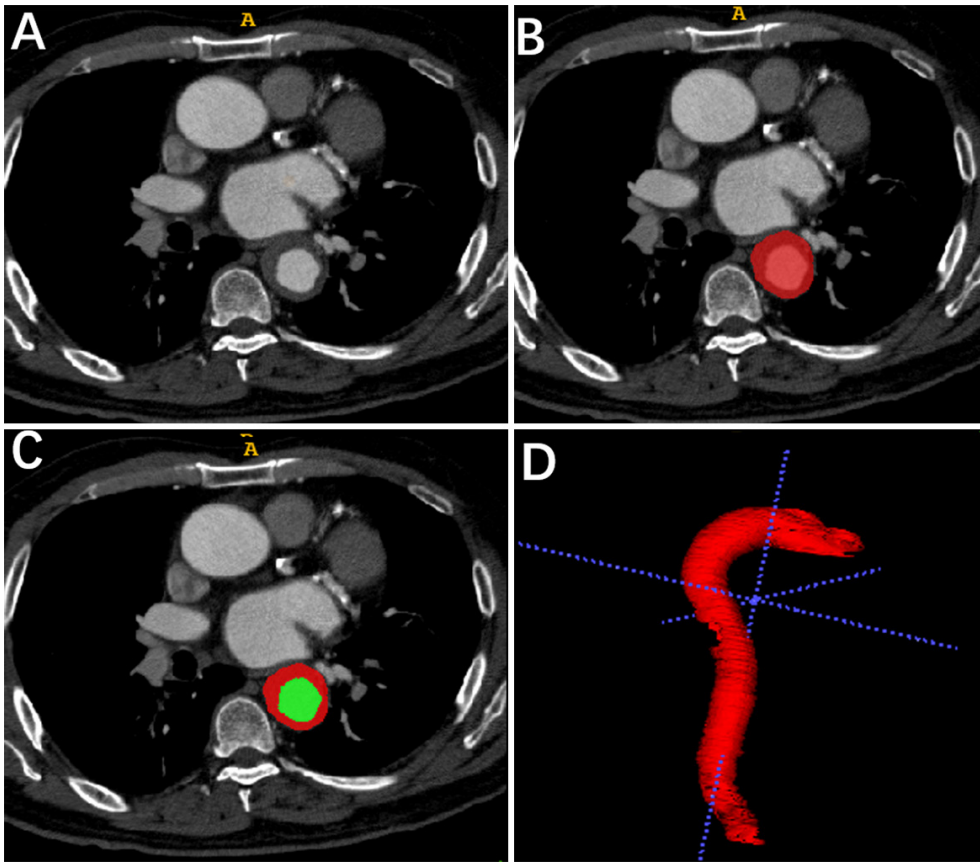
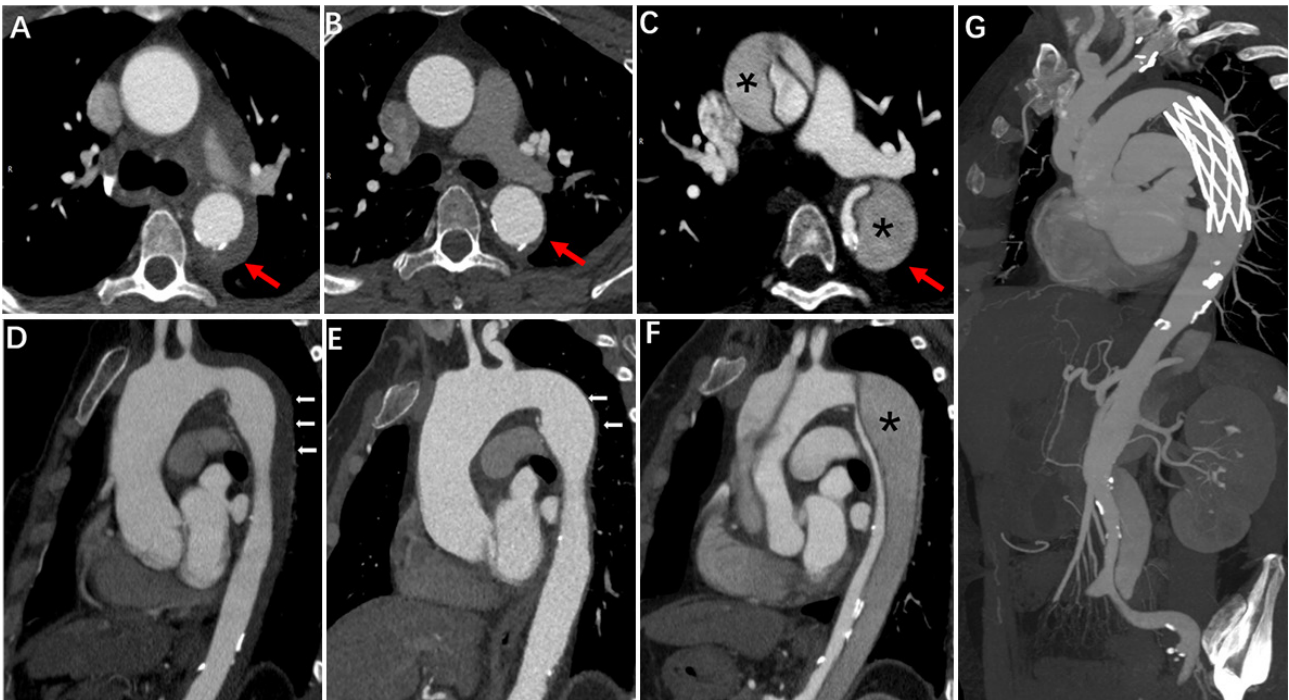


**Figure S1** Imaging features of intramural hematoma (IMH). The measurement of maximal aortic diameter (MAD) and maximal hematoma thickness (MHT) (A and B). The Stanford type of intramural hematoma: Stanford A (C) and Stanford B (D). An ulcer-like projection is indicated by the white arrow (E). The blood pool is indicated by a black arrow (F). The involvement of the left subclavian artery (G; white arrow).



**Figure S2** The computed tomography angiography of a patient with aortic intramural hematoma patient (A). The aorta and the hematoma were labeled as Label1 (B; red). The aortic lumen was covered by Label2 based on Label1 (C; green). The overlap area of Label1 and Label2 was removed, and only the hematoma outside the aortic lumen was preserved. The 3D reconstruction of an intramural hematoma (D).



**Figure S3** The evolution of an intramural hematoma to dissection over a 110-day period. (A and D) show the acute phase; initial computed tomography showed characteristic crescent wall thickening in the descending aorta (red and white arrows). A follow-up study 39 days later showed an obvious resolution of the hematoma (B and E). The follow-up study 110 days later revealed a typical dissection (C and F). Asterisks show the false lumens; the red arrow shows the complete resolution of the hematoma. The patient was treated with surgery. The follow-up computed tomography after the surgery (G).