ORCA TEE NOTE

Procedure Performed ☐ **Date of Service** ☐ **OR #** ☐ **Referring Provider:** ☐

Diagnosis: ☐

STUDY INFORMATION

Scope of study: ☐ TEE+ ☐ TEE for congenital heart disease + ☐ Spectral Doppler during TEE ☐ Complete TTE for congenital heart disease ☐ Color Flow during TEE
☐ TEE for hemodynamic monitoring only ☐ Complete TTE (spectral and color flow) ☐ Limited or follow up TTE

Procedure(s) ☐ Coronary artery bypass ☐ Aortic valve replacement ☐ Mitral valve replacement ☐ Mitral valve repair ☐ Thoracic aorta repair ☐ Tricuspid valve replacement
☐ Tricuspid valve repair ☐ Pulmonic valve replacement ☐ Patent foramen ovale or atrial septal defect repair ☐ Heart transplant ☐ Lung transplant
☐ Complex congenital heart disease repair Other: ☐

Indications for TEE: ☐ Myocardial infarction ☐ Coronary atherosclerosis of native coronary artery ☐ Mitral valve disorders ☐ Aortic valve disorders ☐ Tricuspid valve disorders
☐ Pulmonary valve disorders ☐ Functional disturbances following cardiac surgery ☐ Air embolism as a complication of medical care ☐ Heart replaced by transplant
☐ Lung replaced by transplant ☐ Congenital heart disease ☐ Dissection of thoracic aorta ☐ Atherosclerosis of aorta ☐ Aneurysm of aorta ☐ Cardiogenic shock
☐ Hypertrophic obstructive cardiomyopathy ☐ Shock unspecified Other: ☐

Probe insertion: ☐

Adequate views obtained for: ☐ Pericardium ☐ Left atrium ☐ Right atrium ☐ Left ventricle ☐ Right ventricle ☐ Aortic valve ☐ Tricuspid valve ☐ Mitral valve
☐ Pulmonic valve ☐ Adjacent aorta ☐ Not applicable

Adequate views NOT obtained due to poor image quality: ☐ Pericardium ☐ Left atrium ☐ Right atrium ☐ Left ventricle ☐ Right ventricle ☐ Aortic valve
☐ Tricuspid valve ☐ Mitral valve ☐ Pulmonic valve ☐ Adjacent aorta ☐ Not applicable

Reasons for poor image quality: ☐ Not applicable ☐ View impaired due to shadowing from adjacent structures ☐ View impaired due to artifacts
☐ View impaired due to pathologic distortions of normal anatomy ☐ View impaired due to esophageal or gastric pathology
☐ View impaired due to inadequate tissue penetration by echo beam Other: ☐

Dopler Findings Color Doppler was used to diagnose: ☐ Aortic stenosis ☐ Aortic insufficiency ☐ Mitral stenosis ☐ Tricuspid insufficiency ☐ Pulmonic stenosis
☐ Pulmonic insufficiency ☐ Pulmonary vein flow ☐ Hepatic vein flow ☐ Aortic dissection ☐ Atrial septal defect ☐ Ventricular septal defect ☐ Mitral Insufficiency
☐ Clot in the left atrial appendage ☐ Function of ventricular assist device ☐ Left ventricular outflow tract obstruction ☐ Right ventricular outflow tract obstruction
☐ Not applicable Other: ☐

Spectral Doppler was used to diagnose: ☐ Aortic stenosis ☐ Aortic insufficiency ☐ Mitral stenosis ☐ Tricuspid insufficiency ☐ Pulmonic stenosis
☐ Pulmonic insufficiency ☐ Pulmonary vein flow ☐ Hepatic vein flow ☐ Aortic dissection ☐ Atrial septal defect ☐ Ventricular septal defect ☐ Mitral Insufficiency
☐ Clot in the left atrial appendage ☐ Function of ventricular assist device ☐ Left ventricular outflow tract obstruction ☐ Right ventricular outflow tract obstruction
☐ Not applicable Other: ☐

Surgical implications of the study: **PART A:**

The surgical technique was affected by the TEE findings as follows:

☐ TEE was used to guide active deairing maneuvers or to confirm adequate deairing prior to separation from cardiopulmonary bypass.

☐ TEE was used to grade descending aortic atheroma as a guide to cannulation of the ascending aorta.

☐ TEE was used to evaluate the repair of a native cardiac valve.

