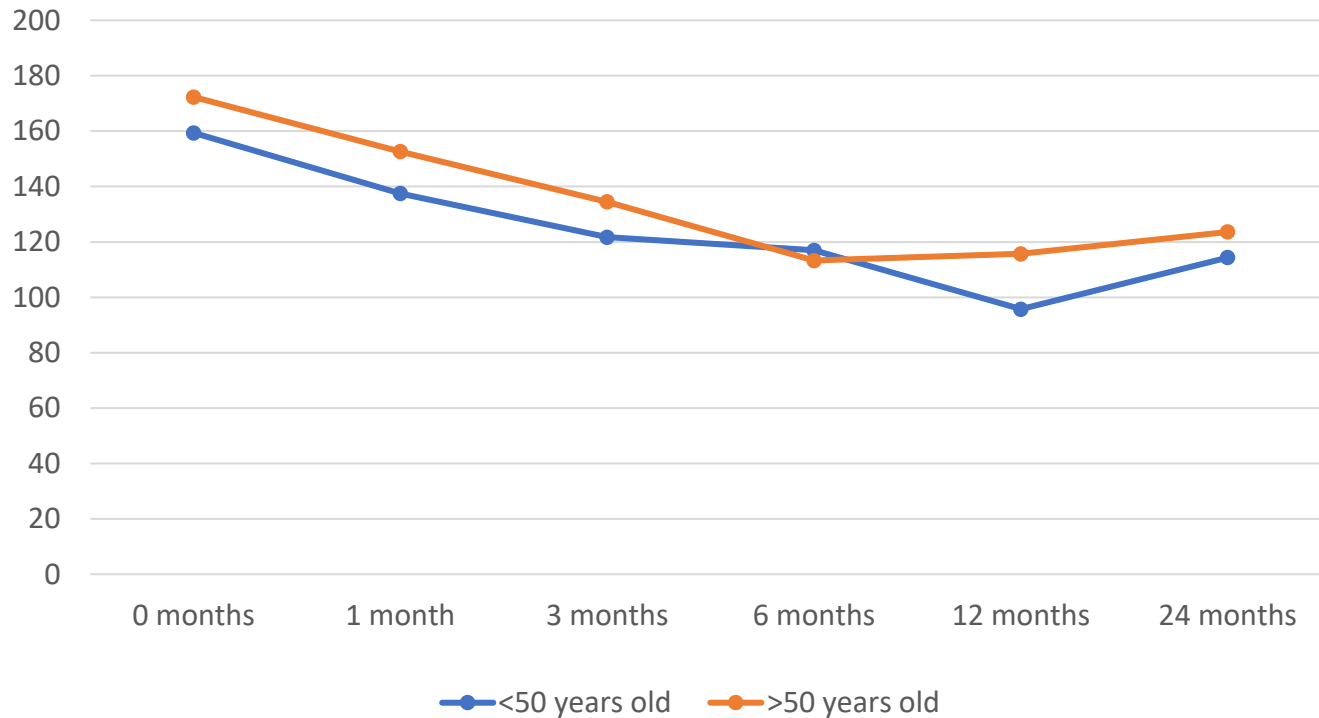
|           | <50 years old | >50 years old | P value |
|-----------|---------------|---------------|---------|
| 0 months  | 50,19         | 51,07         | >0,9999 |
| 1 month   | 37,12         | 39,36         | 0,8402  |
| 3 months  | 43,96         | 45,32         | >0,9999 |
| 6 months  | 49,73         | 52,89         | >0,9999 |
| 12 months | 55,76         | 57,88         | >0,9999 |
| 24 months | 54,65         | 54,69         | >0,9999 |

**N=786**



# Triglicerides

Mean triglicerides concentrations



|           | <50 years old | >50 years old | P value       |
|-----------|---------------|---------------|---------------|
| 0 months  | 159,4         | 172,3         | 0,8031        |
| 1 month   | 137,5         | 152,6         | 0,2302        |
| 3 months  | 121,7         | 134,5         | 0,2616        |
| 6 months  | 117,0         | 113,3         | >0,9999       |
| 12 months | 95,72         | 115,7         | <b>0,0182</b> |
| 24 months | 114,4         | 123,6         | >0,9999       |

