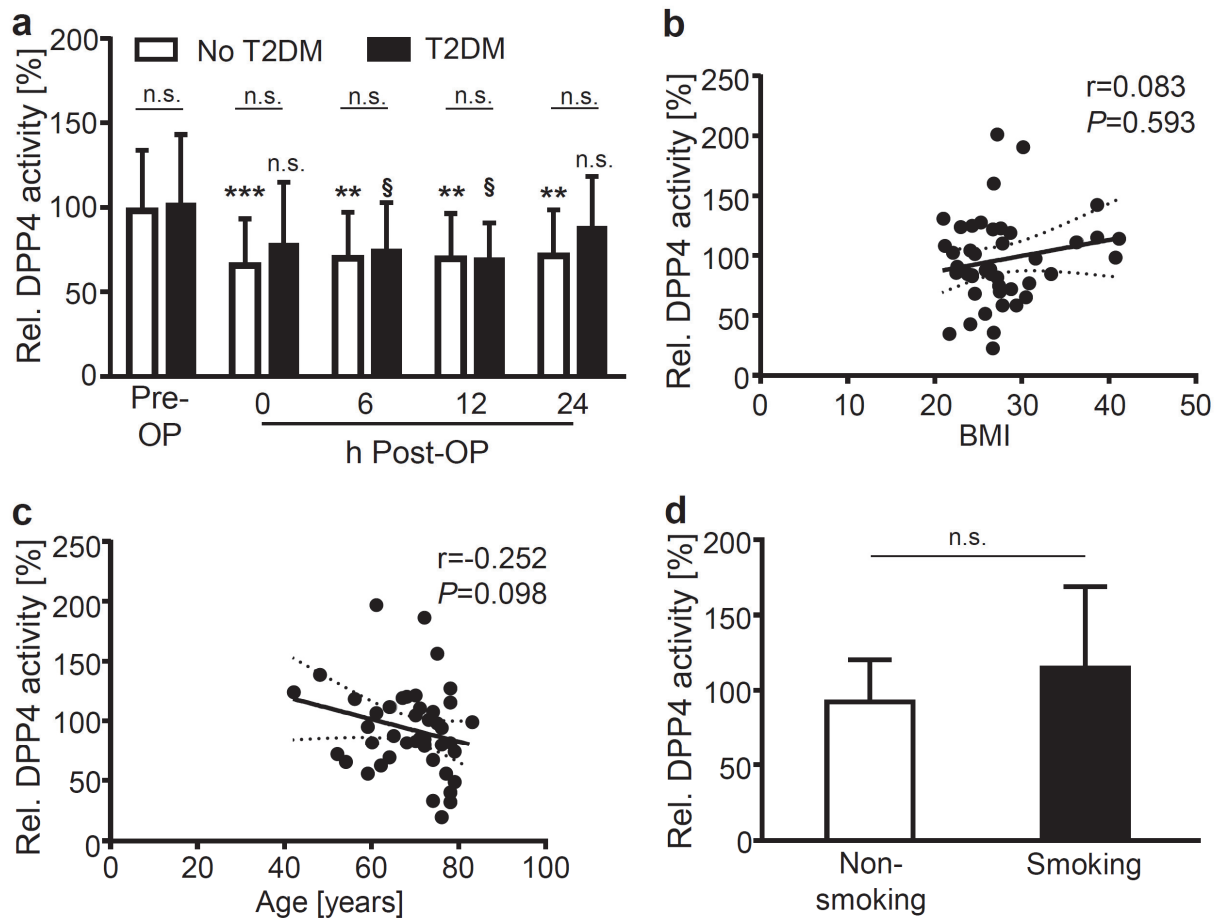


SUPPLEMENTARY INFORMATION

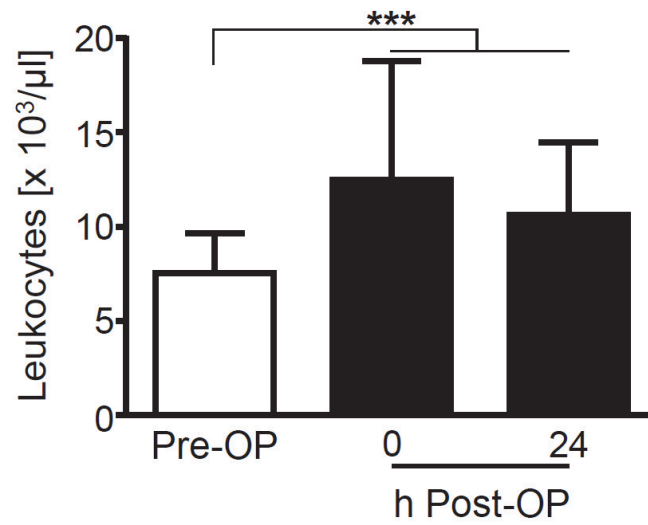
Reduced post-operative DPP4 activity associated with worse patient outcome after cardiac surgery

Short title: DPP4 activity in cardiac surgery

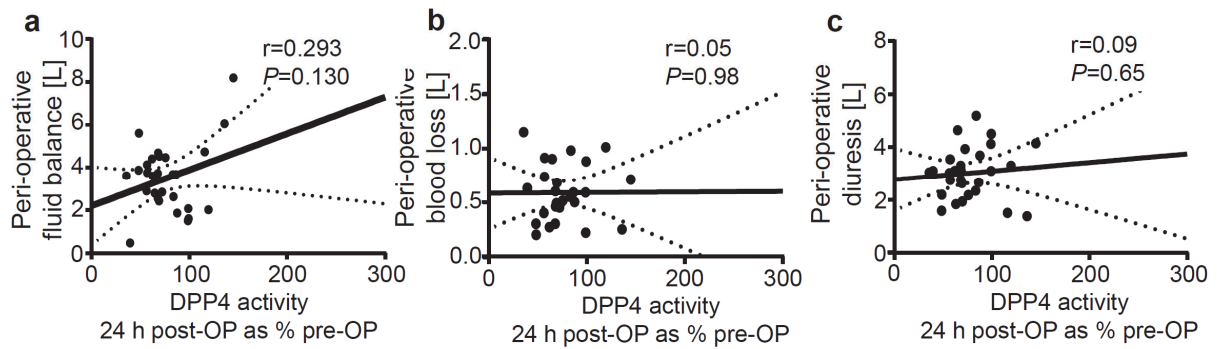
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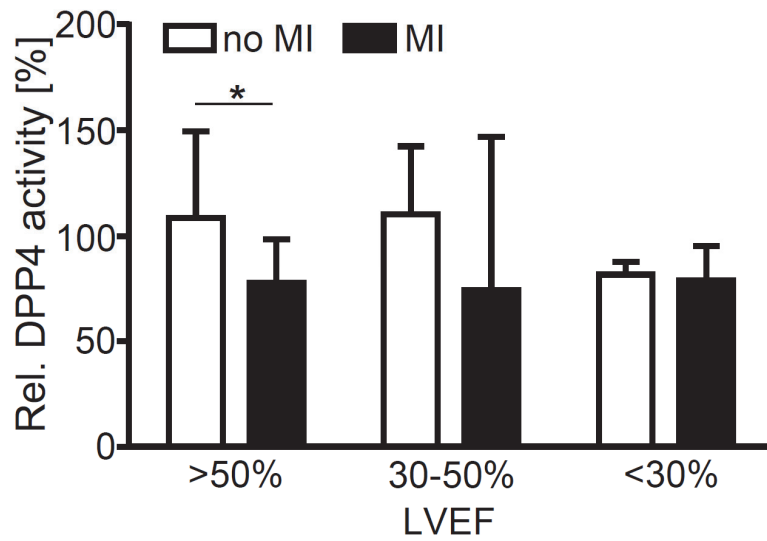
Suppl. Figure 1. Effect of biometric and clinical parameters on pre-operative DPP4 activity. Pre-operative serum DPP4 activity levels were quantified in patients scheduled for cardiac OP. **a**, Relative DPP4 activity levels in serum of patients without vs. with T2DM. no T2DM: $n=18$ (24h post-OP) and $26 \leq n \leq 28$ (other time points); with T2DM: $n=12$ (24h post-OP) and $14 \leq n \leq 17$ (other time points). Two-way ANOVA with Holm-Sidak's post-test to compare i) within each patient group DPP4 activity relative to pre-OP values of the respective patient group (**/***) for patients without diabetes; § for patients without diabetes); and ii) for comparing patients with vs. without T2DM at every time point (n.s. = not significant). **b-c**, Correlation between relative DPP4 activity and BMI (b) or age (c). Data are depicted as linear regression (black line) with 95% confidence intervals (dashed lines). r = Spearman correlation coefficient; two-tailed P -value. **d**, DPP4 activity levels in non-smoking vs. smoking patients. $12 \leq n \leq 32$. Unpaired two-tailed t-test. **a**, **d**, Shown are means \pm SD.



