

The effect of obesity on clinical outcomes after totally endoscopic coronary artery bypass grafting

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Introduction

Surgery on patients with significant **obesity** has become a daily challenge, as obesity has evolved into a prominent global issue. The associated high morbidity and mortality rates highlight the need for novel minimally invasive procedures. Totally **endoscopic** coronary artery bypass grafting (endo-CABG) could be beneficial for these patients.

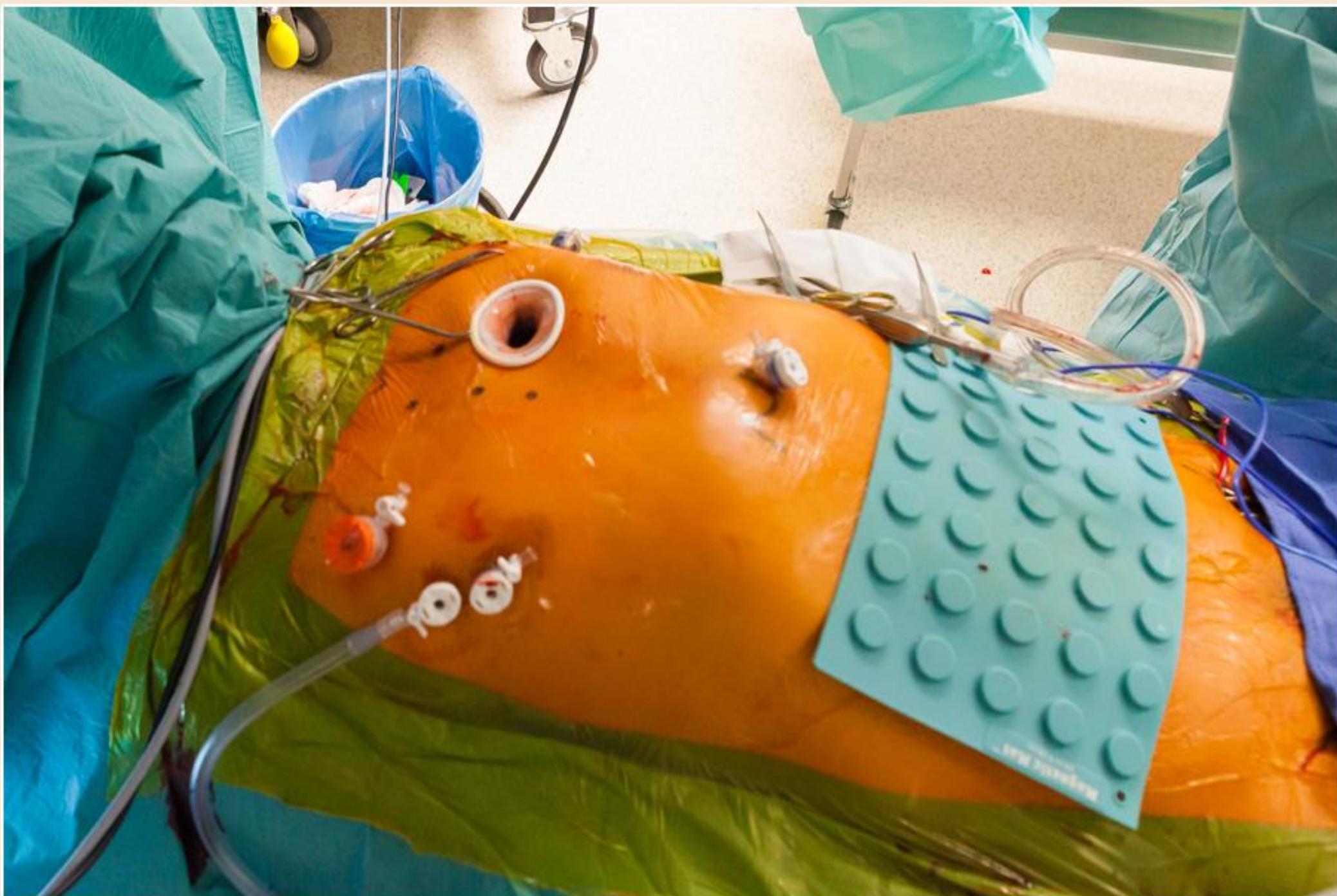
Methods

In this single-center retrospective study, 1472 patients underwent endo-CABG between January 2016 and June 2023.

