

Supplementary material

Mierke J, Christoph M, Augstein A, et al. Influence of caveolin-1 and endothelial nitric oxide synthase on adventitial inflammation in aortic transplants. *Kardiol Pol.* 2020; 78: 124-130. doi:10.33963/KP.15079

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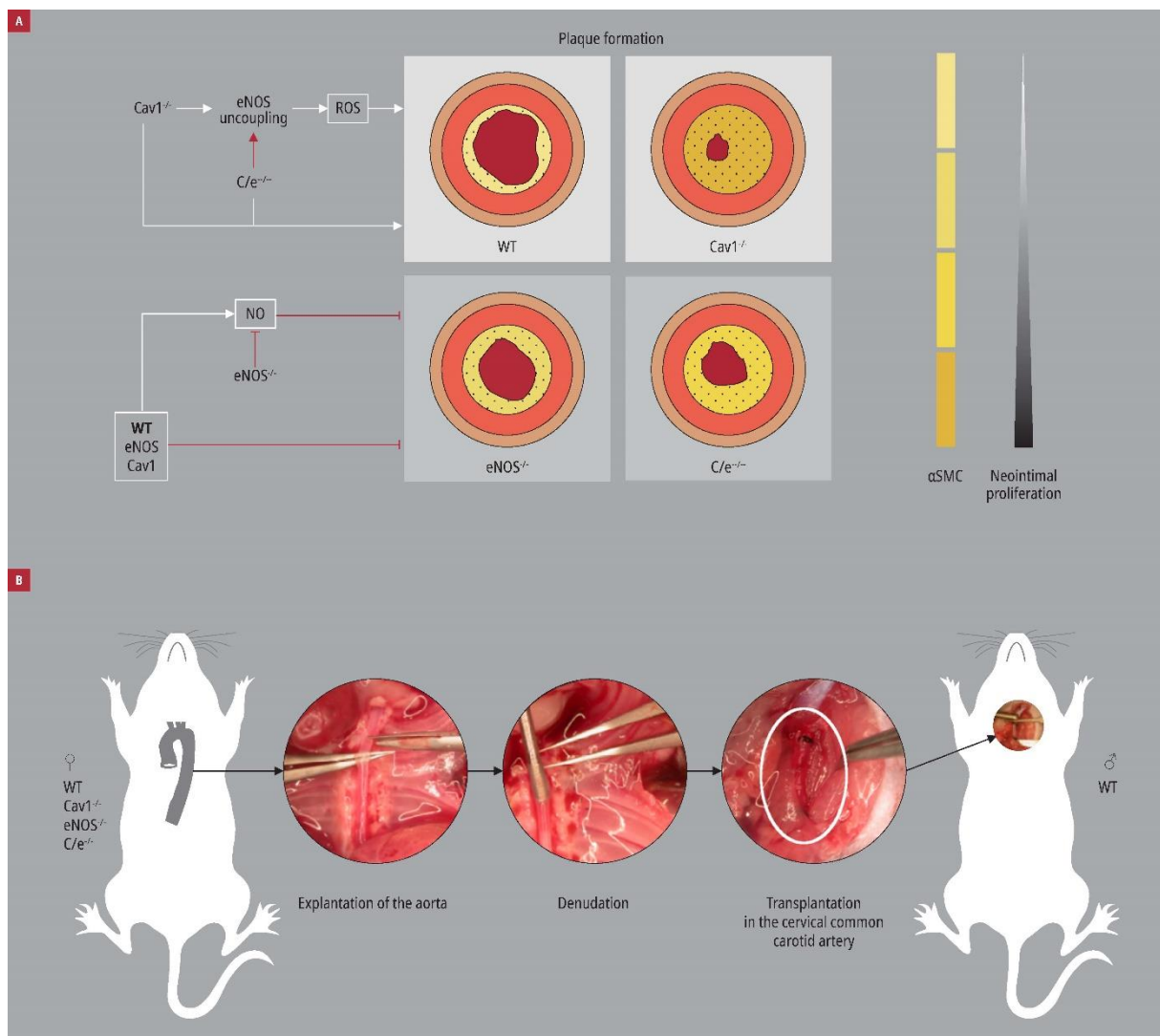


