

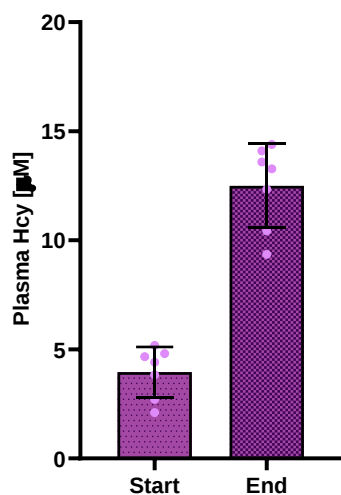


Figure S1: Absolute plasma Hcy levels in rabbits from the VCDD+Hcy group before and after treatment. $n = 7$

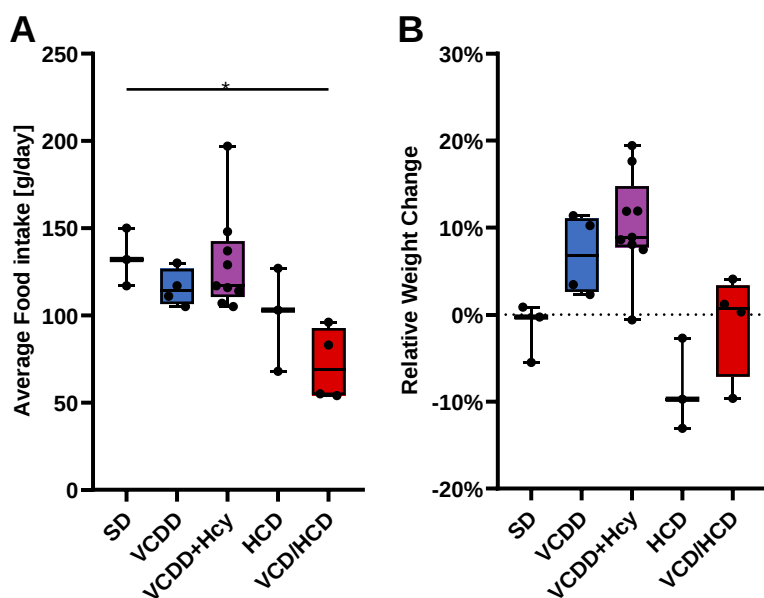


Figure S2: Rabbit food intake and weight gain. (A) Average food intake per rabbit per day ($n = 3 - 9$). Food intake was measured once per week over two days. **(B)** Weight gain or loss per rabbit ($n = 3 - 9$). Statistics were calculated with Mann-Whitney-U pairwise comparison and Bonferroni correction for multiple testing (* = $p \leq 0.05$, ** = $p \leq 0.01$, *** = $p \leq 0.001$).