☐ TEE was used to evaluate the function of a prosthetic valve, including perivalvular leaks (color Doppler), regurgitation, leaflet motion and/or pressure gradient (spectral Doppler).

☐ Previously incompletely evaluated cardiac structural abnormalities were evaluated or reevaluated in deciding on the appropriate cardiac surgical procedure to be performed.

Comment:

Patient Name ☐

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STUDY INFORMATION

PART B:

Thoracic structures ☐ cardiac function were not adequately evaluated preoperatively and the information was necessary to the safe conduct of anesthesia and surgery as follows :

Interpretations:

CONSENT

Consent: ☐ Patient ☐ Representative ☐ Emergent (no consent) Other:

Interpreter: ☐ In person ☐ By phone Other:

PRE-PROCEDURE VERIFICATION

Pre-Procedure verification: ☐ Done Other:

Not done: ☐ Emergent procedure ☐ Exempt procedure

OPERATORS

Attending Fellow Resident Other

MEDICATIONS

Pre-medication for procedure ☐ None

Diazepam (Valium) Fentanyl Morphine Lorazepam (Ativan) Midazolam (Versed)

Therapeutic injection Contrast: Contrast Concentration mg iodine /ml Contrast Osm olality m Osm /kg H20 Contrast Volume ml Contrast Bubbles m Osm /kg H20

PROCEDURE

Left Ventricular Systolic function: ☐ Normal (>=55%) ☐ Mildly reduced (45-54%) ☐ Moderately reduced (30-44%) ☐ Severely reduced (<30%)

Left Ventric Segmental Wall Basal:

Motion Abnl

Anteroseptal:
Anterior:
Infero-Lateral:
Antero-Lateral:
Inferior:
Septal:

Mid

Anteroseptal:
Anterior:
Lateral:
Posterior:
Inferior:
Septal:

Apical

Anterior:
Lateral:
Inferior:
Septal:

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PROCEDURE

Left Ventricular Size: ☐ Normal (32-52 mm diastole) ☐ Dilated (>52mm diasole) Size ____ mm

Left Ventricular Thickness: ☐ Normal /Mild LVH (1.1 - 1.3mm) ☐ Moderate LVH (1.4 - 1.6mm) ☐ Severe LVH (>1.7mm) Size ____ mm

LVOT Obstruction: ☐ Turbulence Peak gradient ____ mm Hg Mean gradient ____ mm Hg

Left Ventricular Ejection Fraction: Visual estimate ____ % Fractional area change ____ (nl 36-64%) Fractional shortening ____ n(l 27-45%) Biplane method of disks ____ (nl 55-75%)

Left Ventricular Diastolic Function:

Normal:
Emax Velocity ____ (nl 70-120cm/s) Amax Velocity ____ E /A ____ (nl <2) E Deceleration time ____ (nl 160-240 ms) E' ____ (nl >10cm /s septal, >15cm/s lat) A' ____ E /e' ____ Normal <8

Impaired Relaxation:
Emax Velocity ____ (nl 70-120cm/s) Amax Velocity ____ E /A ____ (nl <2) E Deceleration time ____ (nl 160-240 ms) E' ____ (nl >10cm /s septal, >15cm/s lat) A' ____ E /e' ____ Normal <8

Pseudonormal:
Emax Velocity ____ (nl 70-120cm/s) Amax Velocity ____ E /A ____ (nl <2) E Deceleration time ____ (nl 160-240 ms) E' ____ (nl >10cm /s septal, >15cm/s lat) A' ____ E /e' ____ Normal <8

Restrictive:
Emax Velocity ____ (nl 70-120cm/s) Amax Velocity ____ E /A ____ (nl <2) E Deceleration time ____ (nl 160-240 ms) E' ____ (nl >10cm /s septal, >15cm/s lat) A' ____ E /e' ____ Normal <8

Pulmonary Vein Flow :

LU [ ] Ar velocity ____ nl <25cm/s Anomalous pulmon vein ____

LL [ ] Ar velocity ____ nl <25cm/s Anomalous pulmon vein ____

RU [ ] Ar velocity ____ nl <25cm/s Anomalous pulmon vein ____

RL [ ] Ar velocity ____ nl <25cm/s Anomalous pulmon vein ____

Right Ventricular Function: ☐ Normal ☐ Mildly reduced ☐ Moderately reduced ☐ Severely reduced

