

**Supplementary table 1** Odds ratio of cardiac comorbidities and risk factors at baseline and follow-up associated with fast Pmean progression after adjusted for age and sex

	OR adjusted for age (95% CI)	P value	OR adjusted for sex (95% CI)	P value	OR adjusted for age and sex (95% CI)	P value
Baseline	1.260	0.383	1.196	0.495	1.260	0.385
BMI≥30 Kg/m <sup>2</sup>	(0.749-2.121)		(0.716-1.997)		(0.749-2.120)	
Follow-up	0.928	0.740	0.918	0.918	0.925	0.726
BMI≥30 Kg/m <sup>2</sup>	(0.599-1.439)		(0.592-1.423)		(0.596-1.434)	
Baseline	0.975	0.908	0.955	0.849	0.965	0.883
history of smoking	(0.633-1.502)		(0.593-1.538)		(0.598-1.557)	
Follow-up	0.958	0.845	0.936	0.785	0.945	0.820
history of smoking	(0.622-1.475)		(0.584-1.501)		(0.589-1.028)	
Baseline	0.707	0.119	0.706	0.119	0.706	0.119
diabetes	(0.457-1.094)		(0.456- 1.094)		(0.456-1.093)	
Follow-up	0.626	<b>0.032</b>	0.626	<b>0.032</b>	0.626	<b>0.032</b>
diabetes	(0.407-0.961)		(0.407-0.961)		(0.407-0.961)	
Baseline	0.512	<b>0.002</b>	0.502	<b>0.002</b>	0.487	<b>0.002</b>
coronary heart disease	(0.333-0.786)		(0.324-0.779)		(0.312-0.760)	
Follow-up	0.611	<b>0.021</b>	0.0606	<b>0.022</b>	0.587	<b>0.016</b>
coronary heart disease	(0.403-0.928)		(0.395-0.931)		(0.379-0.907)	
Baseline	0.505	<b>0.014</b>	0.506	<b>0.015</b>	0.494	<b>0.012</b>
myocardial infarction	(0.294-0.869)		(0.293-0.874)		(0.285-0.856)	
Follow-up	0.430	<b>0.002</b>	0.430	<b>0.002</b>	0.416	<b>0.001</b>
myocardial infarction	(0.255-0.724)		(0.254-0.727)		(0.245-0.707)	
Baseline	0.807	0.491	0.835	0.556	0.806	0.490
hypertension	(0.437- 1.487)		(0.458-1.522)		(0.437-1.487)	
Follow-up	1.088 (0.504-	0.829	1.129	0.750	1.088	0.830
hypertension	2.351)		(0.533-2.388)		(0.504-2.351)	
Baseline	0.661	0.054	0.680	0.071	0.655	0.051
renal dysfunction	(0.433-1.008)		(0.448- 1.033)		(0.428-1.002)	
Follow-up	0.749	0.212	0.779	0.268	0.747	0.210
renal dysfunction	(0.475-1.180)		(0.5-1.212)		(0.473-1.179)	
Baseline peripheral artery	0.614	0.063	0.617	0.067	0.609	0.061
occlusive disease	(0.367-1.027)		(0.368-1.034)		(0.363-1.022)	
Follow-up peripheral	0.945	0.795	0.948	0.810	0.941	0.786
artery occlusive disease	(0.614-1.454)		(0.611-1.469)		(0.606-1.46)	
Baseline	1.453	0.194	1.458	0.190	1.453	0.193
cerebrovascular disease	(0.827-2.552)		(0.830-2.560)		(0.827-2.553)	
Follow-up	1.647	0.051	1.652	<b>0.050</b>	1.647	0.051
cerebrovascular disease	(0.997-2.719)		(1.000-2.727)		(0.998-2.721)	

Pmean, mean trans-aortic pressure gradient; OR, odds ratio; CI, confidence interval; BMI, body mass index

**Supplementary table 2** Odds ratio of laboratory parameters associated with fast Pmean progression after adjusted for age and sex

	OR adjusted for age	P value	OR adjusted for sex	P value	OR adjusted for age and sex	P value
	(95% CI)		(95% CI)		(95% CI)	
Number of comorbidities	0.866 (0.759-0.989)	<b>0.034</b>	0.858 (0.747-0.985)	<b>0.029</b>	0.852 (0.741-0.980)	<b>0.025</b>
LDL- Cholesterol	1.010 (1.003-1.016)	<b>0.004</b>	1.009 (1.003-1.016)	<b>0.007</b>	1.010 (1.003-1.016)	<b>0.005</b>
HDL-Cholesterol	1.015 (1.002-1.028)	<b>0.027</b>	1.015 (1.001-1.028)	<b>0.034</b>	1.015 (1.001-1.028)	<b>0.035</b>
HbA1c	0.946 (0.756-1.183)	0.624	0.946 (0.756-1.183)	0.626	0.941 (0.751-1.178)	0.594
Hemoglobin	1.028 (0.972-1.087)	0.335	1.027 (0.971-1.086)	0.346	1.028 (0.972-1.088)	0.332
C-reactive protein	0.897 (0.804-1.001)	0.052	0.896 (0.803-1)	<b>0.050</b>	0.897 (0.804-1.001)	0.053
Creatinine	0.971 (0.808-1.166)	0.750	0.967 (0.803-1.164)	0.719	0.970 (0.805-1.169)	0.752

Pmean, mean trans-aortic pressure gradient; OR, odds ratio; CI, confidence interval; LDL, low-density lipoprotein; HDL, high-density lipoprotein; HbA1c, hemoglobin A1c