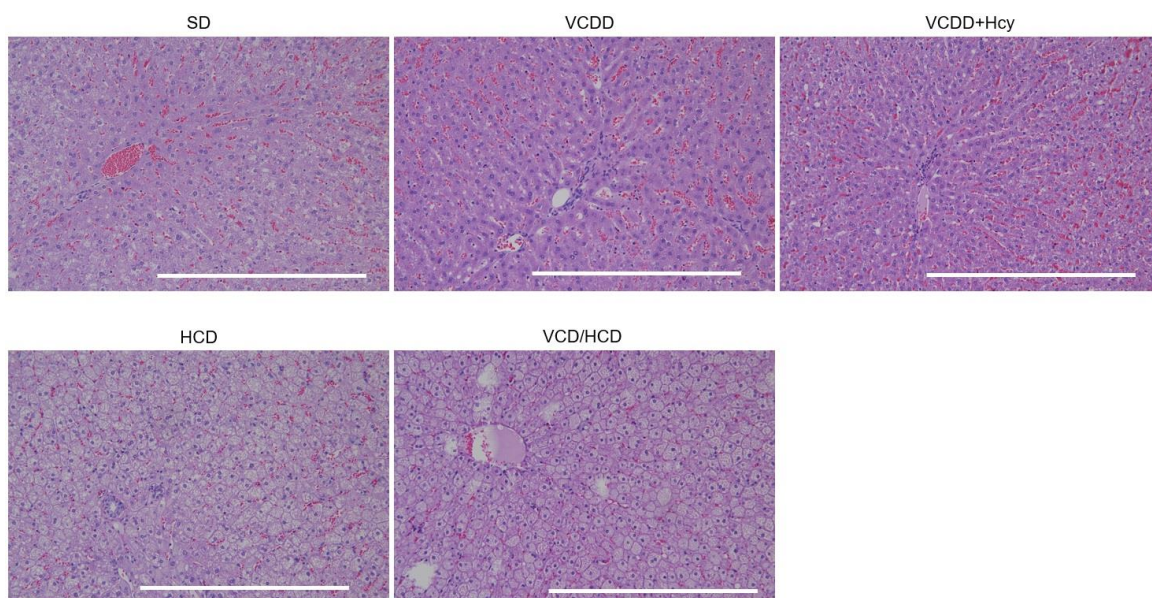


Figure S3: Liver histology. Samples were stained with hematoxylin and eosin, nuclei appear purplish blue and cytoplasm & extracellular matrix appear pink. SD liver tissue shows low amounts of lipid droplets in the cells, VCDD & VCDD+Hcy liver tissues show little to no lipid droplets, HCD & VCD/HCD liver tissues show high amounts of lipid droplets in the cells. Scale bars = 500 μ m.

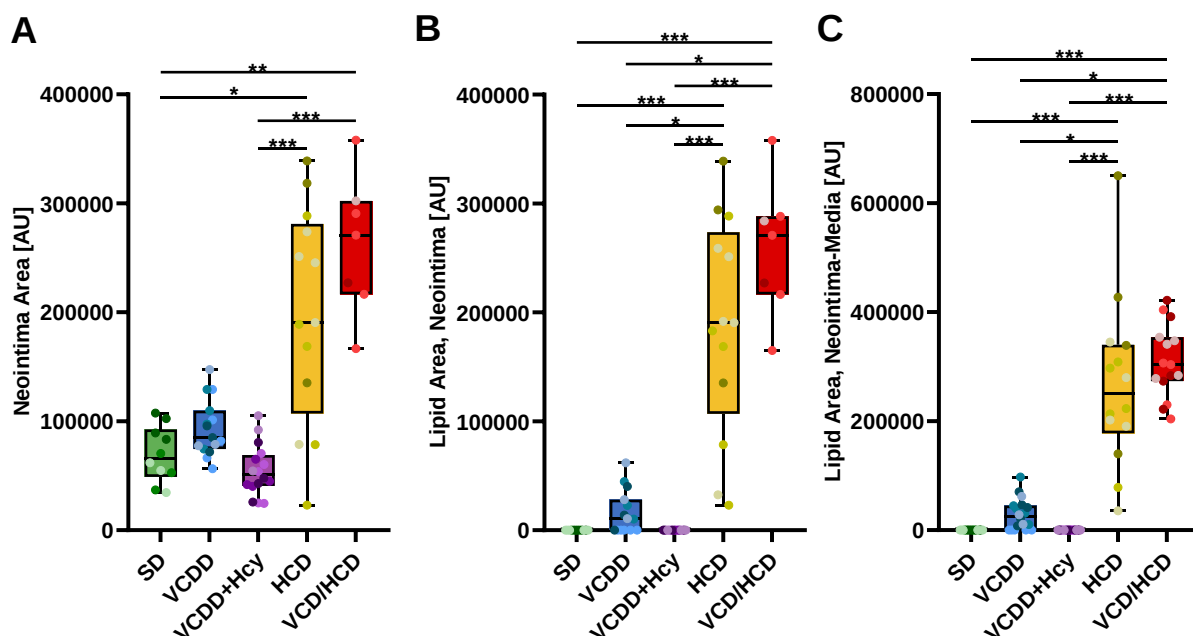


Figure S4: Quantification of neointima area and area of lipid accumulation in aortic specimens of rabbits fed different diets. Area of neointima (A), area of lipid accumulation in neointima (B) and area of lipid accumulation in neointima-media (C) were measured in Oil red O neutral lipids, red) and Hematoxylin (cell nuclei, blue) stained histological sections ($n = 3 - 4$) from rabbits fed different diets. Per rabbit 1 - 5 individual sections were quantified. Histological aorta sections were excluded if it was not possible to quantify neointima. Statistics were calculated with Mann-Whitney-U pairwise comparisons and Bonferroni-correction for multiple testing (* = $p \leq 0.05$, ** = $p \leq 0.01$, *** = $p \leq 0.001$).