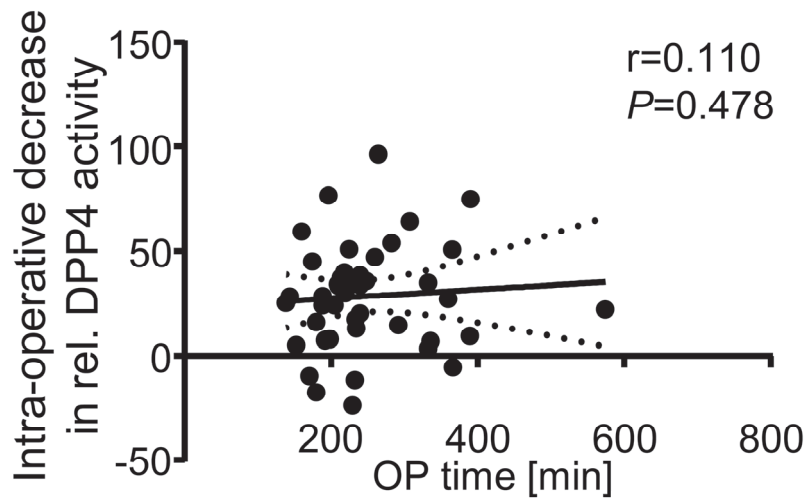
Suppl. Figure 2. Cardiac operation induces a significant increase in circulating leukocyte counts. Leukocytes were quantified in blood before (pre-OP) and at different time points after OP (post-OP), as indicated. Shown are means \pm SD. $43 \leq n \leq 44$. One-way ANOVA (Kruskal Wallis) with Dunn's post-test. *** $P < 0.001$.



Suppl. Figure 3. Effect of peri-operative fluid administration on DPP4 activity. a-c, Correlation between 24 h post-OP activity as % pre-OP and fluid balance (a), blood loss (b) or peri-operative diuresis (c). Data are depicted as linear regression (black line) with 95% confidence intervals (dashed lines). r = Pearson correlation coefficient; two-tailed P -value.



Suppl. Figure 4. Effect of myocardial infarction and cardiac function on DPP4 activity. Relative DPP4 activity levels in patients according to LVEF and occurrence of a prior MI within the 90 days prior to cardiac surgery. $8 \leq n \leq 25$ (LVEF >50%); $2 \leq n \leq 6$ (others). Mann-Whitney test; $*P < 0.05$. Depicted are means \pm SD.



Suppl. Figure 5. No correlation between the intra-operative DPP4 activity decrease and total operation time. Correlation between the intra-operative decrease in relative DPP4 activity (pre-OP minus 0 h post-OP) and the overall duration of the surgery. Data are depicted as linear regression (black line) with 95% confidence intervals (dashed lines). r = Spearman correlation coefficient; two-tailed P -value.

Suppl. Table. Correlations between the pre-operative levels of relative DPP4 activity (%) and the SAPS II or SOFA score directly after surgery (0 h post-OP) or 24 h post-OP. r = Pearson or Spearman correlation coefficient, as appropriate; two-tailed P -value.

Correlations pre-operative DPP4 activity levels versus x	r	P-value
SAPSII (0 h post-OP)	-0.225	0.141
SAPSII (24 h post-OP)	-0.128	0.407
SOFA (0 h post-OP)	-0.108	0.485
SOFA (24 h post-OP)	-0.223	0.146