Right Ventricular Size(4 Chamber) ☐ Normal (mid RV dia 27-33mm) ☐ Mildly abnormal (34-37mm) ☐ Moderately abnormal (38-41mm) ☐ Severely abnormal (>42mm) Size ____ **mm**

Right Ventricular Wall Thickness: ☐ Normal (< 5 mm) ☐ Hyperthrophied (>5 mm) Size ____ mm

Right Atrium: ☐ Normal (<40 mm) ☐ Enlarged ☐ Chiari network Size ____ mm

Left Atrium: ☐ Normal (< 40 mm) ☐ Enlarged Size ____ mm ☐ Cor triatriatum **Left Appendage:** ☐ Normal ☐ Smoke ☐ Clot

Interatrial / interventricular septum:

☐ Aneurysmal intraatrial septum ☐ Primum ASD ☐ Secundum ASD ☐ Sinus venosus ASD ☐ Muscular VSD ☐ Perimembranous VSD ☐ Inlet VSD ☐ Subpulmonary VSD

PFO: ☐ NO PFO by Color Doppler ☐ NO PFO by bubble study

Direction of shunting: ☐ Left to Right ☐ Right to left ☐ Bidirectional

Aortic Valve Morphology:
☐ Normal ☐ Thickened ☐ Calcified ☐ Vegetations ☐ Prolapse ☐ Flail ☐ Prosthesis ☐ Annular dilation ☐ Annulus size-end diastole Size ____ mm nl 14-26mm

Other: ____

Aortic Valve Bicuspid: Other: ____

Aortic Valve Function:
☐ Normal ☐ Stenosis ☐ Mean gradient ____ mm Hg (mild < 25 , m od...) ☐ Peak gradient ____ mm Hg (mild 16-36, m od...) ☐ Peak velocity ____ M/sec

Valve area ____ cm2 (nl 3-5, mild 1.5) ☐ Continuity ☐ PISA ☐ Velocity Ratio (AV/LVOT ____

Regurgitation: ☐ Trace ☐ Mild ☐ Moderate ☐ Severe Method: Vena Contacta ____ mm Descending aorta flow reversal: ☐ Present ☐ Absent

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PROCEDURE

Pulmonic Valve Morphology: ☐ Normal ☐ Thickened ☐ Calcified ☐ Vegetations ☐ Prolapse ☐ Prosthesis ☐ Flail

Pulmonic Valve Function: ☐ Normal ☐ Stenosis Mean Gradient ____ mmHg Peak Gradient ____ mmHg **Regurgitation:** ☐ Trace ☐ Mild ☐ Moderate ☐ Severe

Mitral Valve Morphology: ☐ Normal ☐ Vegetations ☐ Valvuloplasty Ring ☐ Prosthesis

Calcified: ☐ Annulus ☐ Leaflets ☐ Thickened

Prolapse ☐ A1 ☐ A2 ☐ A3 ☐ P1 ☐ P2 ☐ P3

Flail ☐ A1 ☐ A2 ☐ A3 ☐ P1 ☐ P2 ☐ P3

Annulus-End Systole ME LAX ____ mm (nl 20-36mm) ME Commissural ____ mm (nl 27-46mm)

Function: ☐ Normal ☐ Stenosis Mean Gradient ____ mmHg (Mild <5) Peak Gradient ____ mmHg Valve Area ____ cm2 (nl 4-6 ____ Method ____

Regurgitation: ☐ Trace ☐ Mild ☐ Moderate ☐ Severe ☐ Eccentric jet ____ ☐ Multiple Jets ☐ SAM ☐ Leaflet perforation ____ Method ____

Tricuspid Valve Morphology: ☐ Normal ☐ Thickened ☐ Calcified ☐ Vegetations ☐ Prolapse ☐ Flail ☐ Prosthesis

Tricuspid Annulus (end systole) Annulus ____ mm (nl 20-40mm) Apical Displacement ____ mm

Tricuspid Valve Function: ☐ Normal **Stenosis:** Mean Gradient ____ mmHg **Regurgitation:** ☐ Trace ☐ Mild ☐ Moderate ☐ Severe

Hepatic Vein Flow: ☐ Normal ☐ Blunted ☐ Reversed ☐ Vena Contrata Width ____ ☐ Jet Area (Central Jets Only)

Pericardium: ☐ Normal ☐ Thick **Effusion:** ☐ Small <0.5cm ☐ Large >2cm ☐ Localized ☐ Tamponade

