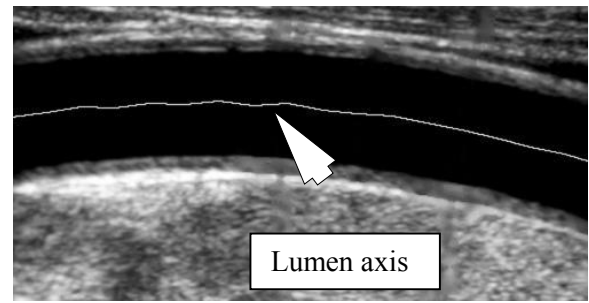
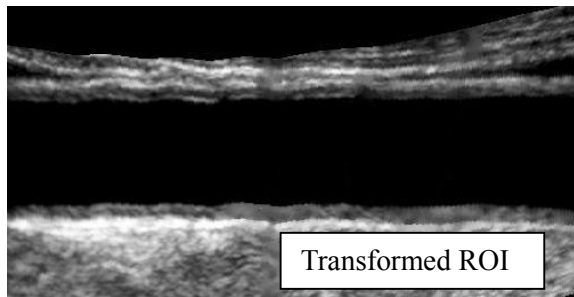


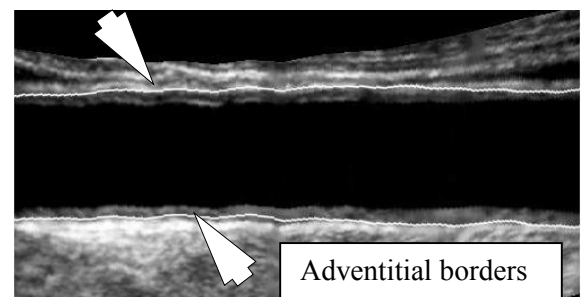
(a)



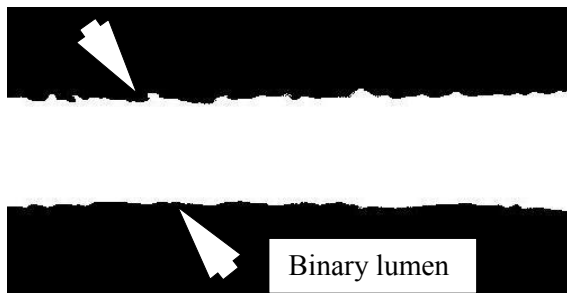
(b)



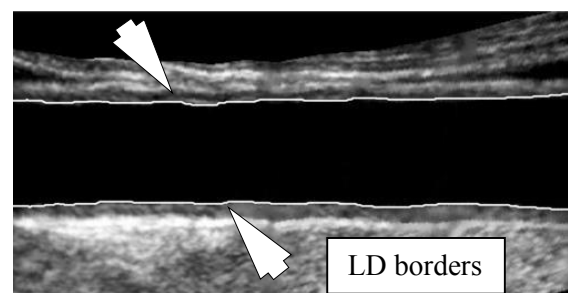
(c)



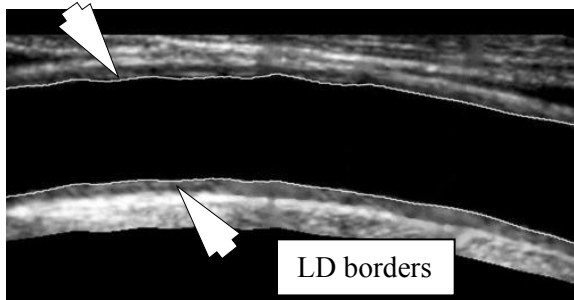
(d)



