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Bariatric Surgery and Cardiovascular Outcomes and Death in Patients with type 2 Diabetes and Obesity Grade 1 and 2: A propensity matched score analysis

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TORONTO 2026

**The Future of Obesity Management:
From Weight Loss to Health Gain**



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Disclosure

NOTHING TO DISCLOSE



Purpose

To evaluate whether bariatric surgery is associated with a reduced risk of cardiovascular (CV) events and death in patients with grade 1 and 2 obesity.

Methods

- Retrospective cohort analysis using the TriNetX Global Health Research Network through anonymised electronic medical records.
- **Inclusion Criteria:** adult patients (>40 years) with a history of type 2 diabetes and grade 1 and 2 obesity (BMI between 30 and 39.9 kg/m²) who had or had not undergone bariatric surgery.
- **Exclusion Criteria:** Patients with type 1 diabetes, prior use of incretin agonists (GLP-1 and tirzepatide), orlistat, topiramate, phentermine, bupropion/naltrexone
- **Propensity score matching (1:1):** age, sex, ethnicity, BMI, sodium-glucose co-transporter 2 inhibitors, hypertension, dyslipidemia, smoking, chronic kidney disease, previous myocardial infarction (MI), and previous stroke.
- **Primary Composite Outcome:** All-cause mortality, myocardial infarction or stroke.



Study Design

Adult patients (>40 years) with type 2 diabetes and grade 1 and 2 obesity who had or had not undergone bariatric surgery.

Bariatric Group
23,724 patients

No Bariatric Group
781,355 patients

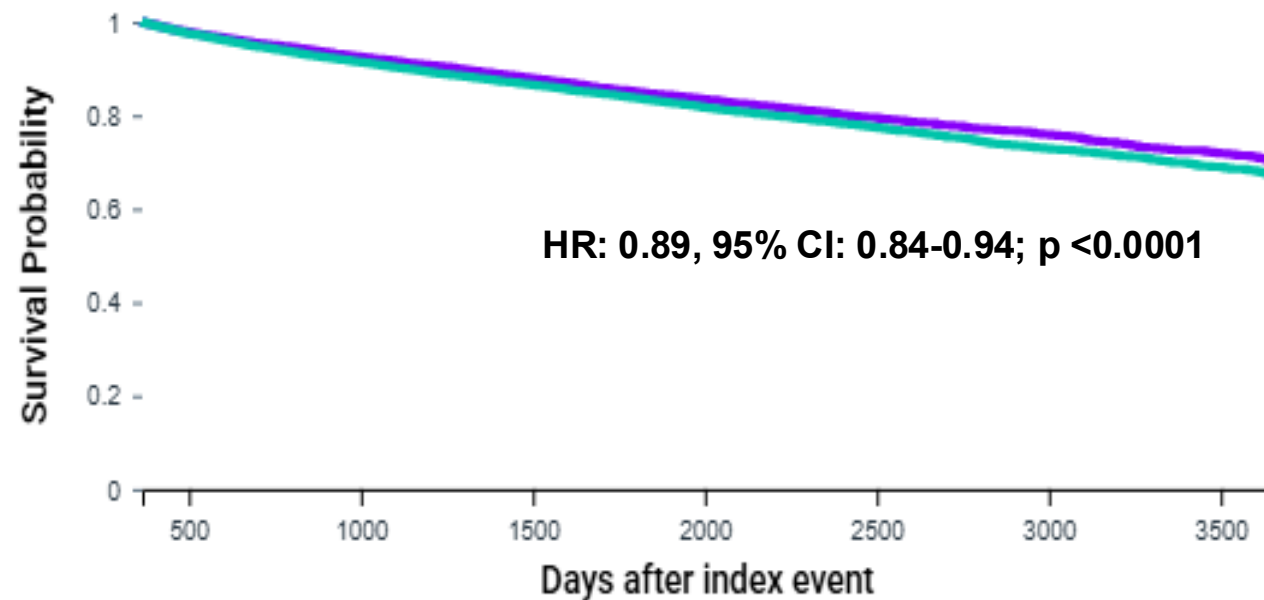
1:1 Propensity Score Matching

Bariatric Group
23,719 patients

No Bariatric Group
23,719 patients

Outcome: MACE (MI, Stroke, Death)

Results



Secondary Analysis

Secondary Analysis	HR (95% CI)	p-value
Individual Components		
All-cause mortality	0.57 (0.53-0.61)	0.007
Myocardial Infarction	0.90 (0.83-0.98)	0.016
Stroke	0.86 (0.79-0.94)	0.001
Female N=33,539		
MACE	0.89 (0.84-0.95)	0.001
Male N=13,899		
MACE	0.97 (0.89-1.06)	0.455

Conclusion

In patients with type 2 diabetes and grade 1 or 2 obesity, bariatric surgery was associated with a reduction in cardiovascular events and death, especially in females.



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