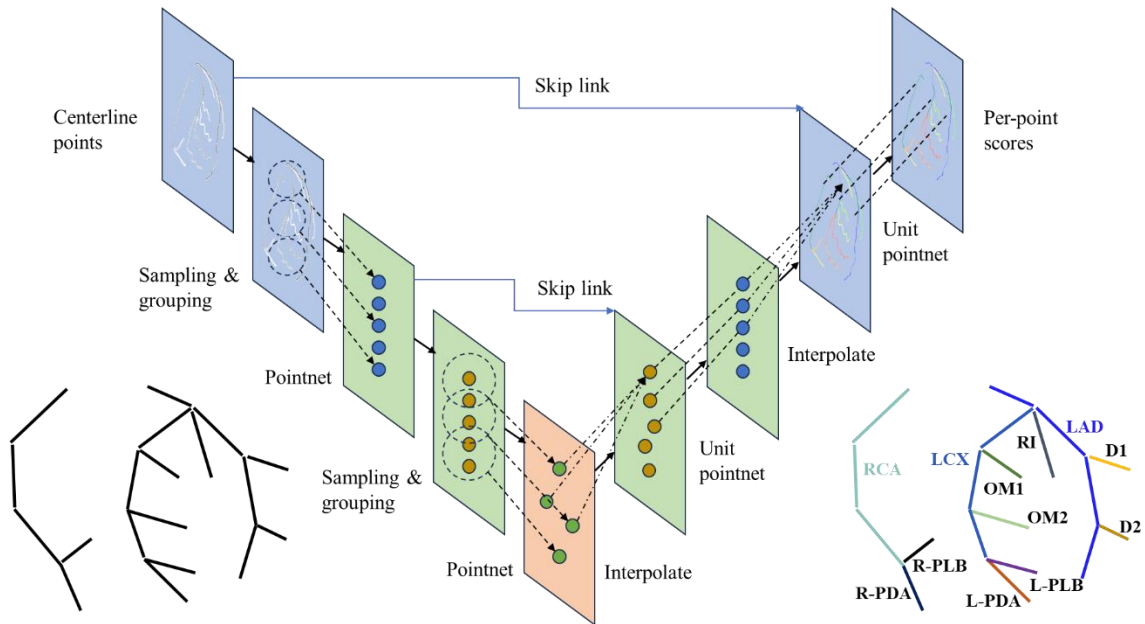
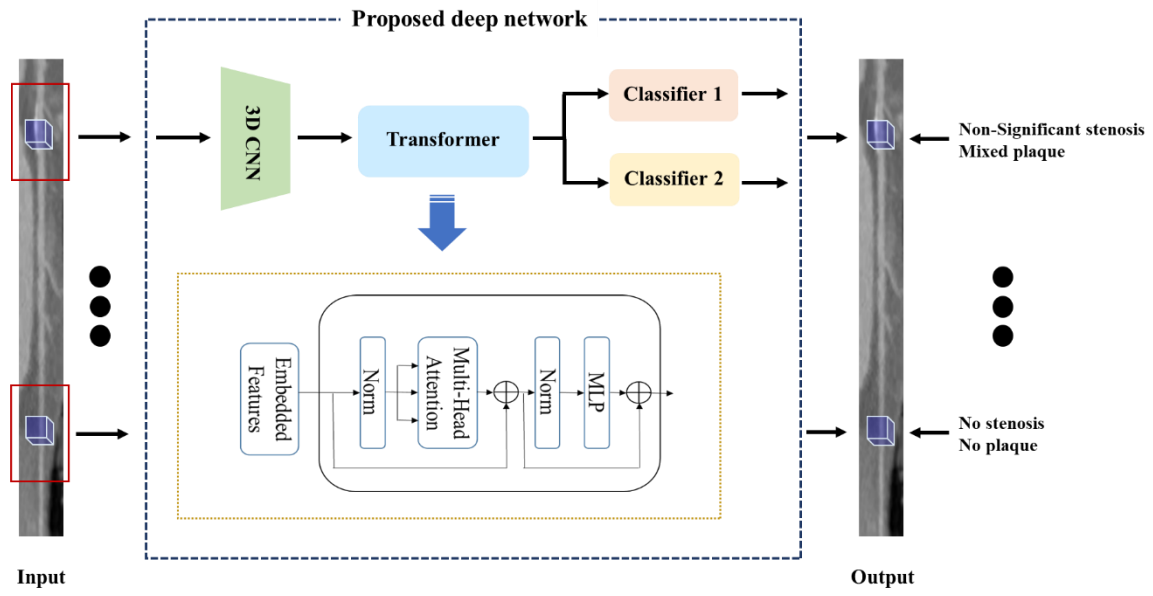