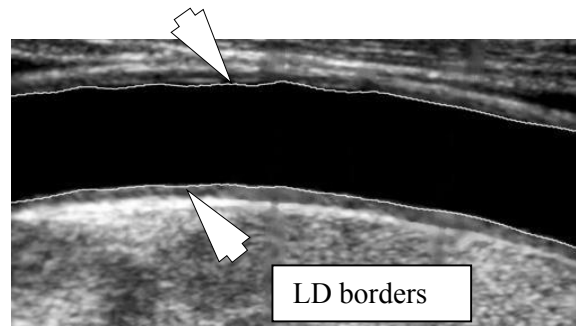
(e)



(f)

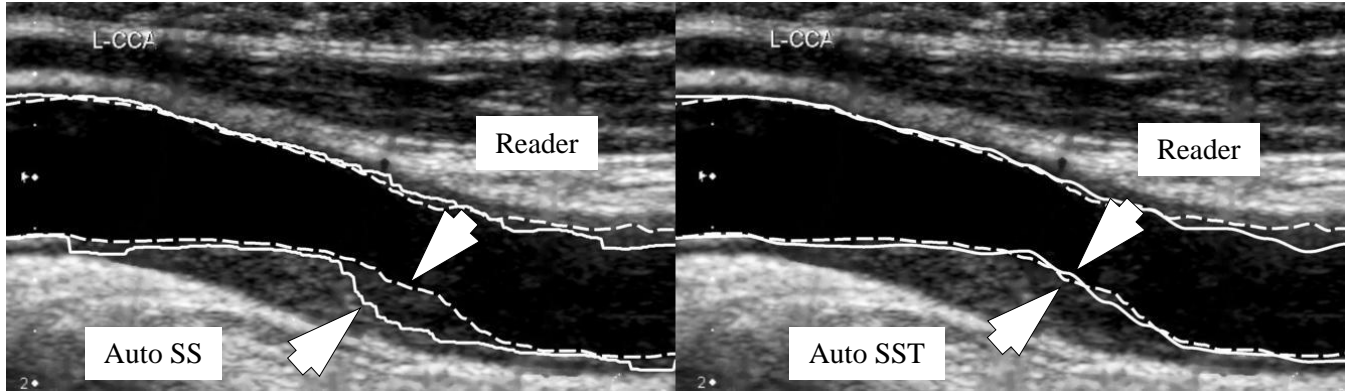


(g)

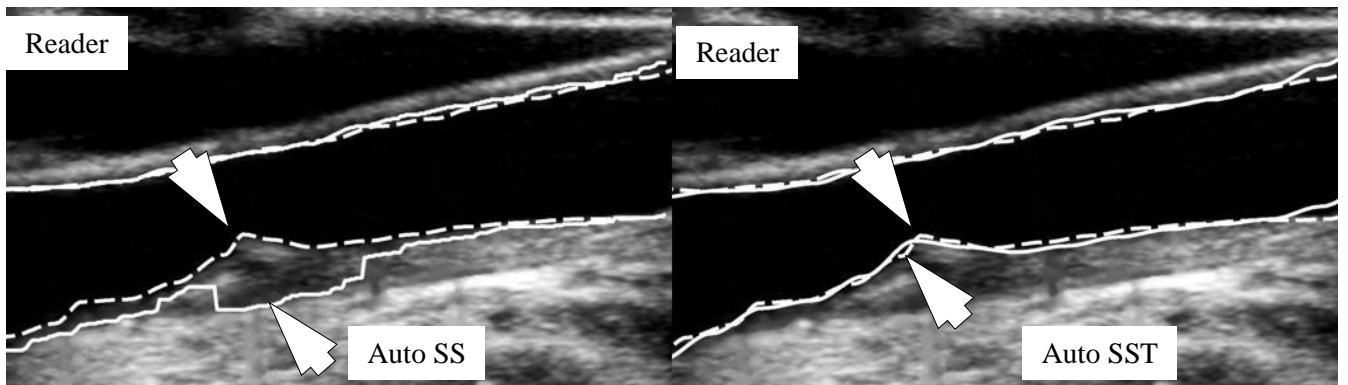


(h)