Aorta ☐ Normal ☐ Dilated

Dimensions (end systole)

Annulus ____ mm(nl14-26mm) Sinuses ____ mm (nl 25-31mm) Sinotubular ____ mm (nl 20-28mm) Aortic Root ____ mm (nl 21-40mm) Arch ____ mm Desending ____ mm(nl 20mm)

Dissection: ☐ Type A ☐ Type B

Atheroma: ☐ Grade1(<3mm intimal thickening) ☐ Grade2(<5mm intimal thickening) ☐ Grade3(sessile atheroma) ☐ Grade4(protruding atheroma) ☐ Grade5(mobile atheroma)

Epiaortic Scanning: ☐ No Significant findings ☐ Significant findings altering cannulation

Masses

Right Atrium ☐ Tumor ☐ Clot ☐ Vegetation ☐ Device, Catheter ☐ Uncertain type

Left Atrium ☐ Tumor ☐ Clot ☐ Vegetation ☐ Device, Catheter ☐ Uncertain type

Left Atrial Appendage ☐ Tumor ☐ Clot ☐ Vegetation ☐ Device, Catheter ☐ Uncertain type

Right Ventricle ☐ Tumor ☐ Clot ☐ Vegetation ☐ Device, Catheter ☐ Uncertain type

Left Ventricle ☐ Tumor ☐ Clot ☐ Vegetation ☐ Device, Catheter ☐ Uncertain type

Pericardium ☐ Tumor ☐ Clot ☐ Vegetation ☐ Device, Catheter ☐ Uncertain type

Post Bypass

Left Ventricular Function: ☐ Normal ☐ Mildly reduced ☐ Moderately reduced ☐ Severely reduced ☐ New segmental wall motion abmormality

Right Ventricular Function: ☐ Normal ☐ Mildly reduced ☐ Moderately reduced ☐ Severely reduced

Valve Replacement

Aortic: ☐ Mechanical ☐ Tissue ☐ Homograft ☐ Normal Function ☐ Perivalvular leak ☐ Abnormal prosthetic leaf motion

Mitral: ☐ Mechanical ☐ Tissue ☐ Homograft ☐ Normal Function ☐ Perivalvular leak ☐ Abnormal prosthetic leaf motion

Tricuspid ☐ Mechanical ☐ Tissue ☐ Homograft ☐ Normal Function ☐ Perivalvular leak ☐ Abnormal prosthetic leaf motion

Pulmonic ☐ Mechanical ☐ Tissue ☐ Homograft ☐ Normal Function ☐ Perivalvular leak ☐ Abnormal prosthetic leaf motion

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POST BYPASS

Valve Repair

Aortic: ☐ Residual Stenosis ☐ Residual Regurgitation **Tricuspid** ☐ Residual Stenosis ☐ Residual Regurgitation

Mitral: ☐ Residual Stenosis ☐ Residual Regurgitation **Pulmonic** ☐ Residual Stenosis ☐ Residual Regurgitation

☐ Repeated observations were made of ventricular function and filling to guide fluid and drug management.

☐ TEE was used to aid de-airing

DEVICES

Intraaortic Balloon Pump:

VAD:

Rhythm Device Leads

Central Lines:

Cannulas:

Complications: ☐ None ☐ Yes (See note below)

Complications:

ATTENDING STATEMENT

Attending Name ☐ Supervised ☐ Personally Performed

TEACHING ATTENDING ATTESTATIONS *(Place initials in boxes below)*

☐ **Probe placement and full TEE study with Doppler Studies:** "I was present for the entire procedure, reviewed the images, and agree with the findings, conclusions, and interpretation was made by me as documented.

☐ **Probe placement only:** "I was present for the entire procedure." or "I was present for the probe placement."

☐ **Interpretation only (with Doppler studies):** "I personally reviewed the images and agree with the findings, conclusions, and interpretation of images as documented."

PERSONALLY PERFORMED ATTESTATIONS *(Place initials in boxes below)*

☐ **Probe placement and full TEE study with Doppler Studies:** "I was present for the entire procedure, reviewed the images, and agree with the findings, conclusions, and interpretation of images was made by me as documented.

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☐ **Interpretation only (with Doppler studies):** "I personally reviewed the images and agree with the findings, conclusions, and interpretation of images as documented."

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Attending Name: Signature Date

Resident Name: Signature Date