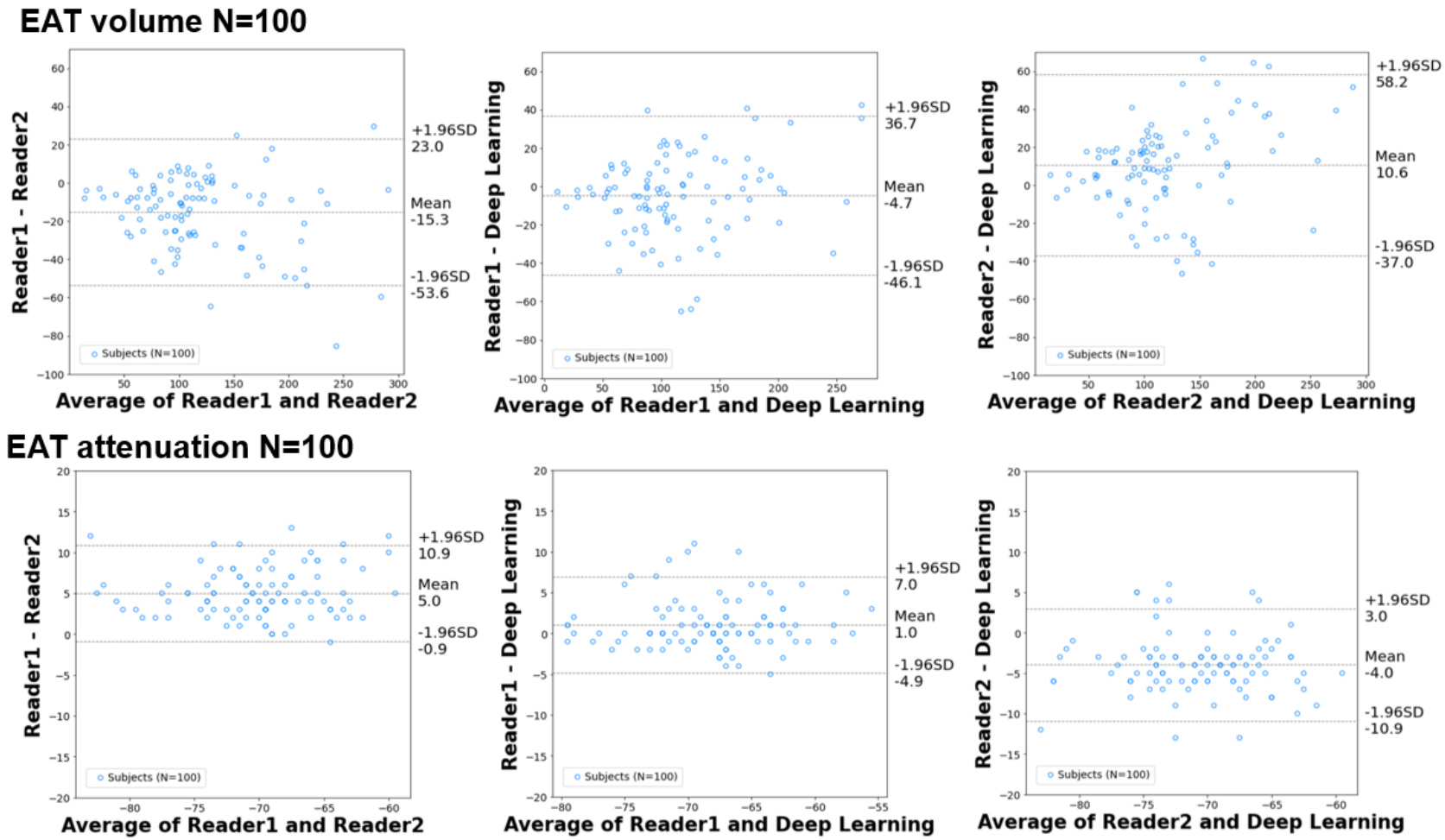
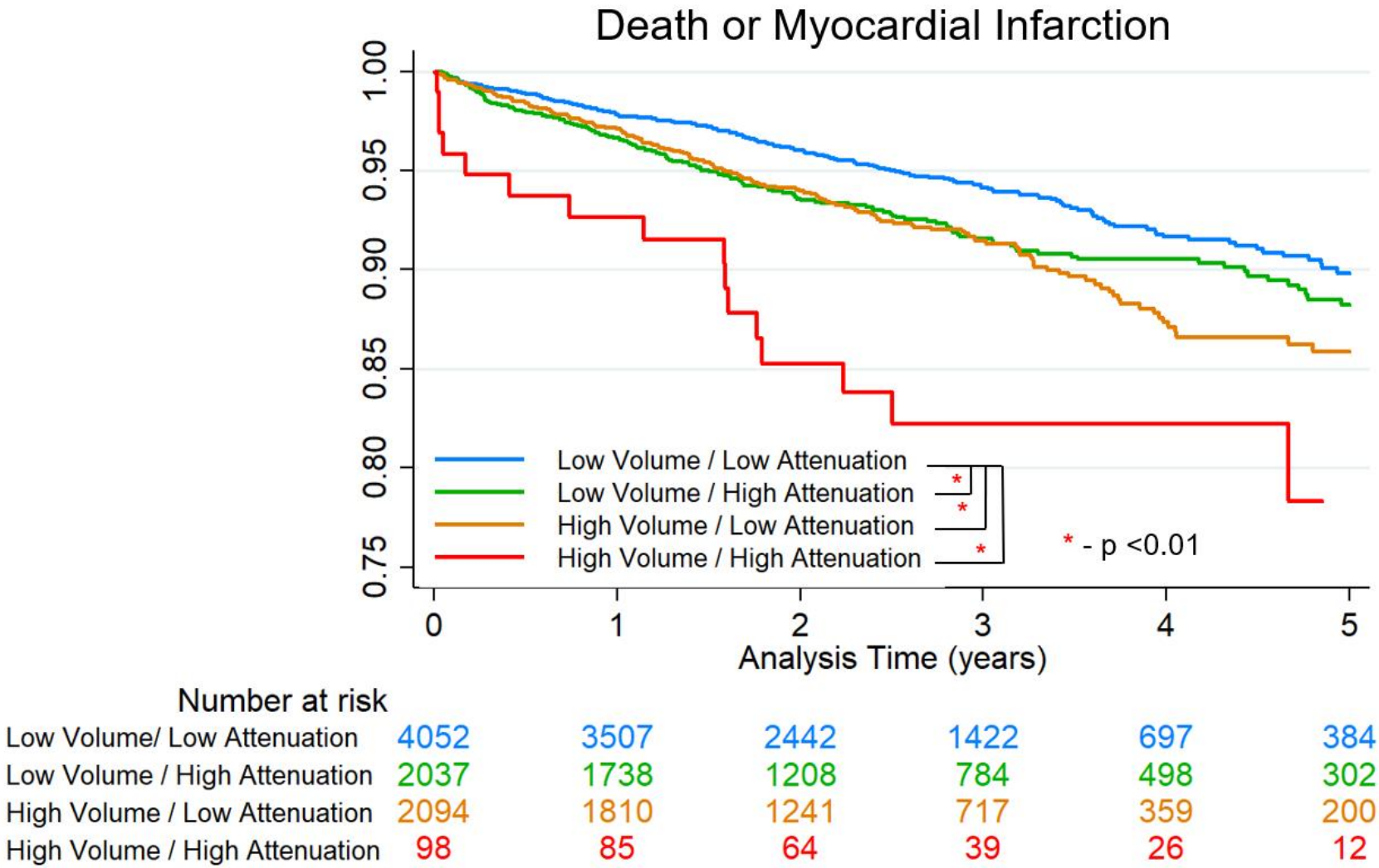
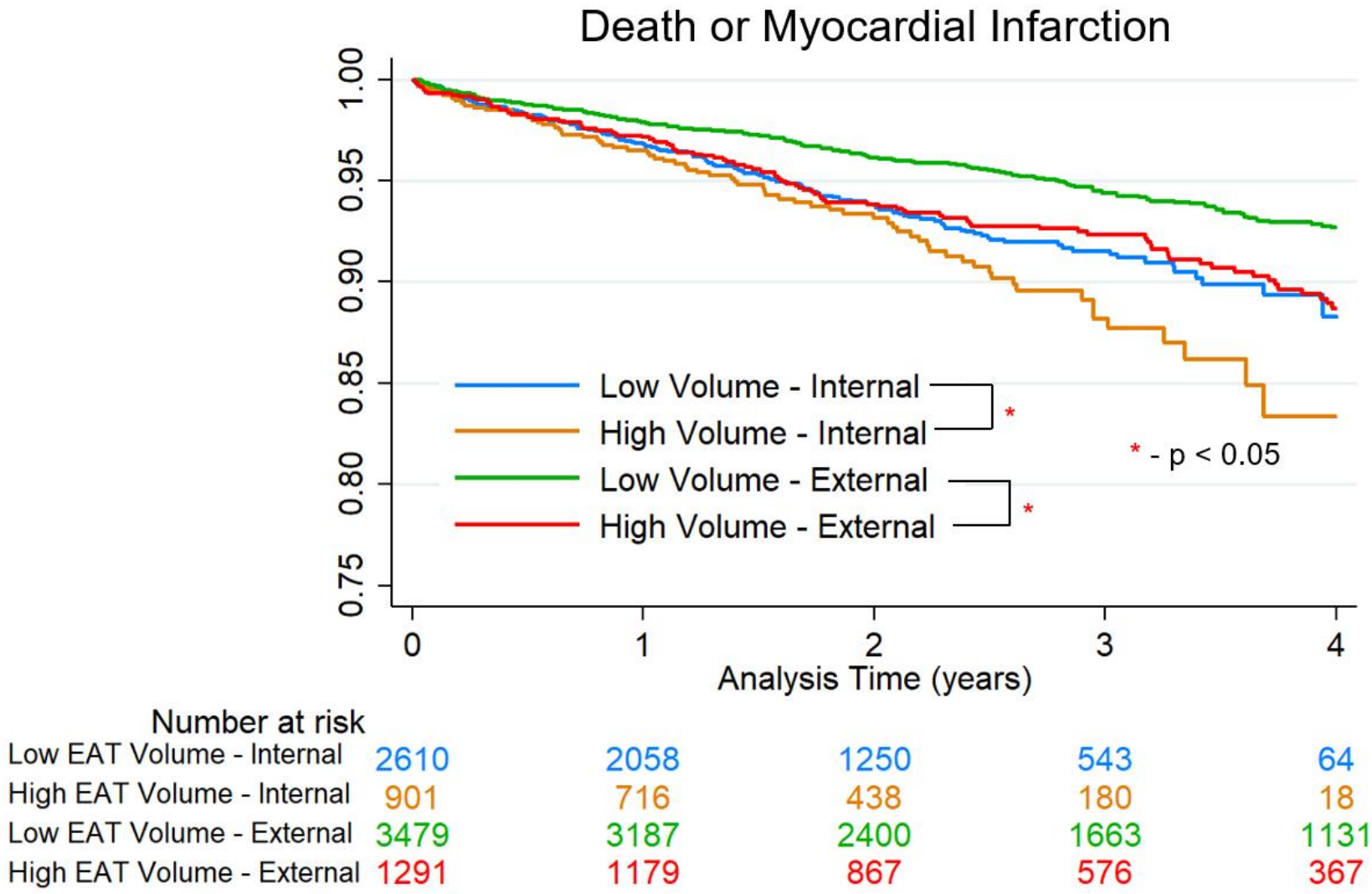
SUPPLEMENTAL MATERIAL



