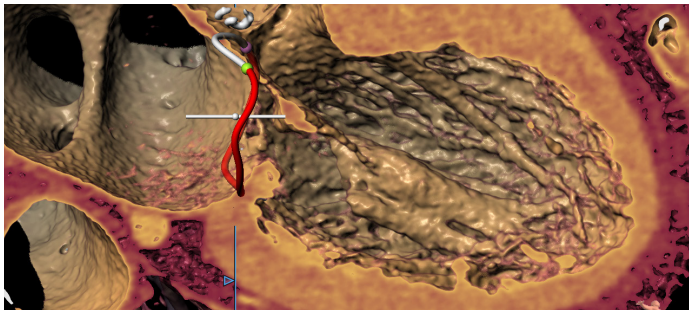
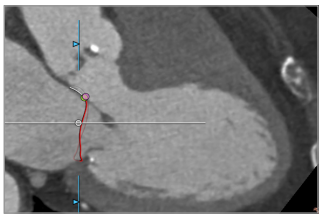
3mensio Mitral Valve

Pre-operative planning for mitral valve repair and replacement

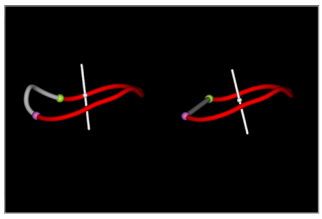
Determine the anatomy and dimensions of the patient's mitral valve with this dedicated workflow. The 3D shape and dimensions of the annulus can easily be defined as well as the relationship with surrounding structures. Assess different approach routes to get a complete overview of the patient's anatomy.



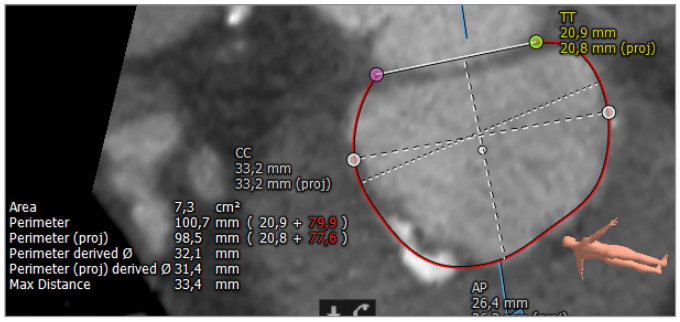
The heart with a defined mitral annulus.



Mitral annulus



Saddle shape and D-shape



Annulus dimensions

Mitral annulus anatomy

Annulus annotation

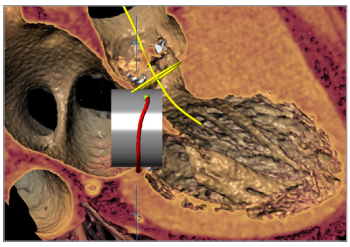
A single click brings you into the mitral space. Choose for automatic tracing of the saddle-shaped annulus over the full cardiac cycle, providing all key measurements and characteristics. This applies to both the saddle and D-shaped annulus.

Anatomical assessment

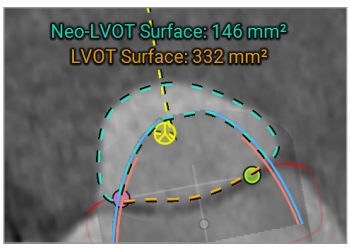
Different views are available to assess the shape and position of calcium and coronary vessel centerlines can be traced and visualized.

Neo-LVOT on CT

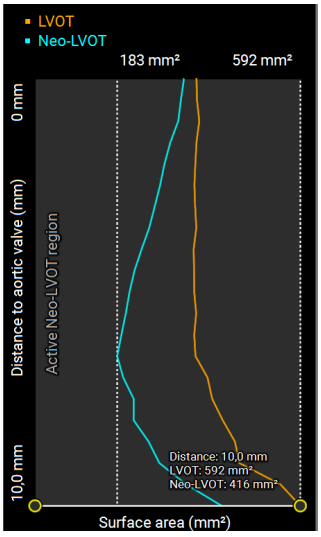
A virtual valve can be placed by importing an STL file or creating a custom valve. Once the virtual valve is positioned, the LVOT obstruction can be measured throughout the entire LVOT. The LVOT and neo-LVOT are plotted together in a graph. The smallest neo-LVOT can be saved to the report both in end-systole and end-diastole.



