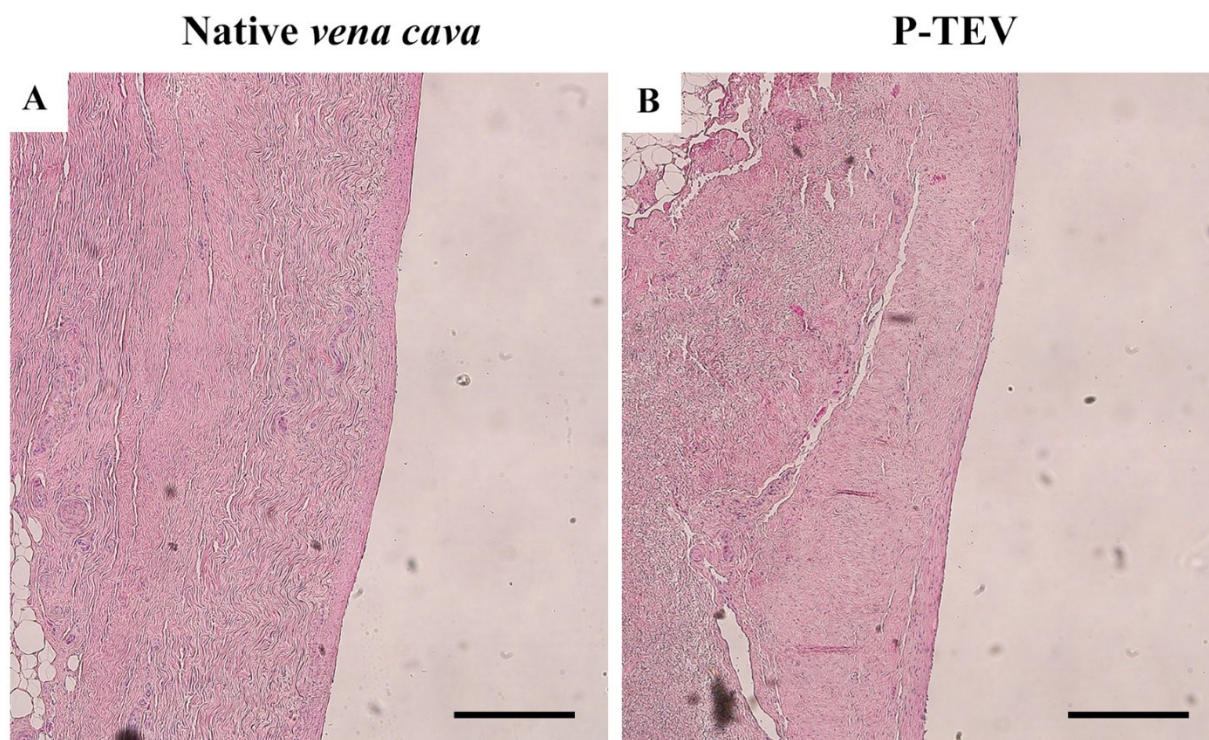
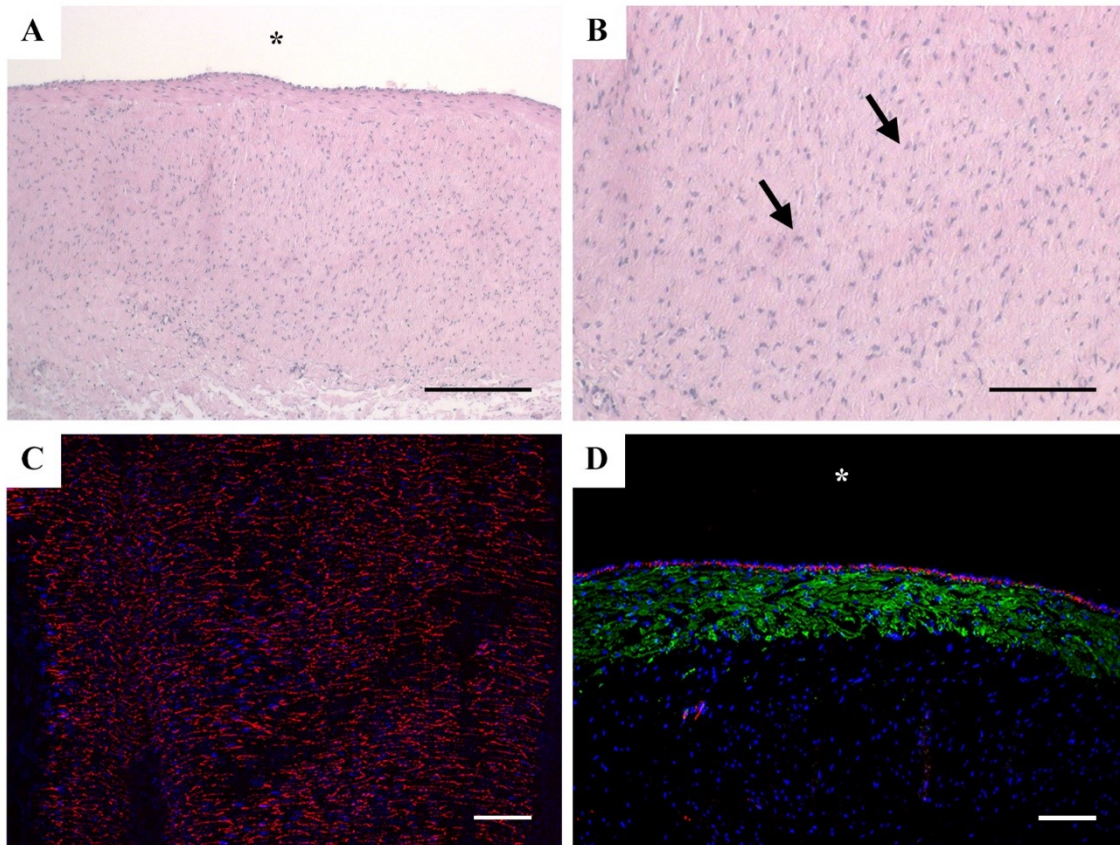


