

STS/EACTS Latin America Cardiovascular Surgery Conference

September 21-22, 2017 | Cartagena, Colombia

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How to Deal With the Small LVOT

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Nothing to disclose



The Society
of Thoracic
Surgeons



EACTS
European Association For Cardio-Thoracic Surgery



TYPES OF OBSTRUCTION

- CRITICAL AORTIC STENOSIS
- FIBROUS SUB-AORTIC MEMBRANE
- TUNNEL TYPE
- FOLLOWING REPAIR OF CONGENITAL HEARTH DEFECTS
- HIPERTROPHIC OBSTRUCTIVE CARDIOMIOPATHY

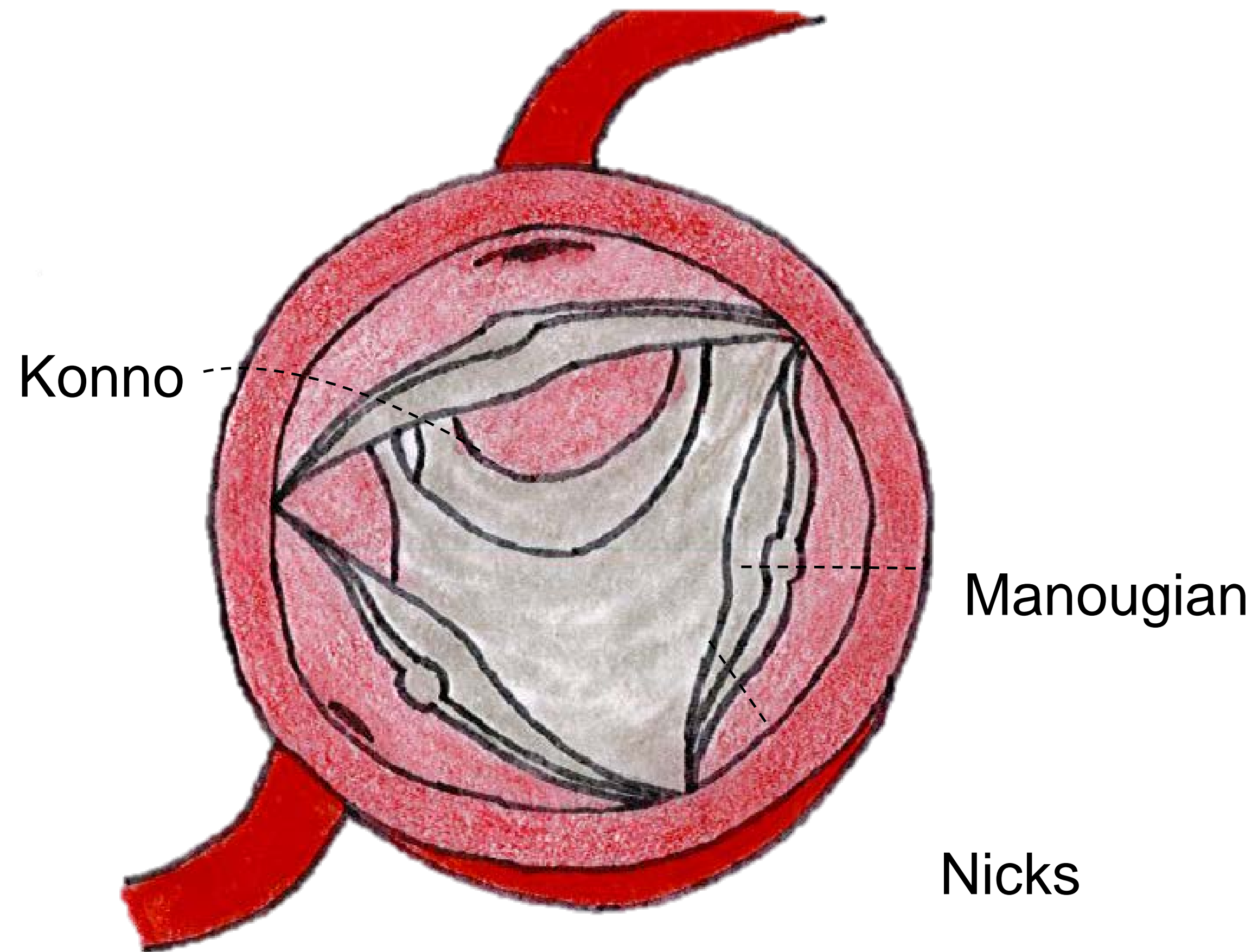
GOALS FOR TREATMENT

- COMPLETE RELIEF
- PRESERVATION OF THE AORTIC VALVE
- PRESERVATION OF CONDUCTION SYSTEM
- AVOID RECURRENT OBSTRUCTION

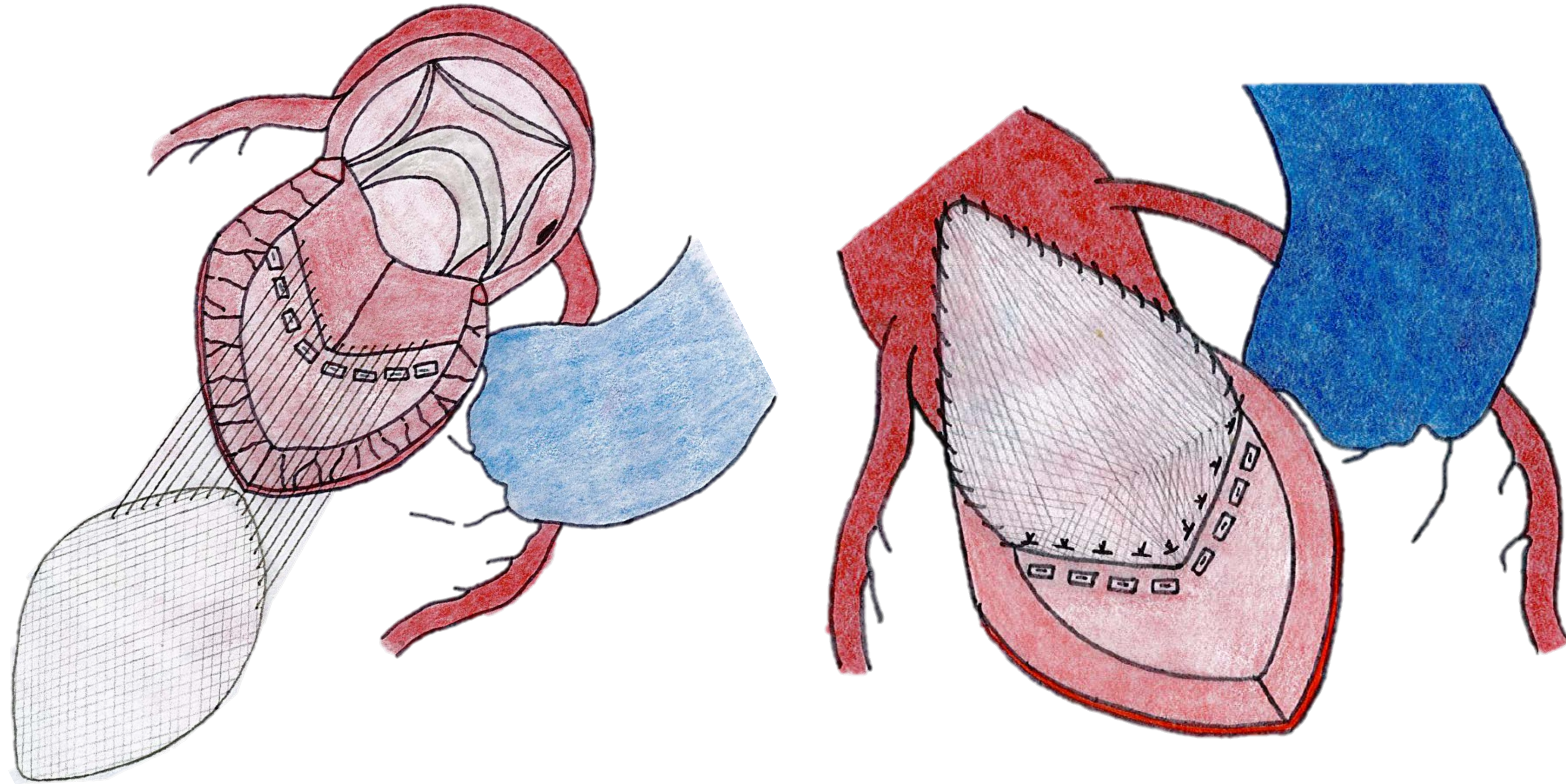
SURGICAL TECHNIQUES

- POSTERIOR ENLARGEMENT
 - . Manougian
 - . Nicks
- ANTERIOR ENLARGEMENT
 - Konno Rastan
 - Ross Konno
 - Homograft Konno
- MODIFIED KONNO
- MYECTOMY