The patients were divided into five groups according to their BMI:

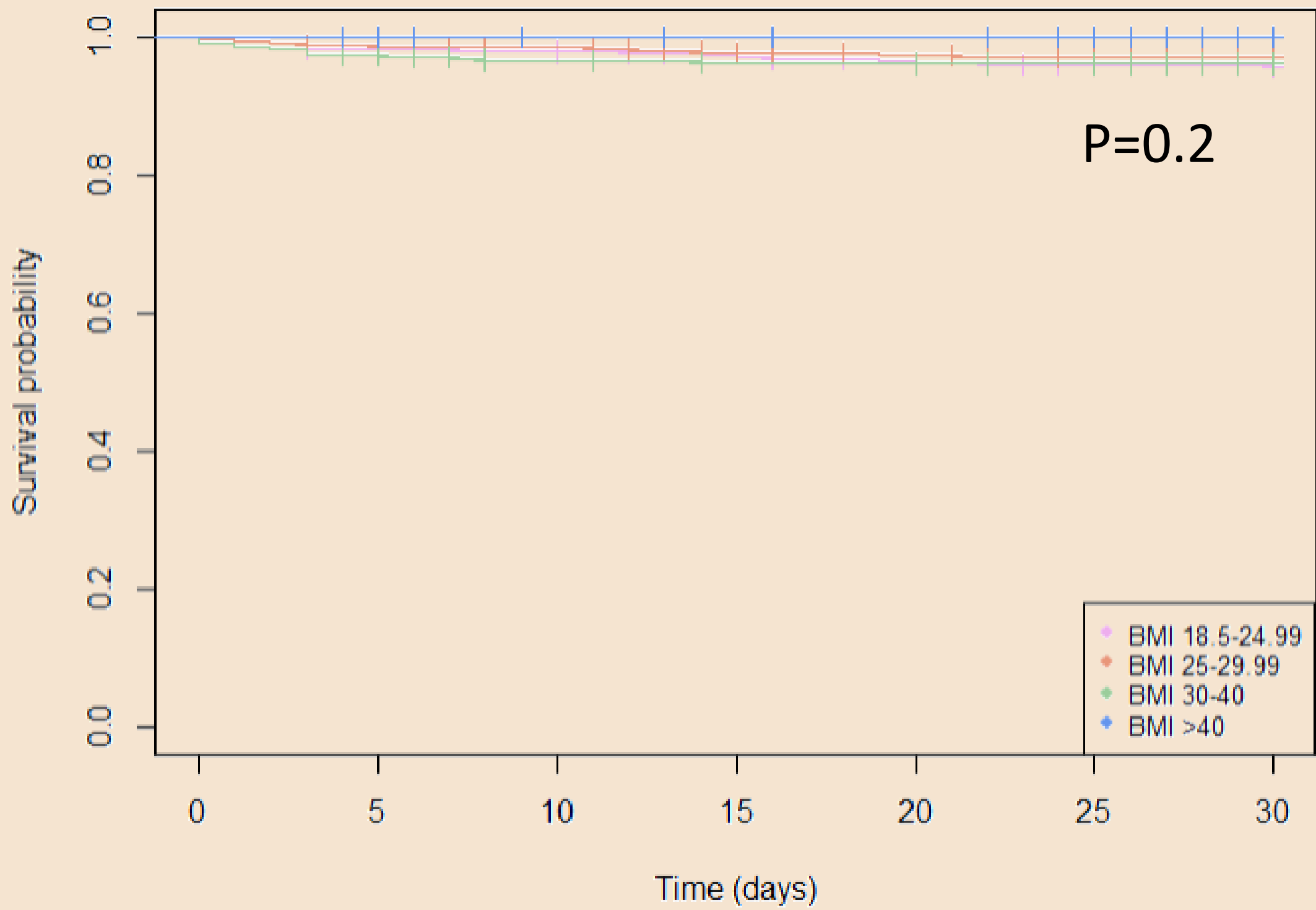
- < 18.5 kg/m2: underweight, n=8
- 18.5-24.99 kg/m2: normal weight, n=389
- 25-29.99 kg/m2: overweight, n=673
- 30-34.99 kg/m2: obese, n=298
- >35 kg/m2: severely obese, n=108

All patients received full arterial (internal mammary artery) revascularization.

