

Supplement Figure 1. CT image analysis using 3mensio (3mensio Medical Imaging BV, Bilthoven, The Netherlands)

(A) The cardiac computed tomography image is imported, and (B) the left atrial appendage (LAA) is automatically located. (C) Landmarks are placed at the coumadin ridge and left circumflex artery. (D) The LAA ostium is located and measured. (E) The landing zone is defined as the area 10 mm distal to the ostium and is measured. (F) Virtual images of the ostium and landing zone are available in a three-dimensional model, CT image, and fluoroscopy.

A picture containing graphical user interface

Description automatically generated

Supplement Figure 2. Representative cases of landing zone measurements

(A) A circular-shaped landing zone with less difference between parameters

(B) An eccentric landing zone with a significant difference between parameters

Table

Description automatically generated

Supplement Figure 3. Sizing charts for Amulet and Amplatzer cardiac plug

(A) Sizing chart for Amplatzer cardiac plug

(B) Sizing chart for Amulet

Diagram

Description automatically generated with medium confidence

Supplement Figure 4. Bland-Altman plots comparing the predicted size using each parameter with oversizing and the actual device size

Diagram, pie chart

Description automatically generated

Supplement Figure 5. Diameters of an oval

(A) The red line represents an oval with a long radius (a) and a short radius (b).

(B) The blue and yellow lines represent a circle with a radius of (a) and (b), respectively.

(C) The green line represents a circle with a radius of the arithmetic mean of (a) and (b). The geometric mean of the two radiuses is expressed, showing a smaller value than the arithmetic mean.