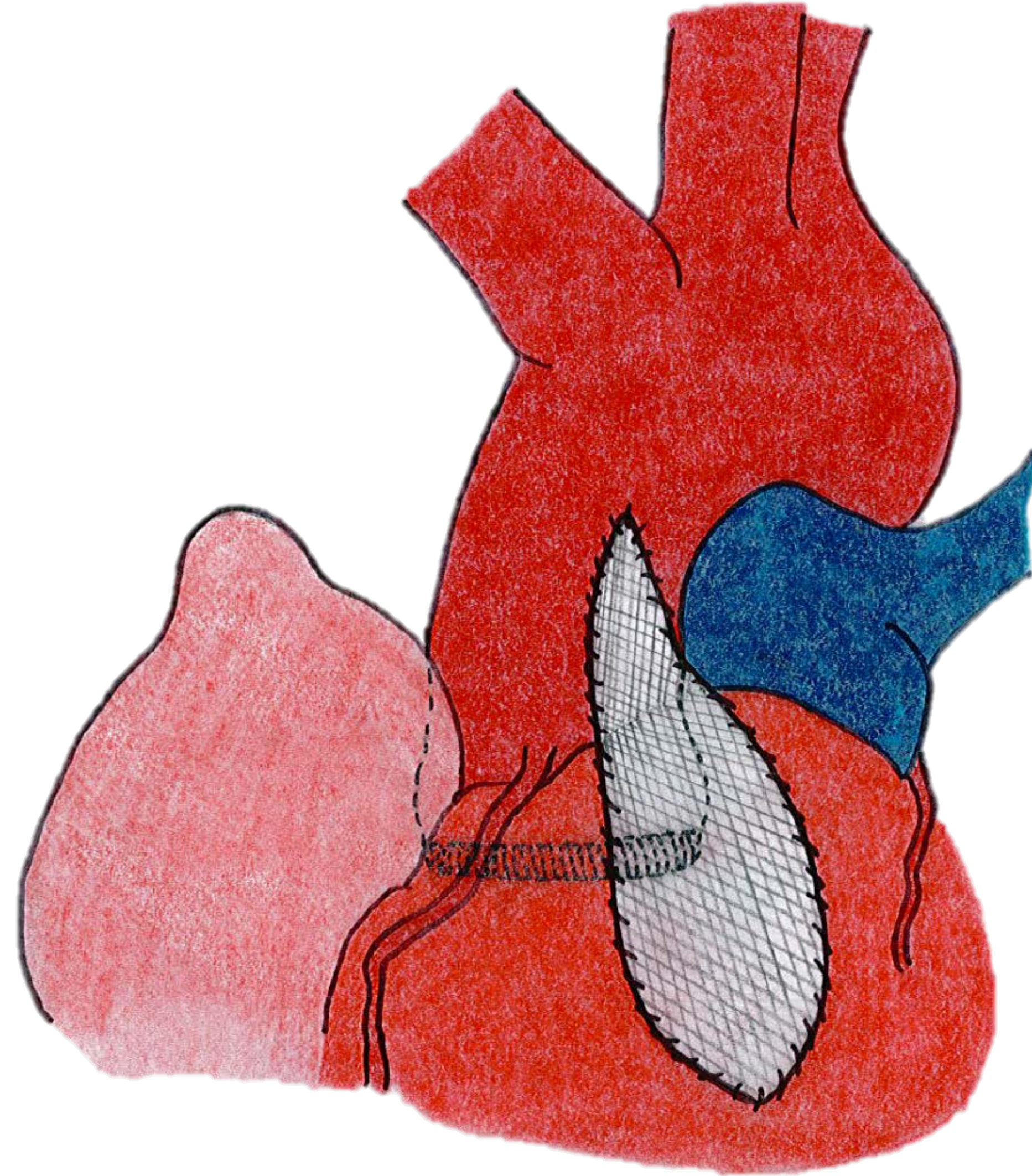
ANTERIOR AND POSTERIOR ENLARGEMENT



THECHNICS FOR KONNO OPERATION



THECHNICS FOR KONNO OPERATION



ADVANTAGES AND DISADVANTAGES

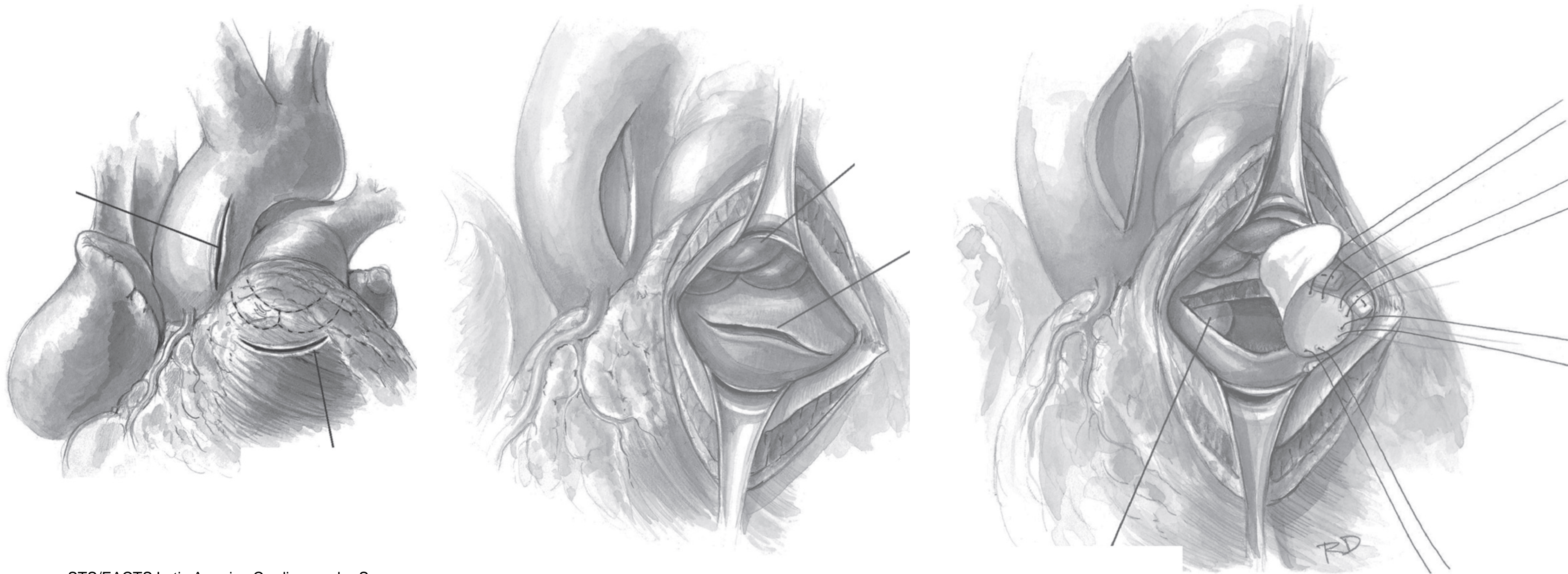
KONNO - RASTAN

- ANTICOAGULATION
- LESS REOPERATIONS
- EASIER NEW OPERATIONS

ROSS - KONNO

- NO ANTICOAGULATION
- GROWTH OF AUTOGRAFT
- FRECUENT REOPERATIONS IN THE HOMOGRAFT
- REOPERATIONS IN THE AUTOGRAFT ARE VERY CHALLENGING

MODIFIED KONNO PROCEDURE



LVOT OBSTRUCTION AFTER CONGENITAL HEARTH REPAIRS

- DOUBLE OUTLET RIGHT VENTRICLE
- COARTATION OF THE AORTA
- TYPE B INTERRUPTED AORTIC ARCH
- MEMBRANOUS SUBAORTIC STENOSIS
- SHONE'S SYNDROME
- POSTERIOR EXTENSION VSD
- ATRIO-VENTRICULAR SEPTAL DEFECTS INCLUDING OSTIUM PRIMUN DEFECTS

Surgical management of complex and tunnel like subaortic stenosis. Eur J CV Surg. 17(2000)637-642
Jonas

SURGICAL PROCEDURES (Children Hospital Boston)

Procedure	#
Modified Konno	15
Konno mechanical valve	3
Ross-Konno	2
Resection of conal septum	12
Resection of fibrous tissue Myectomy	7
Repair of Ventricular patch	5
Mitral procedure (Shone)	2