Virtual valve inside anatomy



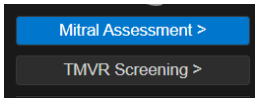
Short axis view on the LVOT



Neo-LVOT graph

TMVR Screening

TMVR screening assists in cardiac phase selection, annular dimensions and neo-LVOT suggestion, aiding patient eligibility assessment.



TMVR Screening

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PIE MEDICAL IMAGING

3mensio Mitral Valve

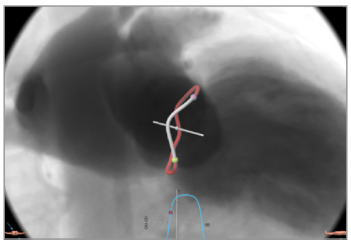
Multimodality mitral assessment

Simulated angio

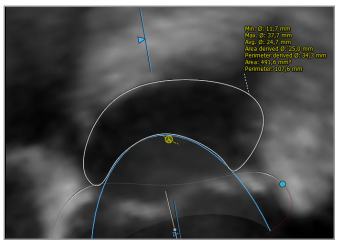
The simulated angio view can be used to find best C-arm projections, which can be used during the procedure.

3D echo with virtual valve and neo-LVOT

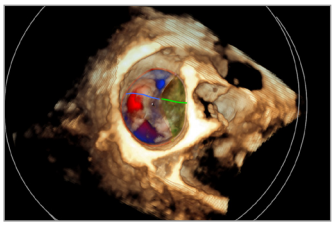
A virtual valve can be placed, and a neo-LVOT measurement can be done directly on 3D echo. The 3D echo data can be registered with the CT analysis, by tracing the annuli within both modalities, combining the best of both worlds.



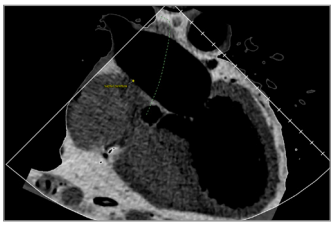
Simulated angio view



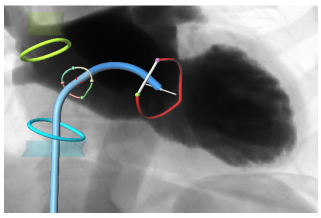
3D TEE neo-LVOT measurement



3D ultrasound

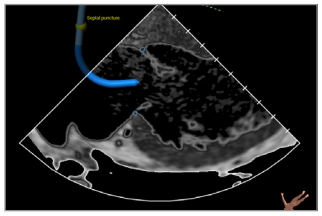


CT-derived virtual TEE

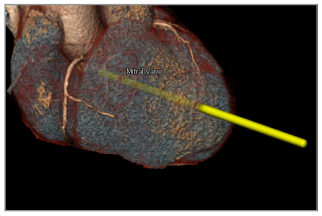


Septal crossing

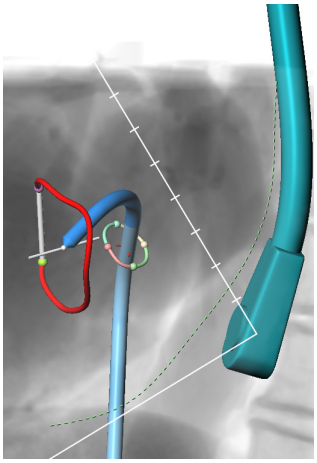
Femoral and subclavian



Virtual ICE view



Transapical



Virtual TEE probe

Approach route assessment

Septal crossing: this workflow can be used to plan and visualize the catheter path through the vena cava and fossa ovalis by determining the septum anatomy.

Virtual TEE and ICE: make your pre-op planning complete with the virtual TEE or ICE modules that help to assess and plan TEE and ICE probe position, angles, and views in either mono or bi-plane echo views.

Transapical: the trajectory of a catheter is automatically determined perpendicular from the mitral valve towards the apex. The entry point and structures like ribs, skin and vessels can be visualized.

Reporting

A complete report can be created by labeling the measurements in the different workflows. The most important measurements are shown in a summarizing infographic. Customize your report by adding screenshots of the assessment.