Figure S1 A Intimal influence of Cav1 and eNOS on plaque formation – Cav1 and eNOS have an atheroprotective function through inhibiting neointimal proliferation. Thereby, the eNOS-derived NO and Cav1 directly inhibit the cell cycle of VSMC. Moreover, Cav1 is

responsible for coupling of the eNOS dimer. Its loss leads to an eNOS uncoupling with an increased production of ROS, which enhance the cell cycle of VSMC. The intensity of neointimal proliferation is illustrated through font size of α SMC and color. |

B Schematically illustration of the cervical aortic graft transplantation – The aortae from female wt, Cav1^{-/-}, eNOS^{-/-} or C/e^{-/-} mice were explanted and denudated. Afterwards, these arteries were transplanted into the CCA of male wt mice using the cuff technique.

α SMC, α -smooth muscle cell; ROS, reactive oxygen species.

Figure S2

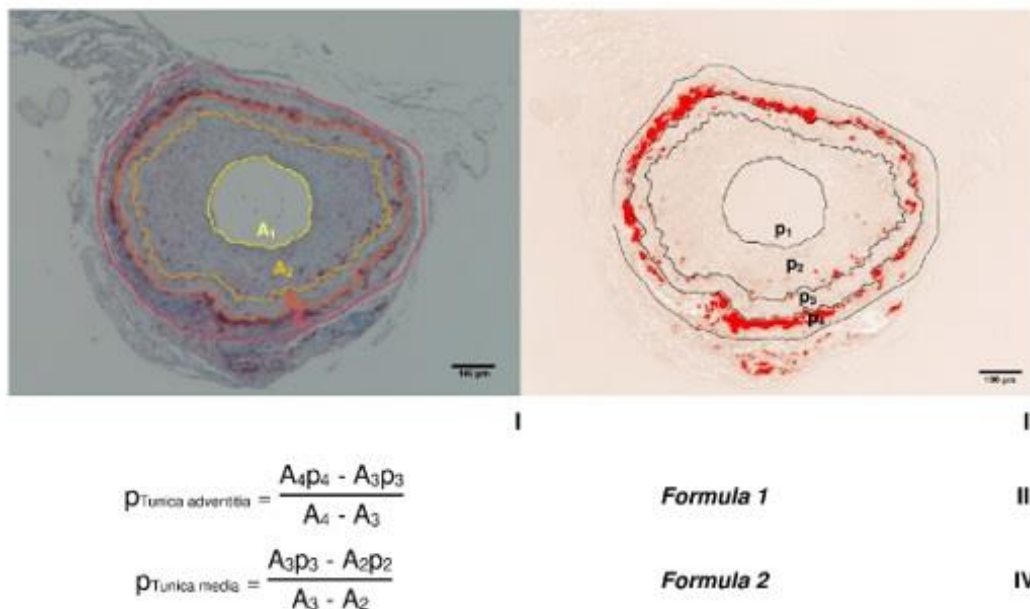


Figure S2. Calculation of Gal3 positive stained area in an eNOS^{-/-} transplant (10x) – I

Color-coding of the determined cross-sectional areas A1, A2, A3, A4 | II Red fraction image

which was received due to RGB color space deconvolution for determining percentage of

Gal3-positive areas p1, 2, 3, 4 (\cong percentage of Gal3-positive area in A1, 2, 3, 4) | III

Formula for calculating percentage of Gal3-positive area in tunica adventitia | IV Formula

for calculating percentage of Gal3-positive area in tunica media. This approach was

performed for quantification of all immunohistochemical stainings.