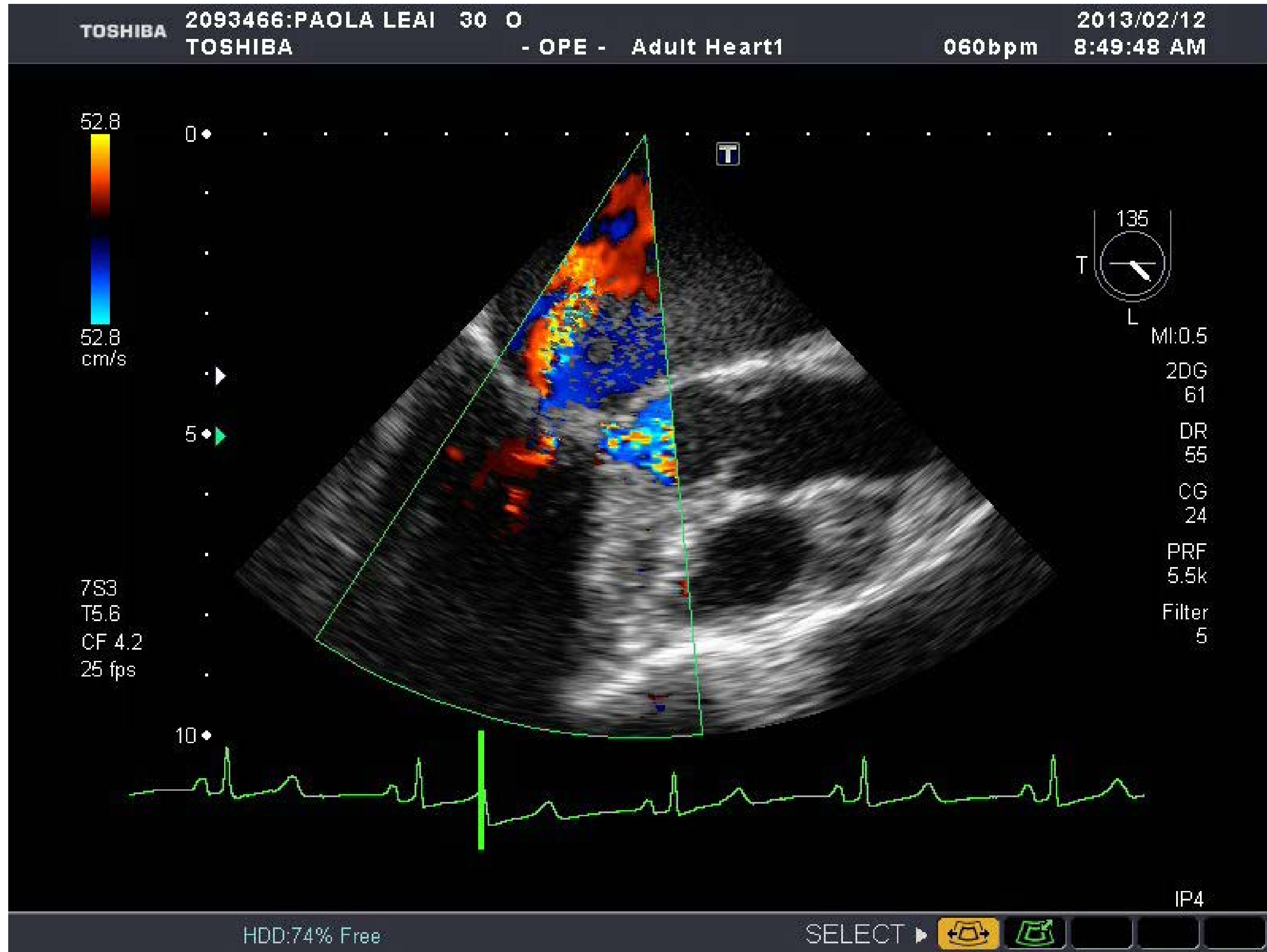
PREOPERATIVE EVALUATION

- Angio TAC or NMR
 - Coronary arteries
 - Ascending aorta and arch.
- Abnormalities of the Outflow tract
- Pulmonary valve
- Mitral valve
- Conduction abnormalities