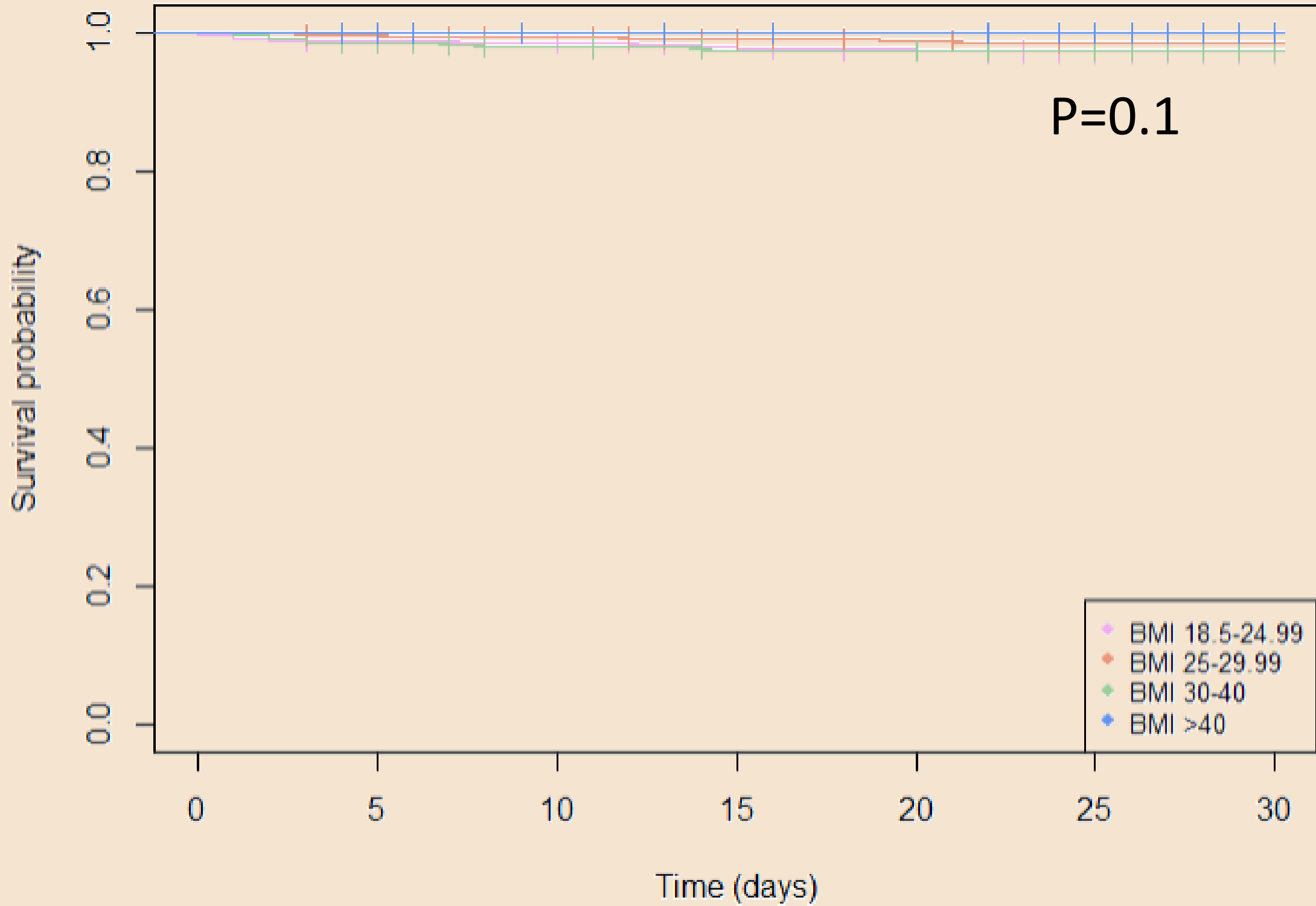


Results

MACCE-free survival



All-cause mortality



	Normal weight N=389	Overweight N=673	Obese N=294	Severely obese N=108	p-value
Clamping time (min)	57 [44; 72]	55 [44; 70]	59 [46.5; 73]	59 [48; 73]	0.841
Cardiopulmonary bypass time (min)	95 [76; 119]	95 [77; 120]	104 [81; 130]	118 [92.5; 137]	0.006
Number of bypasses	3 [2; 3]	3 [2; 3]	3 [2; 3]	2 [2; 3]	0.595
Postoperative blood loss (ml)	430 [225; 775]	440 [215; 823.8]	460 [263.8; 772.5]	565 [327.5; 860]	0.430
Intensive care length of stay (h)	47 [25; 72]	47.5 [24.5; 87.5]	48 [24.5; 81]	71 [44.25; 97.62]	0.249
Hospital length of stay (days)	6 [4; 8]	6 [4; 7]	6 [4; 7]	7 [5; 9]	0.067

Conclusion: An increased BMI does not affect postoperative outcomes in endo-CABG. Overall, it can be stated that endo-CABG is a good option for these obese patients receiving full arterial revascularization.