TAVR Services

TAVR Services for Better Case Planning

M2S has extensive experience with over 10,000 TAVR cases planned. Our 3D reconstructions and case planning reports combine all TAVR planning needs in **one efficient and high quality service**.

We provide an **unbiased assessment** for patient candidacy, with benchmarking against the site and other case planning methods.

- Standardized suite of valve and iliac access measurements (including c-arm calculation) and static images of valve and iliac anatomy
- Interactive 3D models that allow users to take measurements and conduct pre-op planning analysis
- Standardized and validated methods and measurement protocols
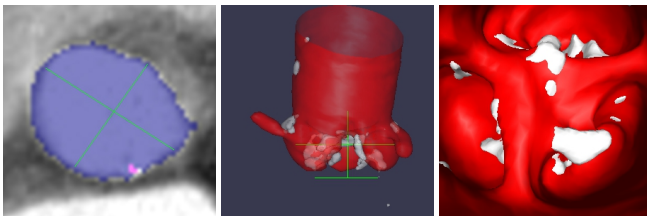- Qualitative assessment of source imaging data

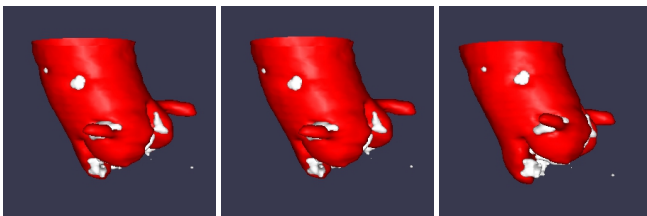Transcatheter Aortic Valve Replacement
Procedure Planning

Institution and Patient Information			
Institution Name	Avian Medical Center	Physician Name	Charlie Ladd
Patient Name	Scarlet Tanager	M2S Study ID	290022
Date of Birth	01/01/1900	Report Date	07/02/2014
Gender	Female	Scan Date	06/17/2014

Aortic Valve Measurements on CT						
Measurement	Size	Slice	Measurement	Size	Slice
Min Annulus Diameter (mm)	19.0	23	Left Coronary Height (mm)	11.8	11
Max Annulus Diameter (mm)	22.8	23	Right Coronary Height (mm)	10.8	12
Mean Annulus Diameter (mm)	20.9	23	Sinus of Valsalva Diameter (mm)	30.4	13
Area (mm^2)	363.8	23	STJ Diameter (mm)	28.7	3
Cardiac Phase (R-R Interval %)	30 Systole		STJ Height (mm)	19.6	3

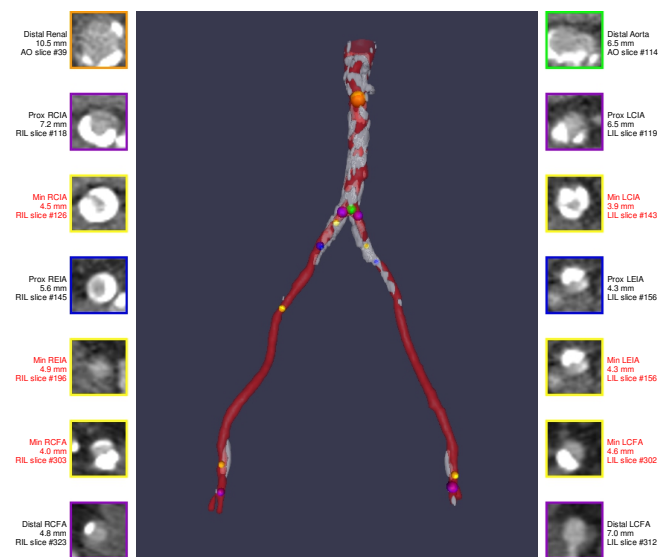**Note:** Cardiac phase is an important factor when assessing the diameter of the aortic annulus.