**Supplementary Materials ” Personalized tissue-engineered veins – Long term safety, functionality
and cellular transcriptome analysis in large animals “**

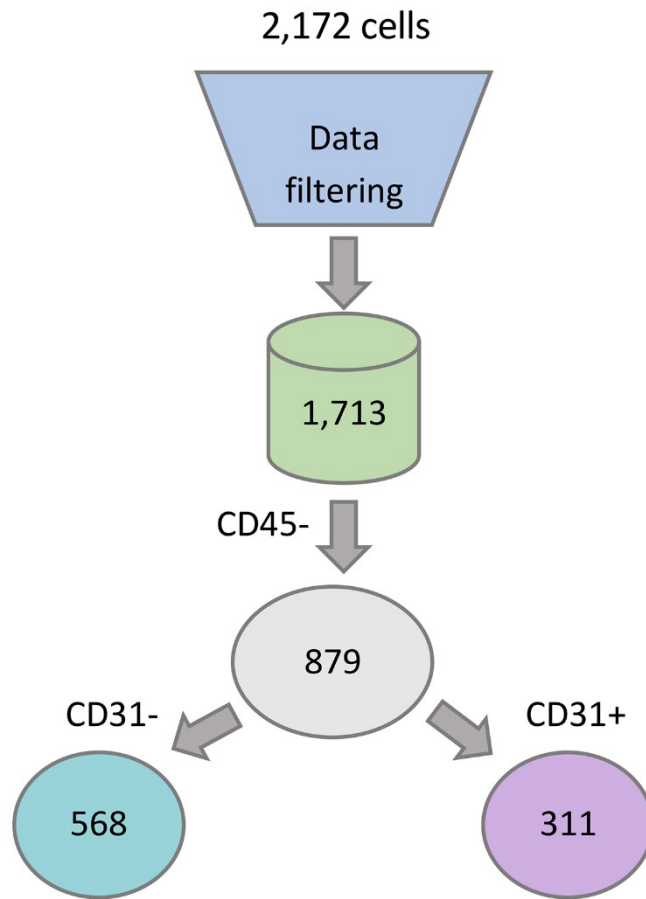


**Supplementary figure 1. Cellular morphology of native *vena cava* tissue and P-TEV on year
after transplantation**

Low magnification tissue morphology illustrated with Hematoxylin and Eosin staining. A) Tissue from native *vena cava* shows the normal tissue morphology. B) Tissue morphology of P-TEV after 12 months *in vivo* Scale bars are 200 μm .



Supplementary figure 2 Histology images of P-TEV 6 months after surgery in the GLP study. A and B) Hematoxylin and Eosin staining showing the recellularized vein tissue. Arrows indicate cell nuclei. C) *En face* image of the luminal side of the graft with DAPI (blue) and antibody against CD31 (red). D) Antibodies against CD31 (red) and alpha smooth muscle actin (green), and DAPI (blue). * = luminal side. Scale bars are 200 μm in A; 50 μm in B; 20 μm in C and D.



Supplementary Figure 3. Filtering of cells for RNA sequencing data analysis. Filtering of low-quality cells, blood cells and split into CD31 (PECAM) positive and negative cells for subsequent data analysis. The number of cells in each filtering step are shown in the figure.

Supplementary table I

Vessel Nr	Luminal diameter (mm)	Graft length (cm)
Surgeries in Sweden		
1	6.4	2.5
2	5.1	2.5
3	4.4-7.0	2.3
4	4.5	2.5
5	7.6	2.5
6	7.0	3.0
7	7.6	2.5
Surgeries in Spain		
1	5.1	3.3
2	4.5	3.0
3	6.4	2.2

FOXP1
WTAP
GJA1
TXNRD1
CSDE1
LARP1
missing: 14639
missing: 15188
missing: 15087
missing: 7151
missing: 15088
missing: 12518
missing: 3153
RAMP2
SELENOS
RANBP1
missing: 3573
MT1X
SRSF3
ADGRG1
missing: 4395
EMP2
LIMA1
HNRNPA3
missing: 13002
PRSS23
TSPAN12
HSPA9
TIMP1
CLEC14A
CDH5
BTF3
RHOJ
RGS4
STOM
KTN1
OLR1
SRRM1
TMED5
DCLK1
RHOB
SGK1
S0O2
ADGRL4
missing: 8035
LMNA
RNPS1
NFKBIZ
CLDN5
missing: 2769
CEBPZ
RGS2
S1PR1
STX11
COPS4
AOPEP
ITM2B
ISG15
EMP1
missing: 13263
FGF2
MAFF
SGCE
GLT8O2
PTGES
LGALS3BP
GMFB
FAM180B

Supplementary Table IV

Gene names in heatmap, Figure 9C

NSA2
PROX1
missing:14549
AXL
EEF10
RAB7A
PRKAA1A
PDIA3
BUB3
HNRNPA.3
missing:14639
missing:12517
missing:15088
missing:15188
missing:12518
missing:7151
missing: 15087
missing:12520
missing:15324
missing: 15236
FGF2
NCL
SFPQ
GSN
missing: 10206
EIF3J
VIM
C3
missing:13263
KLF4
PTGS2
FBLN1
SERPINE1
missing:1294
AMCF-II
S100A10
BGN
RPS3
MT1X
PGRMC1
SOCBP
IMP3
missing: 13095
SELENOM

MIS12
TWF1
F2RL2
missing:7887
COV3