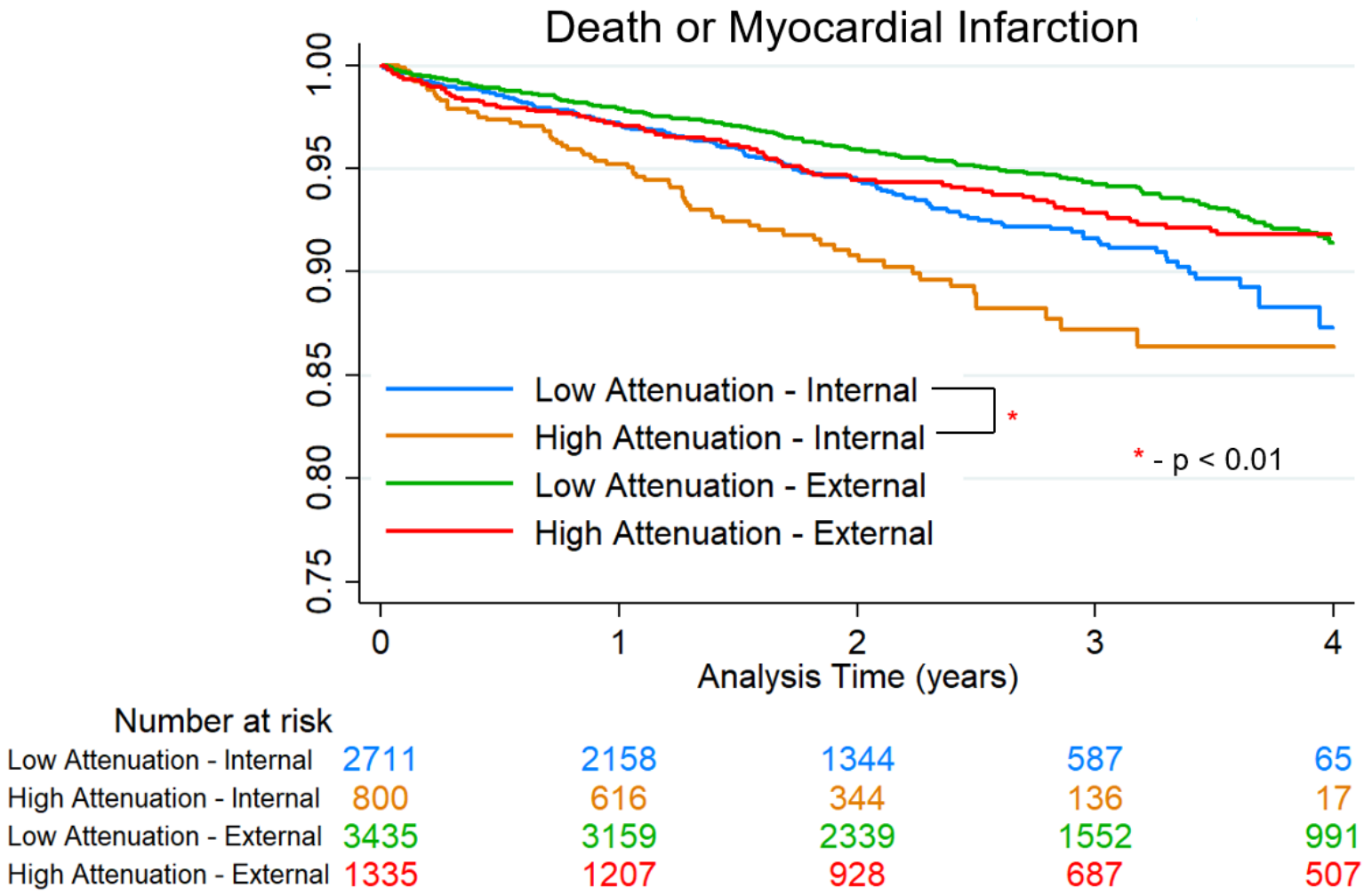
Supplemental Figure 1: Bland-Altman plots comparing measurements of epicardial adipose tissue volume and attenuation between two expert readers and deep learning. The mean bias for EAT volume for deep learning was intermediate between the two readers, with similar limits of agreement. Similar results were seen for median EAT attenuation. 1.96 standard deviation (SD) implies the 95% confidence intervals.