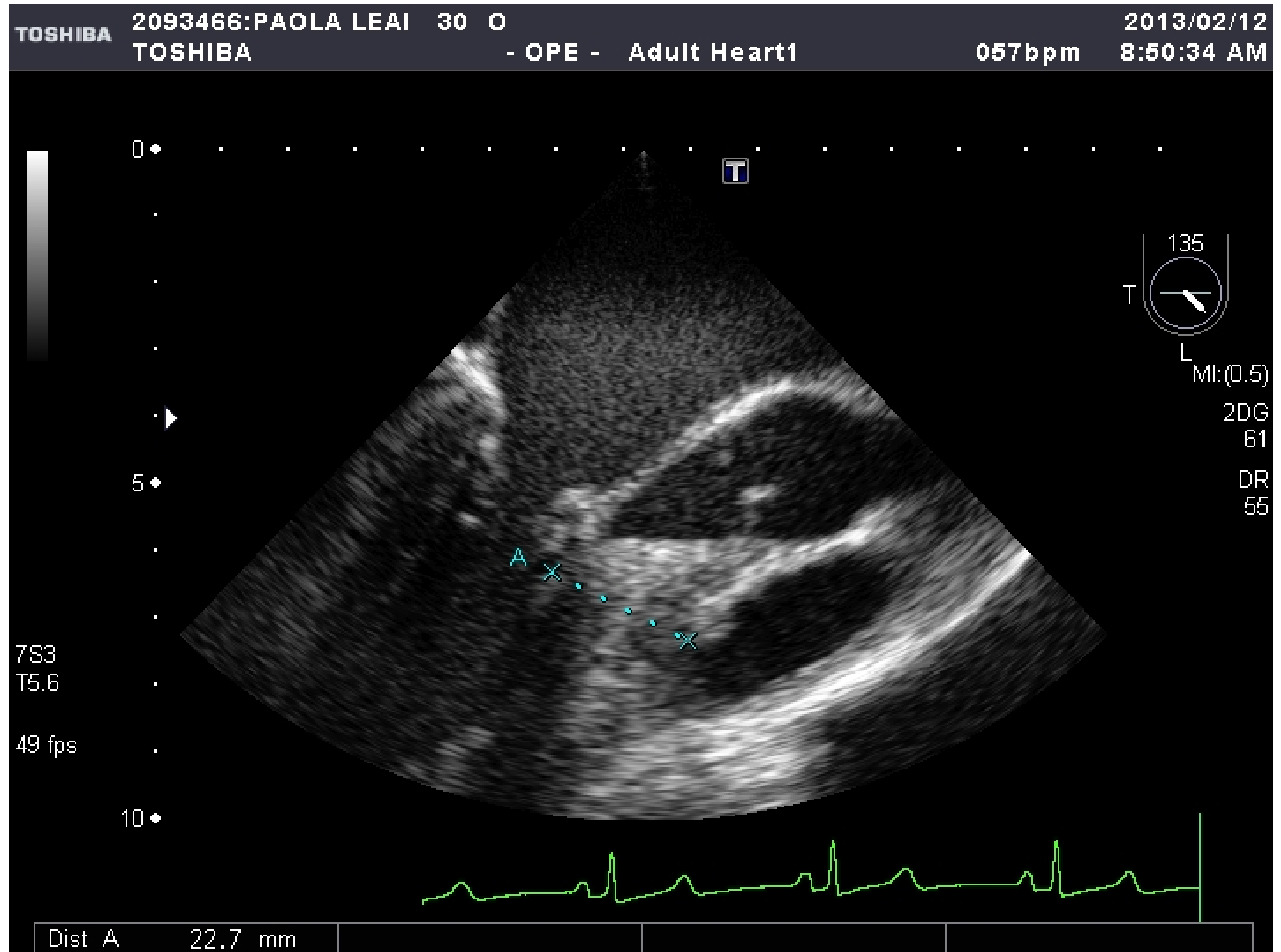
INDICATIONS FOR SURGERY

- New onset of aortic insufficiency
- Left Ventricular Hypertrophy
- Peak Gradient more than 40 (60 in tunnel)
- Earlier for post VSD repair
- OHCM only for symptoms