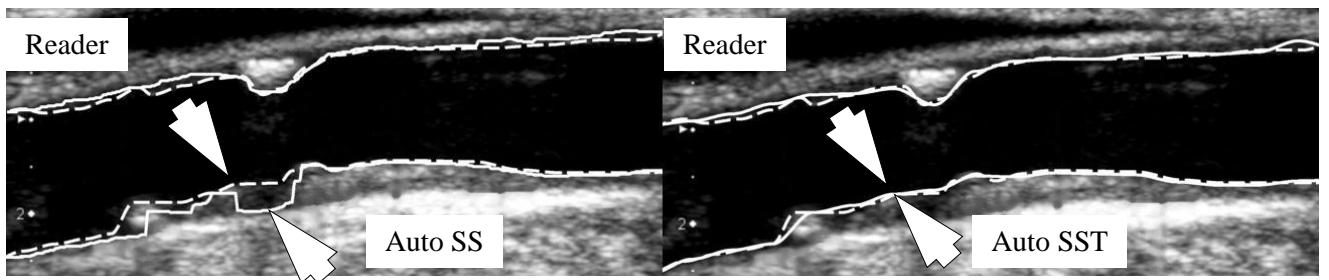
Fig. 4: Illustrating the algorithmic steps on a single image having curvature. (a) Curved ROI, (b) Lumen axis on ROI, (c) Transformed ROI, (d) Adventitial borders on the transformed ROI, (e) Binary lumen from classifier, (f) LD borders on transformed ROI, (g) LD borders on inverse transformed ROI, (h) LD borders on original ROI.



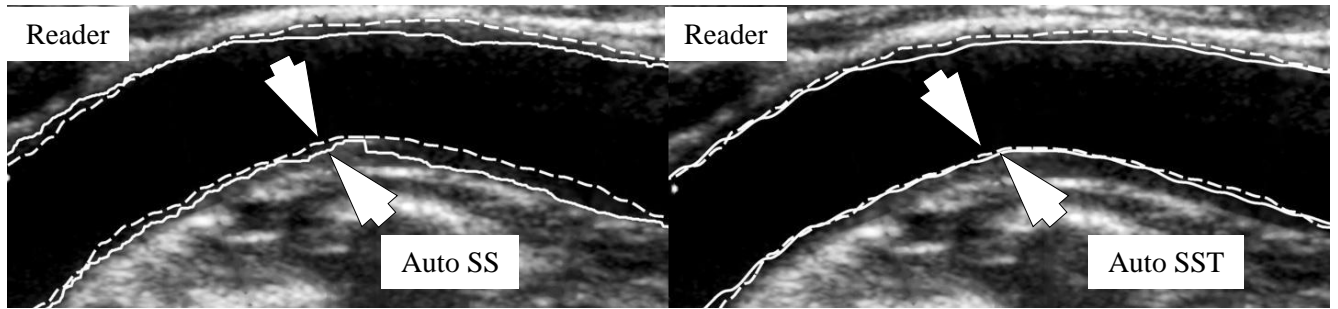
(a)



(b)



(c)



(d)

Fig. 5: Carotid Auto LD borders compared against the manual tracings on the grayscale images of four patients for both simple scale-space and transformation based iterative methods. Carotid Auto LD borders are shown in solid white; while manual LD borders are shown in dashed white (Auto SS – Automated Simple scale-space, Auto SST – Automated scale-space with Transformation, Reader – Manual Reader).