N=786

# Reduction or complete discontinuation in antihypertensive treatment

| Under 50 years old | Over 50 years old |
|--------------------|-------------------|
| 36/164 (22%)       | 25/157 (15,9%)    |

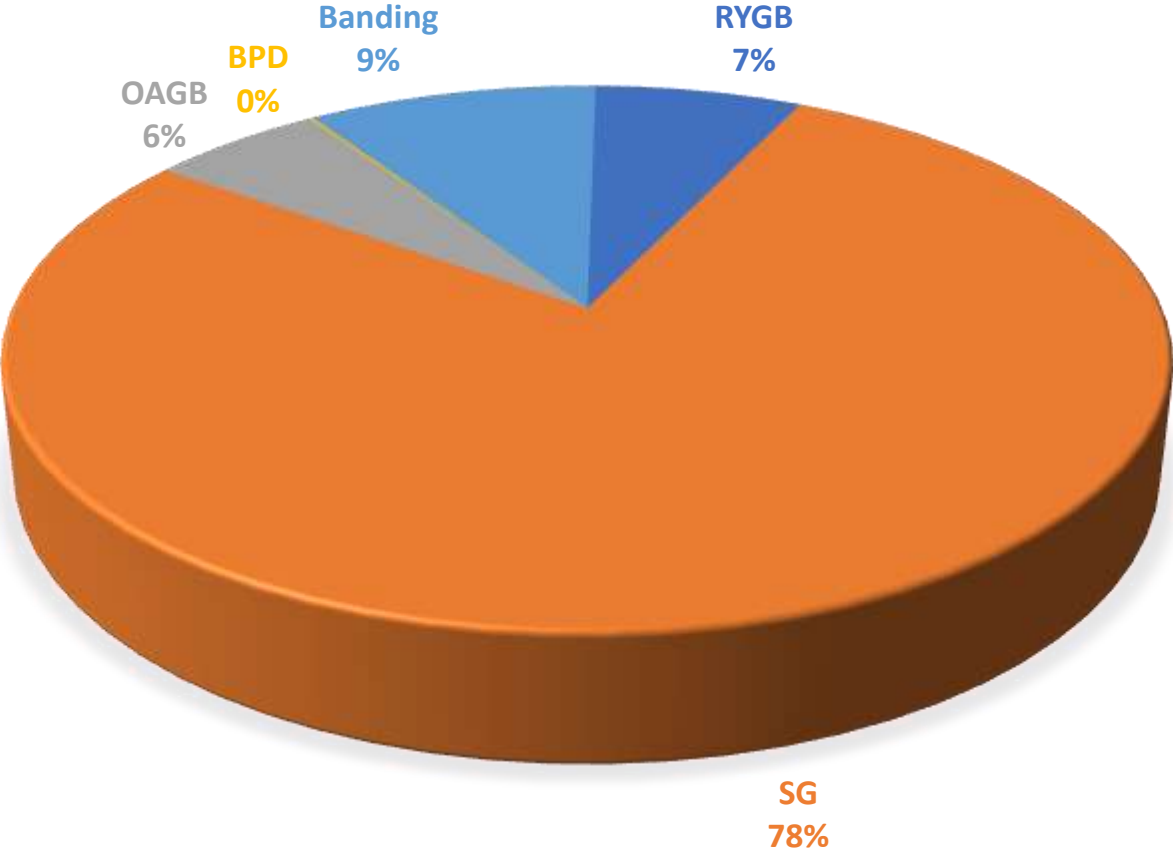
# Reduction or complete discontinuation in antidiabetic treatment

| Under 50 years old | Over 50 years old |
|--------------------|-------------------|
| 19/55 (34,5%)      | 20/70 (28,5%)     |

# Conclusion

**Laparoscopic sleeve gastrectomy proves effective in treating components of metabolic syndrome irrespective of age**

CASE MIX DISCLOSURE



# Thank you

**I have no potential conflict of interest to report**