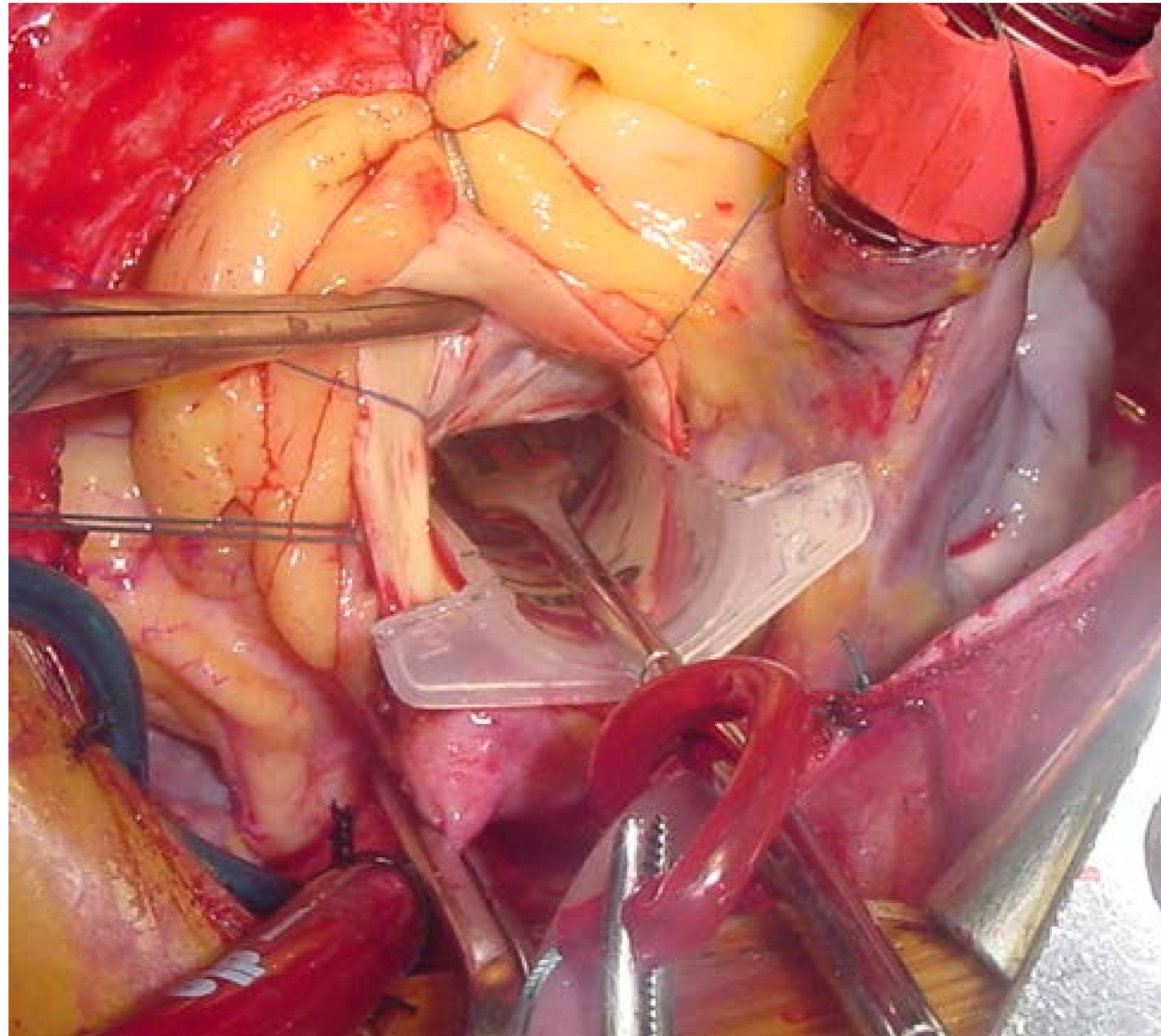
HOCM



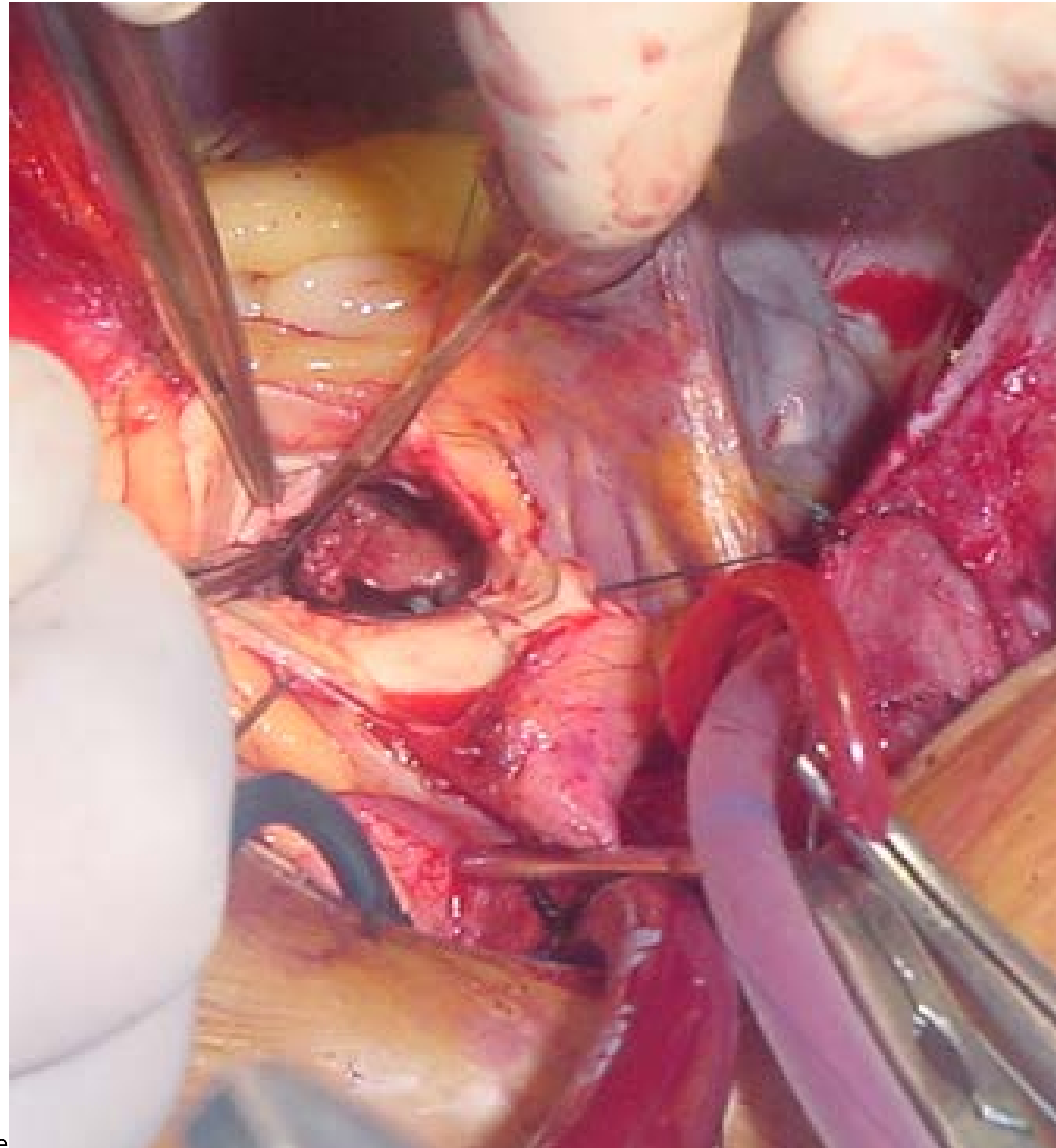
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