Predicted C-Arm Gantry					
LAO(+)/RAO(-)	7.89	LAO(+)/RAO(-)	10	LAO(+)/RAO(-)	-10
CRA(+)/CAU(-)	4.4	CRA(+)/CAU(-)	5.6	CRA(+)/CAU(-)	-5.3

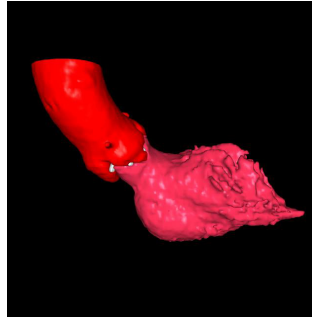

Transcatheter Aortic Valve Replacement
Procedure Planning

Institution and Patient Information			
Institution Name	Avian Medical Center	Physician Name	Charlie Ladd
Patient Name	Scarlet Tanager	M2S Study ID	290024
Date of Birth	01/01/1900	Report Date	07/02/2014
Gender	Female	Scan Date	06/17/2014

Reconstructed Image of Access Vessels

Distal Renal 10.5 mm AO slice #39

Distal Aorta 6.5 mm AO slice #114

Prox RCIA 7.2 mm RIL slice #118

Prox LCIA 6.5 mm LIL slice #119

Min RCIA 4.5 mm RIL slice #126

Min LCIA 3.9 mm LIL slice #143

Prox REIA 5.6 mm RIL slice #145

Prox LEIA 4.3 mm LIL slice #156

Min REIA 4.9 mm RIL slice #196

Min LEIA 4.3 mm LIL slice #156

Min RCFA 4.0 mm RIL slice #303

Min LCFA 4.6 mm LIL slice #302

Distal RCFA 4.8 mm RIL slice #323

Distal LCFA 7.0 mm LIL slice #312

Contact us today to find out more about our TAVR Case Planning Service at tavr-sales@m2s.com.

About TAVR services

- **Measurement Protocol:** The case planning report includes a measurement suite for both valve and ilofemoral access assessment. Measurements were designed based by collaborative efforts between M2S and industry thought leaders. Studies are measured by trained technicians using semi-automated segmentation. All measurements are made on slices orthogonal to the centerline of the aorta or iliac vessels.

- **Scan Criteria:** The Scans sent to M2S are compared against a scan criterion that was designed to optimize the custom TAVR measurements. Contrast in blood flow is used to determine the transition between tissue and fluid. The images are windowed for brightness and contrast levels. Slices are segmented to produce 3D reconstructions of the valve and the access vessels.

- **Technicians:** Each technician involved in the creation of TAVR 3D images and associated measurements undergoes a training certification program to the defined protocol. Technicians involved with the valve studies must have experience with the thoracic aorta. They are then trained by someone certified to do the aortic valve modeling and measuring. Training involves doing several training studies and having them reviewed by a trainer. Technicians are certified when they can demonstrate repeatability. On average, the M2S technicians have 8.2 years of experience with measuring (49 years combined).

- **Final QC:** All production studies undergo a final QC check or review by technicians who are trained and certified for TAVR QC. Segmentation, centerlines, oblique slices, and completeness are reviewed at this step.

Other M2S measurements services

- **Abdominal Aortic Aneurysm** pre and post-operative with longitudinal tracking on the Patient Evaluation and Management System (PEMS) – with or without contrast enhancement
- **Thoracic Aortic Aneurysm** including dissection with longitudinal tracking on PEMS – with or without contrast enhancement
- **Ascending Aorta** including aortic valve assessment
- **Branched Fenestrated** thoracoabdominal
- **Carotid, peripheral vascular, and custom protocols**
- **Secure data transfer** through our DICOM ArmorCar system
- **Vascular database** including over 250,000 records

About M2S

- M2S provides medical image and data management services designed to improve patient outcomes through advanced image analysis, clinical data registries, and aortic device clinical trials.
- M2S is a world leader in 3D reconstructions and measurements associated with aortic disease with services being used by over 2600 medical professionals throughout the USA. M2S has processed over 250,000 datasets since 1998.
- M2S has provided Core Lab services on over 28,000 datasets for device manufacturers in the aortic disease space. Services include image QC against custom scan acceptance criteria, 3D reconstructions, and radiological reads.
- M2S is regulated by the FDA and is certified to ISO 13485 and ISO 14971. Preview is a Class II Medical Device.