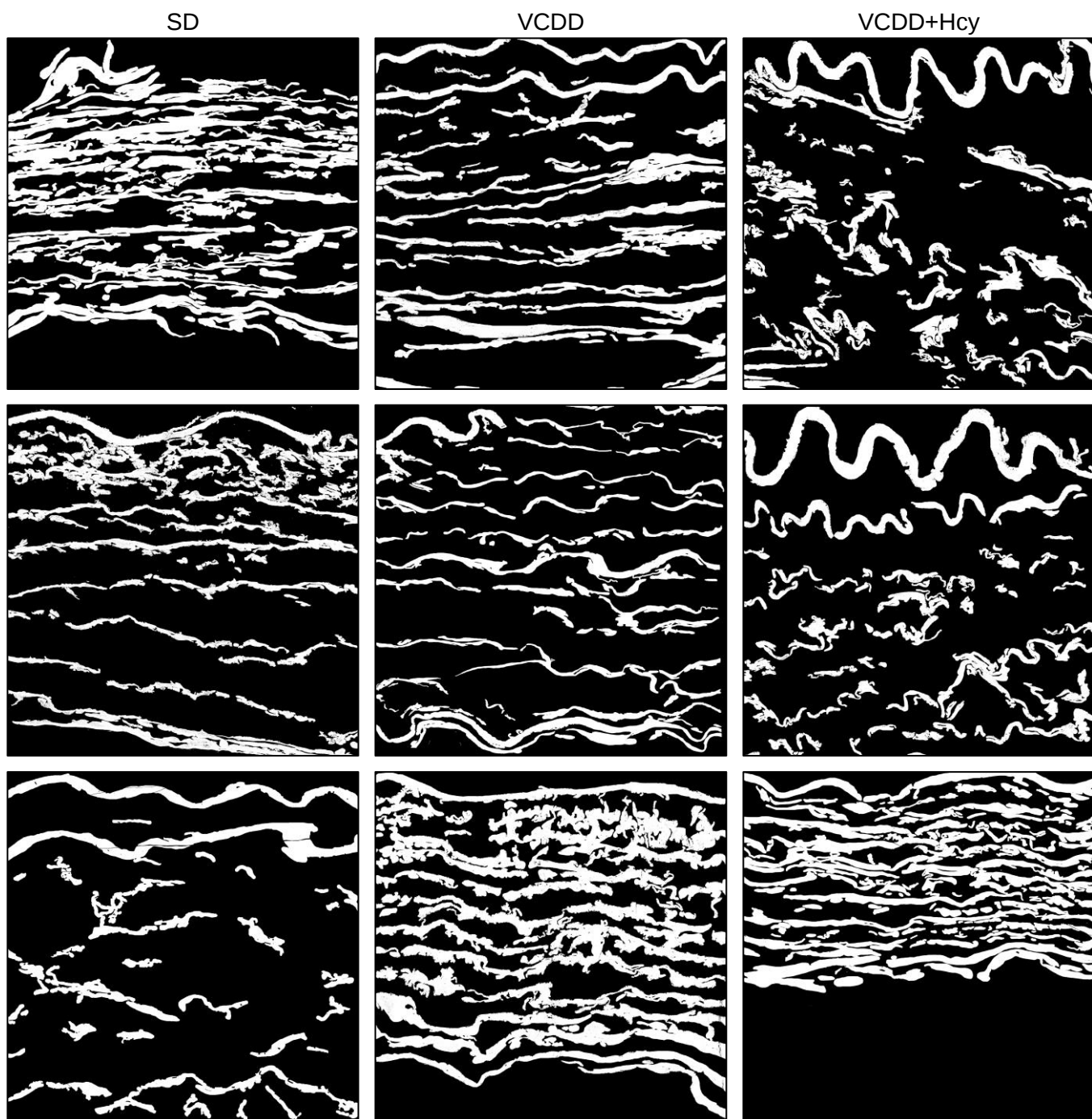


Figure S5: Masks of aortic STEM used for elastin quantification. Left: SD. Middle: VCDD. Right: VCDD+Hcy. Extraction of elastin fibers from media of rabbit aorta for quantification. Adobe Photoshop and Fiji were used as programs for image analysis. For details see Material and Methods.