Figure S3

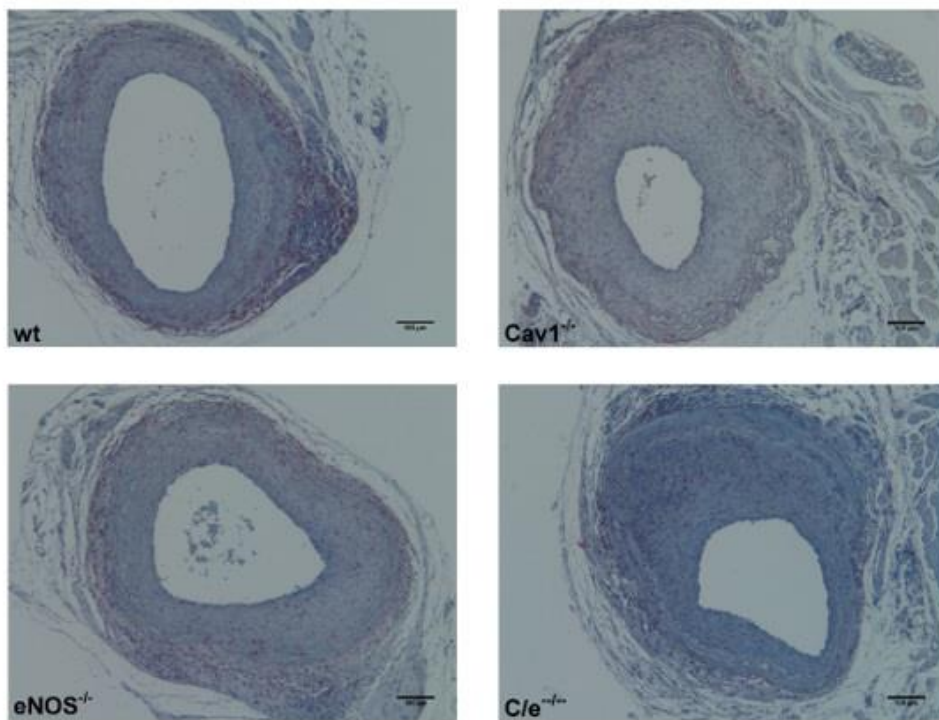


Figure S3 Histological sections of Galectin-3 staining (10x). Adventitia is exemplary visualized through dotted lines

Figure S4

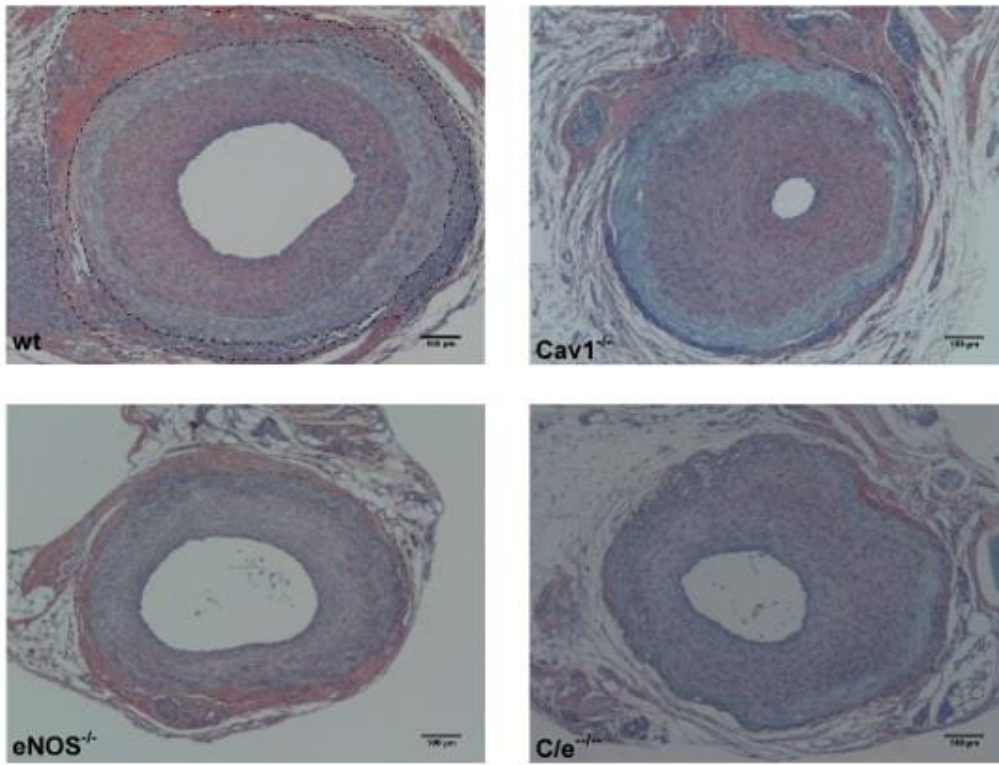


Figure S4 Histological sections of VEGF-A staining (10x). Adventitia is visualized through dotted lines