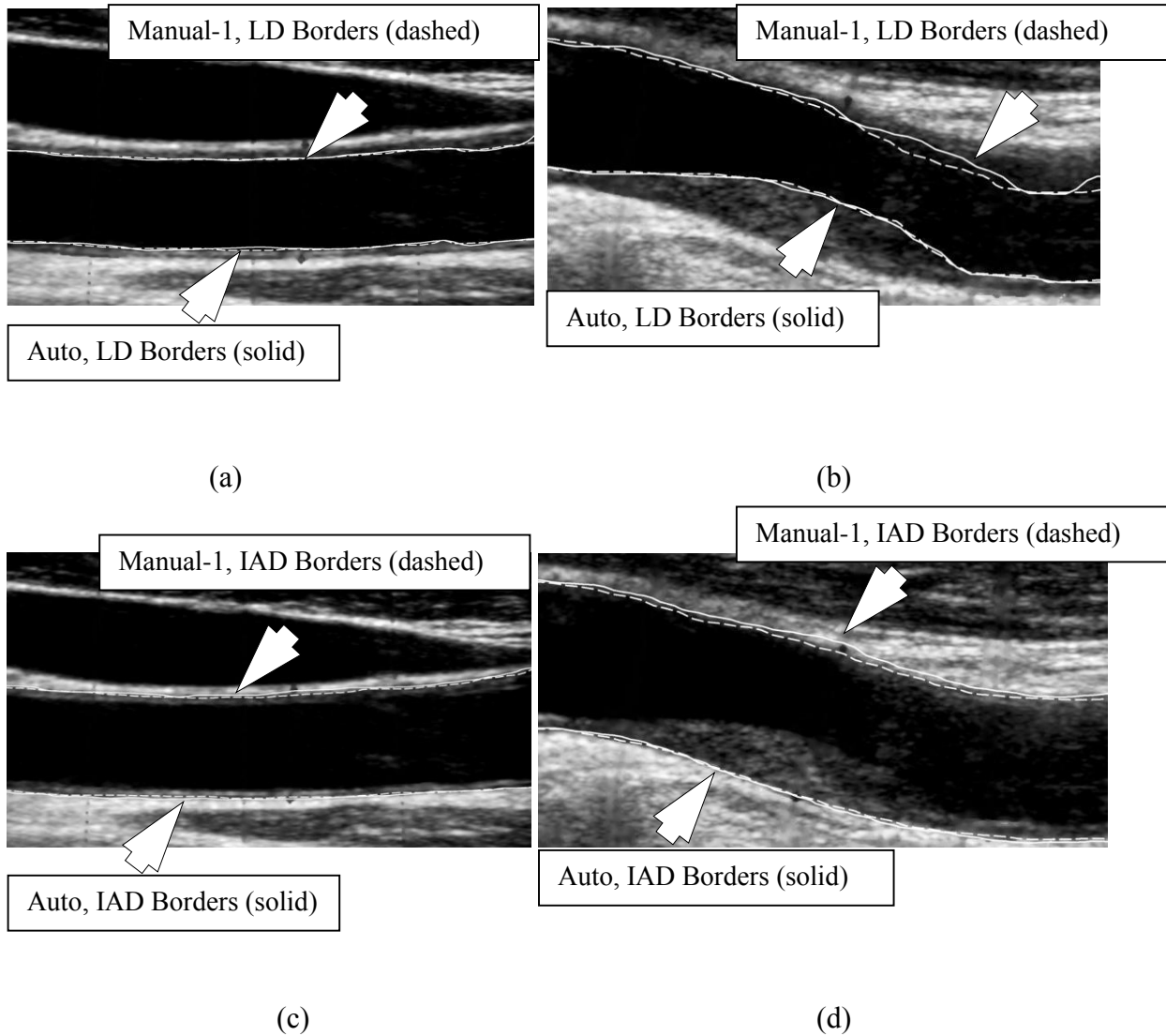


Fig. 6: Carotid Auto LD/IAD borders drawn on the gray scale images of patients having jugular vein interference (a) and thick plaque can be seen in (b). (a) Carotid Auto LD borders (solid white) Vs. Manual-1 LD borders (dashed white); (b) Auto LD borders (solid white) Vs. Manual-2 LD borders (dashed white); (c) Auto IAD borders (solid black) Vs. Manual-1 IAD borders (dashed black); (d) Auto IAD borders (solid black) Vs. Manual-2 IAD borders (dashed black).