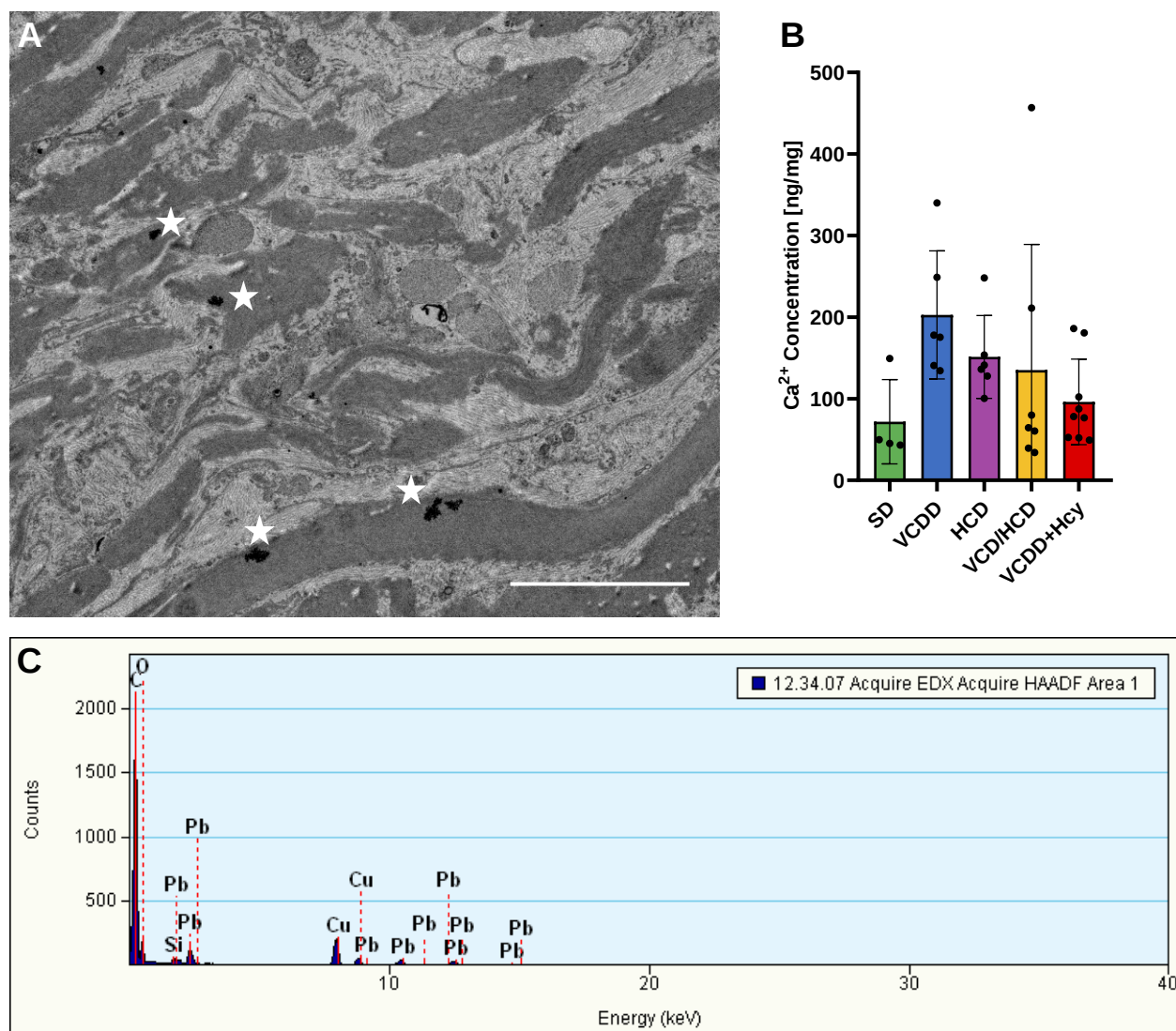


Figure S6: Analysis of elastin-specific high-density spots in aortic media of rabbits fed vitamin deficient diet combined with intravenous Hcy injections. (A) Unstained STEM micrograph of aortic specimen of a rabbit from the VCDD+Hcy group, asterisks indicate electron dense elastin-specific structures. Scale bar = 5 μ m. (B) Aortic calcium quantification (n = 4 – 9). (C) Representative energy dispersive x-ray (EDX) spectrum covering one high-density particle, showing lead from staining and copper originating from the grid.