

FIGURE LEGEND

Figure S1. Scheme of the imaginary inscribed spheres for investigating the longitudinal luminal structure of the bronchus. The internal radii of the imaginary inscribed spheres vary according to the shape irregularity of the airway lumen when the spheres moved inside the lumen from the proximal to the peripheral airway (white arrow). These radii can be measured even at the bifurcation of a bronchus.

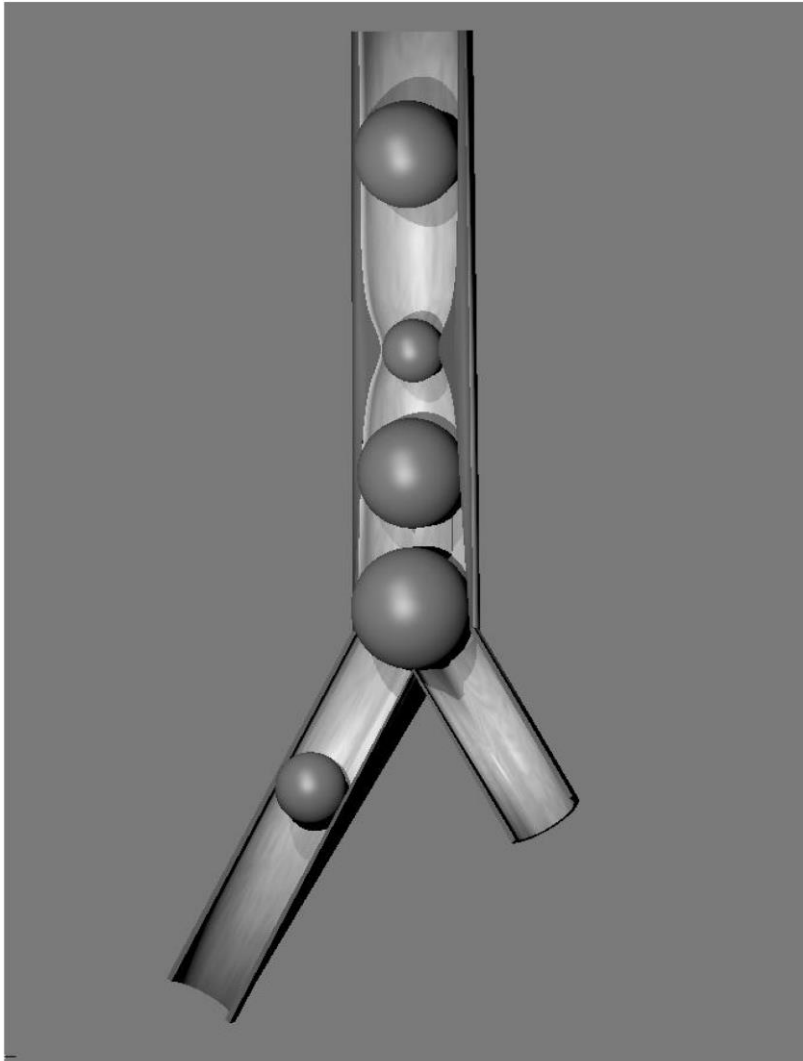


Figure S2.

A: Schema of airway phantom, in longitudinal section, for validation study. This phantom consists of 8 tubes, and each tube has dents (Y) on the internal surface of the baseline radius (X), simulating a varying internal diameter along the longitudinal direction. There were some variations in the X and Y values among the tubes, as shown in the table.

B: An axial slice CT image of airway phantom (left panel), and a reconstructed sagittal section of the phantom CT image showing the lumen of tube no. 2 (right panel).

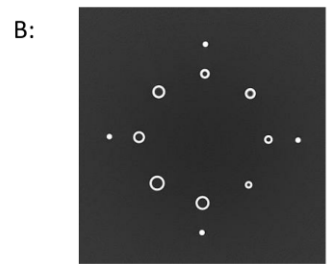
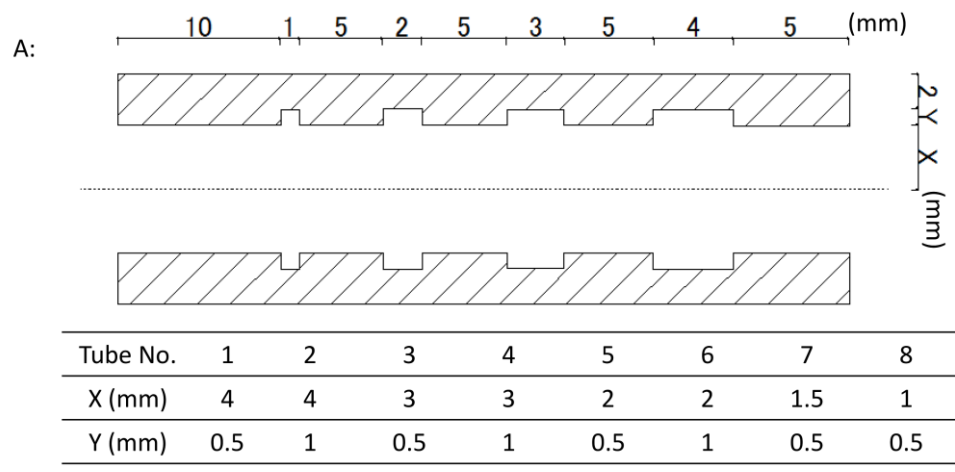


Figure S3. Relationship between theoretical radius measurements (horizontal axis) and measured radius measurements (vertical axis) in the phantom study. ($y = 0.990x + 0.219$; $r = 0.995$)