Figure S5

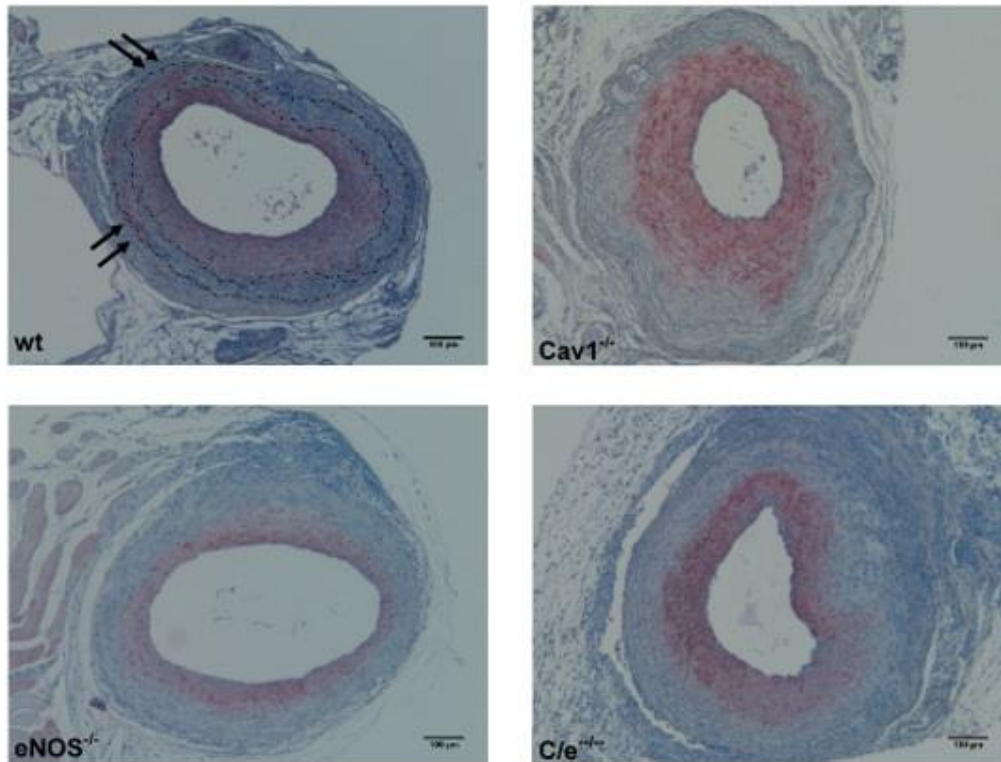


Figure S5 Histological sections of α -smooth muscle actin staining (10x). Tunica media is exemplary visualized through dotted lines