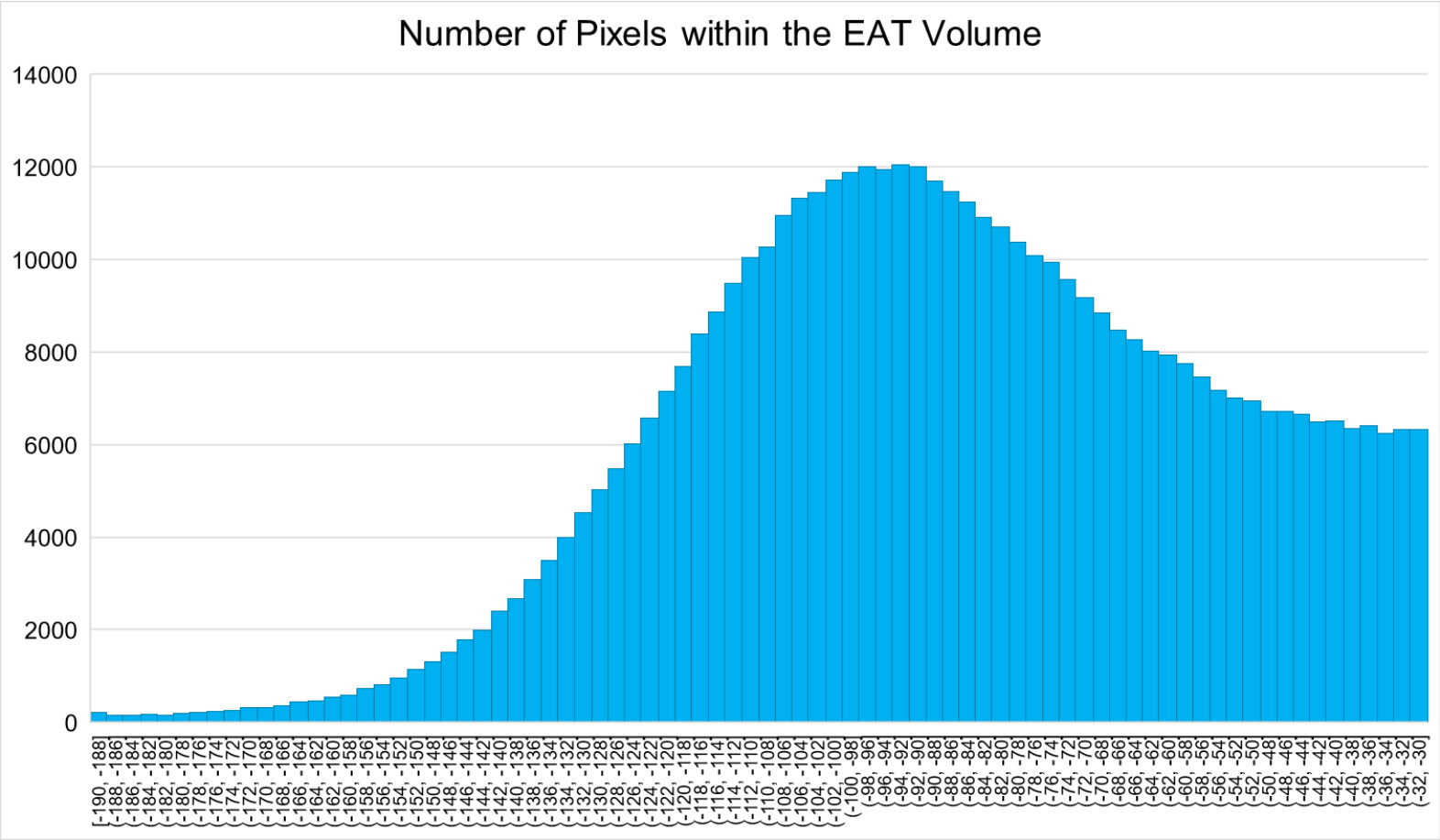
Supplemental Figure 2: Kaplan-Meier curves for death or myocardial infarction stratified by epicardial adipose tissue (EAT) volume and attenuation in the combined internal and external testing population.



Supplemental Figure 3: Kaplan-Meier curves for death or myocardial infarction stratified by epicardial adipose tissue (EAT) volume. The threshold for elevated EAT volume (>144 mL) was established in the internal testing population.



