3mensio Tricuspid Valve

Pre-operative planning for tricuspid valve repair, replacement and transcaval intervention.

Based on CT-data the 3D shape of the Tricuspid valve and surrounding structures can be visualized and analyzed. A Virtual valve or anchor device can be placed. The distances towards the RCA can be easily assessed and detailed analysis of the inferior and superior Vena Cava dimensions can be performed.



Tricuspid annulus



Surgical view



Annulus Dimensions



Tricuspid leaflets



The heart with a defined Tricuspid annulus

Tricuspid Annulus Measurements

Automatic Annulus Annotation

Automatic tracing of the tricsupid annulus over the full cardiac cycle, providing all key measurements, like area, perimeter, and custom diameter are automatically calculated. The Commissures are depicted as well, additional commissures can be added and the Tricuspid leaflets can be annotated. Commisure distances, leaflet length, Coaptation length, and (3D) Tenting are given automatically

Tricuspid Valve or device placement

Optimal Projection

The simulated Angio view can be used to find an optimal projection which can help save time during the procedure.

Virtual Valve or Device

A virtual valve can be placed by means of an STL file of a valve or by creating a custom valve. This will aid in the assessment of implantation depth, valve selection and anchoring possibilities. When anchors are placed, a ring-like device can also be visualized.



Simulated Angio view



Atrial structures



Hockey puck



PIE MEDICAL

IMAGING

Virtual valve

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Anchoring and RCA Trace

The anchoring workflow can help to assess anchor placement based on proximity to the annulus, the wall and surrounding vessels.

The RCA centerline can be traced either automatically or manually and the distance to the annulus is automatically calculated.

Trabeculae

Trabeculae can be segmented automatically and are highlighted in the Angio view. Possible interference with trabeculae can be assessed by implantation of a virtual device.

Automatic Volume Measurements

The Ventricular and Atrial volumes can be measured automatically for all phases. Helping to find the ED and ES phases and making remodeling followup easy.



SVC dimensions



IVC reprecented in Angio



SVC segmentation



Virtual ICE

Reporting

A complete report can be created by labeling the measurements in the different workflows. Customize your report by adding screenshots of the assessment.







Trabeculae in VR





Automatic Atrium volume

Automatic Ventricle volume

Preparing the procedure SVC and IVC assessment

The superior Vena Cava can be segmented and centerlines can be drawn in the left and right Brachiocephalic vein and the inferior Vena Cava. Dimensions like diameter, area and lengths of both IVC and SVC are easily obtained for optimal aproach or stenting.

Virtual ICE and TEE

The virtual ICE and TEE workflows can be used to plan optimal probe position and angulations for your procedural guidence.





Pie Medical Imaging develops, produces and sells products in accordance with international accepted standards. 3mensio workstation is FDA 510(k) cleared and MDR compliant (CE marked).