Figure S6

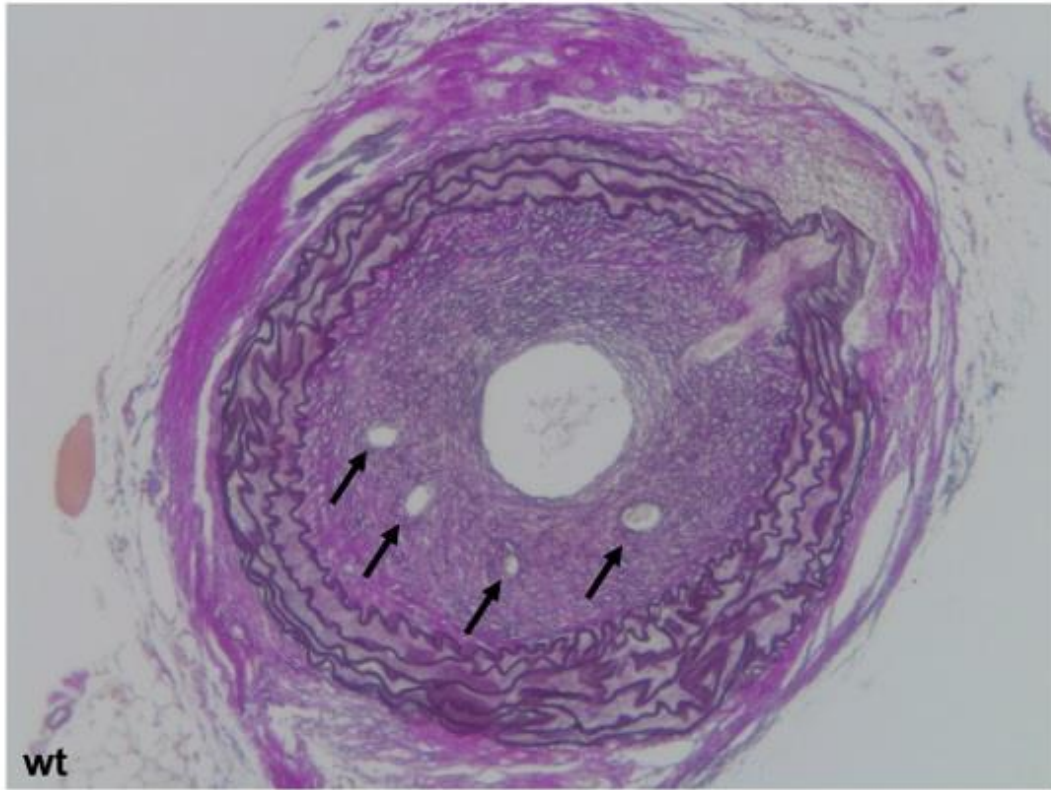


Figure S6 EvG staining of a wt transplant with multiple neovessels in the intima formation (10x)

Figure S7

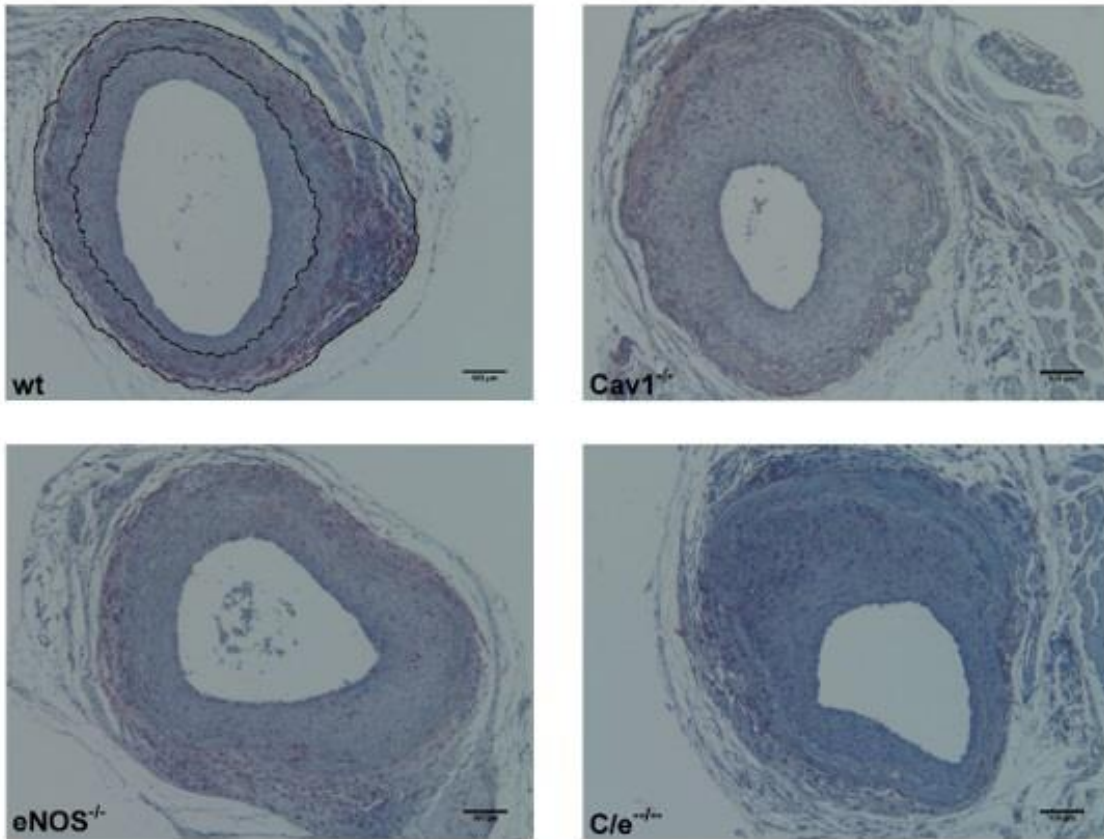


Figure S7 Histological sections of CD3 staining (10x). Adventitia is exemplary visualized through dotted lines