Supplemental Figure 4: Kaplan-Meier curves for death or myocardial infarction stratified by epicardial adipose tissue (EAT) attenuation. The threshold for elevated EAT attenuation (> -64 Hounsfield Units) was established in the internal testing population.



Supplemental Figure 5: Epicardial adipose tissue (EAT) attenuation values for all pixels in a 50-year-old woman with a body mass index of 30.3. The total EAT volume was 130 mL and the median EAT attenuation was -88 Hounsfield Units.

Factor	Training Population (n=500)	Internal Testing Population (n=3511)	p-value
Age, median (IQR)	66.5 (58, 74)	63 (55, 72)	<0.001
Male, n (%)	308 (61.6%)	1764 (50.2%)	<0.001
Body mass index, median (IQR)	28.6 (25.5 – 33.1)	29.5 (25.5 – 34.2)	0.042
Hypertension, n (%)	349 (70.1%)	2099 (59.8%)	<0.001
Diabetes Mellitus, n (%)	146 (29.3%)	829 (23.6%)	0.005
Dyslipidemia, n (%)	297 (59.6%)	1698 (48.4%)	<0.001
Family History, n (%)	66 (13.3%)	536 (15.3%)	0.240
Smoking, n (%)	98 (19.7%)	696 (19.8%)	0.940
Race			0.047
White	355 (71.4%)	2213 (63.1%)	
Black or African American	91 (18.3%)	772 (22.0%)	
American Indian or Alaska Native	3 (0.6%)	11 (0.3%)	
Asian	8 (1.6%)	99 (2.8%)	
Native Hawaiian or Pacific Islander	0 (0.0%)	9 (0.3%)	
Other Race / Declined to Disclose	43 (8.6%)	407 (11.6%)	
EAT Volume, median (IQR)	106.7 (76.1, 151.4)	100.9 (70.8, 145.5)	0.041
EAT Attenuation, median (IQR)	-70 (-75, -65)	-69 (-74, -65)	0.150

Supplemental Table 1: Characteristics of the training and testing populations. EAT – epicardial adipose tissue, IQR – interquartile range.

	No Death or MI (n=7716)	Death or MI (n=565)	p-value
Age, median (IQR)	64 (56, 72)	70 (61, 77)	<0.001
Male, n (%)	3834 (49.7%)	332 (58.8%)	<0.001
BMI, median (IQR)	30.2 (26, 34.9)	28.4 (24.4, 33.5)	<0.001
Hypertension, n (%)	4518 (58.6%)	347 (61.4%)	0.184
Diabetes Mellitus, n (%)	1951 (25.3%)	192 (34.0%)	<0.001
Dyslipidemia, n (%)	3532 (458%)	261 (46.2%)	0.861
Family History, n (%)	1936 (25.0%)	112 (19.8%)	0.005
Smoking, n (%)	1142 (14.8%)	100 (17.7%)	0.067
Stress TPD, median (IQR)	3.0 (1.0, 6.7)	4.0 (1.5, 8.6)	<0.001
Stress LVEF, median (IQR)	65.5 (57.4, 73.3)	60.1 (48.6, 68.9)	<0.001
DL CAC score, median (IQR)	13 (0,230)	176 (11, 966)	<0.001
EAT volume, median (IQR)	103.2 (71.2, 146.3)	108.6 (74.3, 161.9)	0.011
High EAT volume, n (%)	2004 (26.0%)	188 (33.3%)	<0.001
Median EAT attenuation, median (IQR)	-69 (-73, -64)	-68 (-72, -63)	0.045
High median EAT attenuation, n (%)	1959 (25.4%)	176 (31.2%)	0.003

Supplemental Table 2. Patient characteristics in patients who experienced major adverse cardiovascular events (MACE) compared to those who did not. BMI – body mass index, CAC – coronary artery calcium, DL – deep learning, EAT – epicardial adipose tissue, IQR – interquartile range, LVEF – left ventricular ejection fraction, MI – myocardial infarction, TPD – total perfusion deficit.