## Supplemental Material

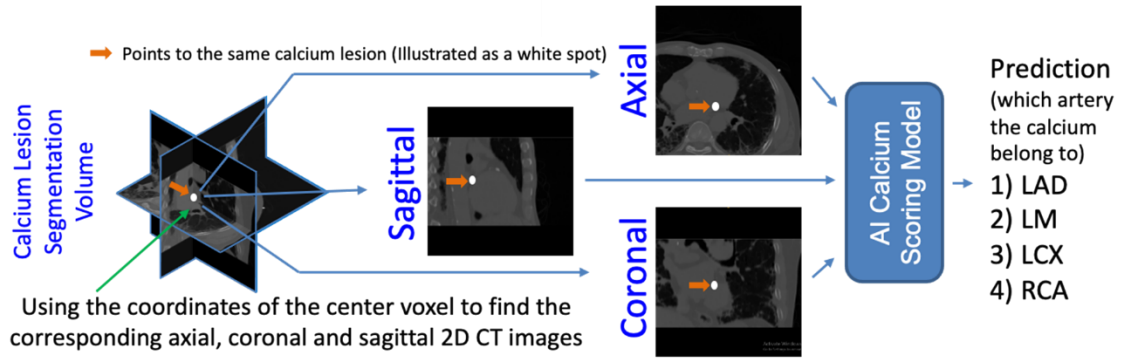


**Supplemental Figure 1.** Diagram of graph PointNet for coronary artery segment labelling.

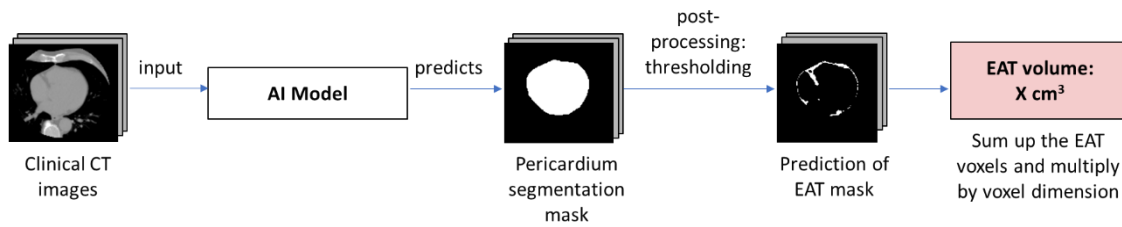
LAD: left anterior descending; LCX: left circumflex; LM: left main; RCA: right coronary artery; D1: first diagonal artery; D2: second diagonal artery; OM1, OM2: obtuse marginal arteries; RI: ramus intermedius; R-PLB: right posterior lateral branch; R-PDA: right posterior descending artery; L-PLB: left posterior lateral branch; L-PDA: left posterior descending artery.



**Supplemental Figure 2.** Multiple-target three-dimensional (3D) Transformer on 3D image classifier for joint stenosis grading, plaque quantification and characterization. CNN: convolutional neural networks.



**Supplemental Figure 3.** Workflow for calcium score quantification using convolutional neural networks (CNN). LM: left main; LAD: left anterior descending; LCX: left circumflex; LM: left main; RCA: right coronary artery.



**Supplemental Figure 4.** Workflow for AI EAT quantification. AI: artificial intelligence; EAT: epicardial adipose tissue.