SUPPLEMENTAL MATERIAL

Figure eI: Examples of automated pixel intensity quantification.

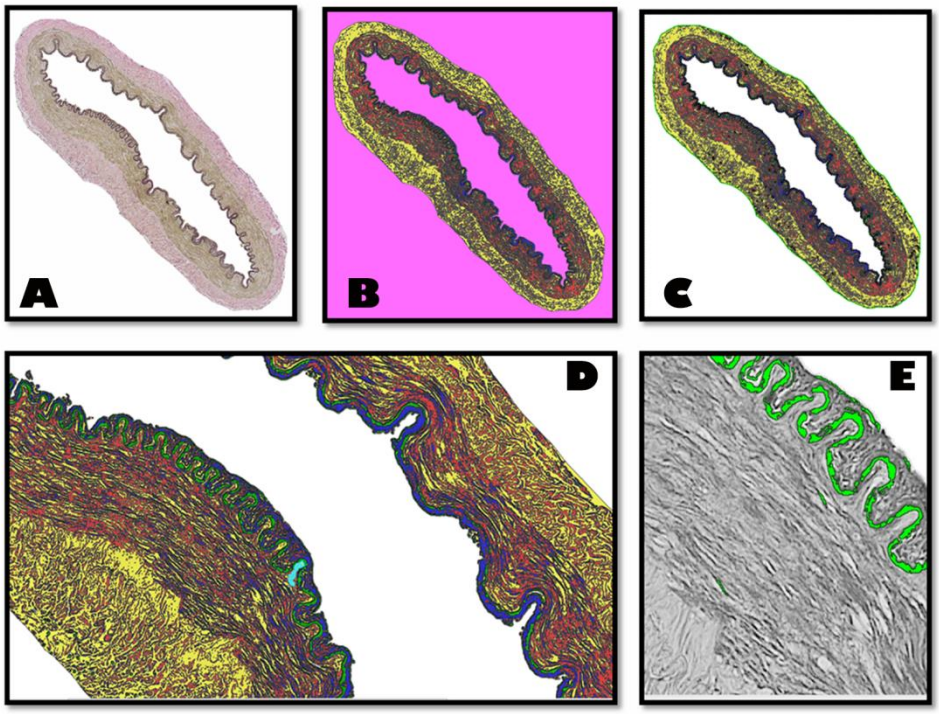

Figure eI legend: In this case, we aimed to quantify the area of elastin staining using EVG staining as shown in panel a (which show elastin in black). First, we created mask to separate the brackground 9in pink) from the tissue as shown in panel B. The tissue is also segmented in three colors by automated clustering of intensities. Because black is naturally the darkest, it segregates easily from the other color channels. In panel, C, we defined the tissue area as the total for area calculation. In panel B, the sofware executes further segregation of colors to isolated the black channel, which then is quantified as the percentage of the artery cover in black (as shown in opanel D).

Table eI: Posterior circulation arteries changes with aging compared with arteries in the anterior circulation.					
	P value for the interaction	20-39	40-59	60-79	>80 years
		Estimate ± SE	Estimate ± SE	Estimate ± SE	Estimate ± SE
	BASILAR ARTERY				
Increased collagen (yes/no)	0.003	0.4 ± 0.3	-0.3 ± 0.4	-0.6 ± 0.7	-0.7 ± 1.6
	VERTEBRAL ARTERIES				
Increased collagen (yes/no)	0.001	0.3 ± 0.4	-0.4 ± 0.3	-1.2 ± 0.4	-23.0 ± 100.0
Any calcifications	0.003	2.2 ± 0.96	1.3 ± 0.5	1.4 ± 1.3	0.9 ± 1.0

Abbreviations: IEL, internal elastic lamina;

Models adjusted for artery location (proximal versus distal), arterial size, arterial type (anterior cerebral artery, internal carotid artery, middle cerebral artery, etc.), age, sex, ethnicity, hypertension, diabetes, dyslipidemia, smoking, country of origin.