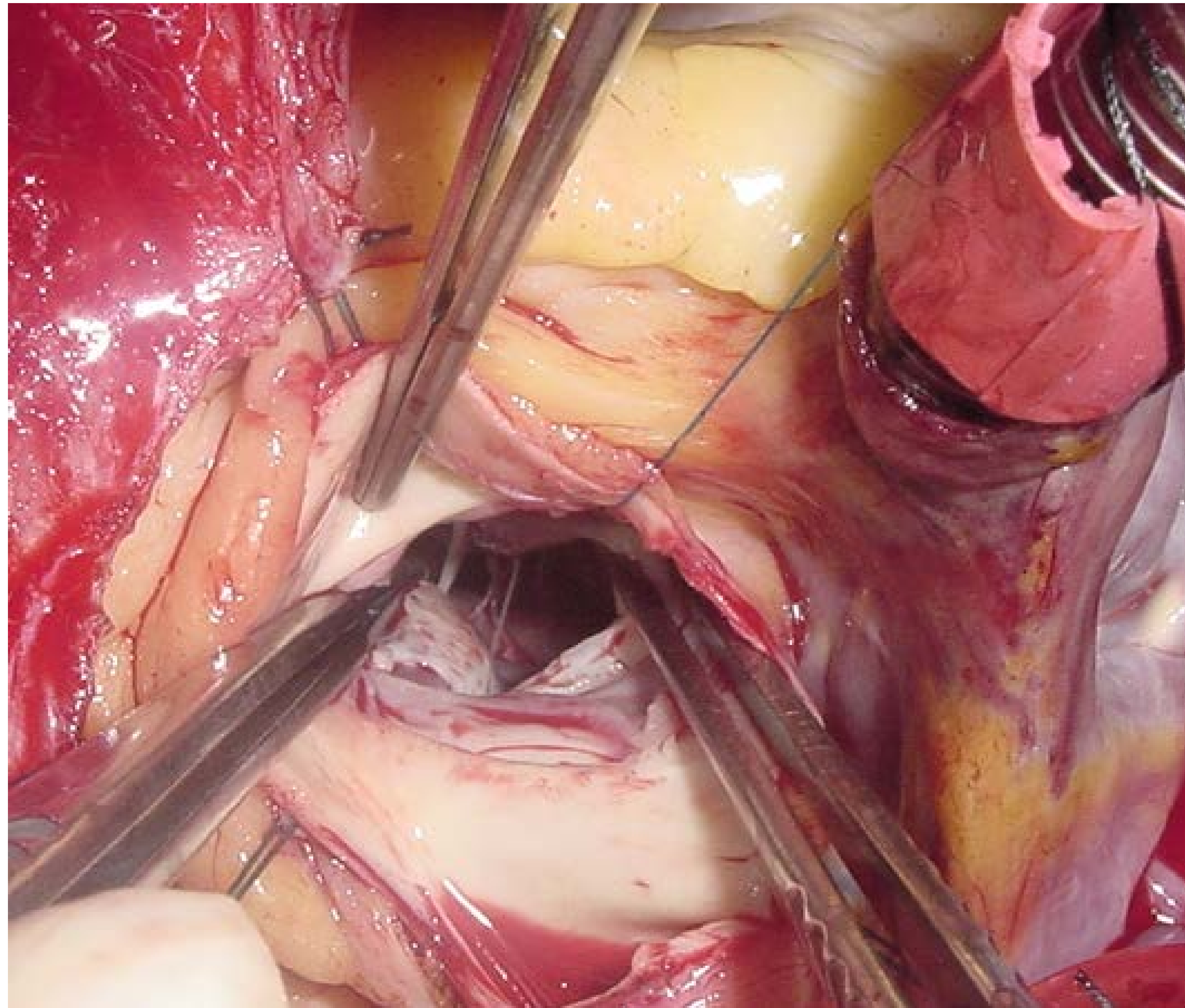
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HOCM



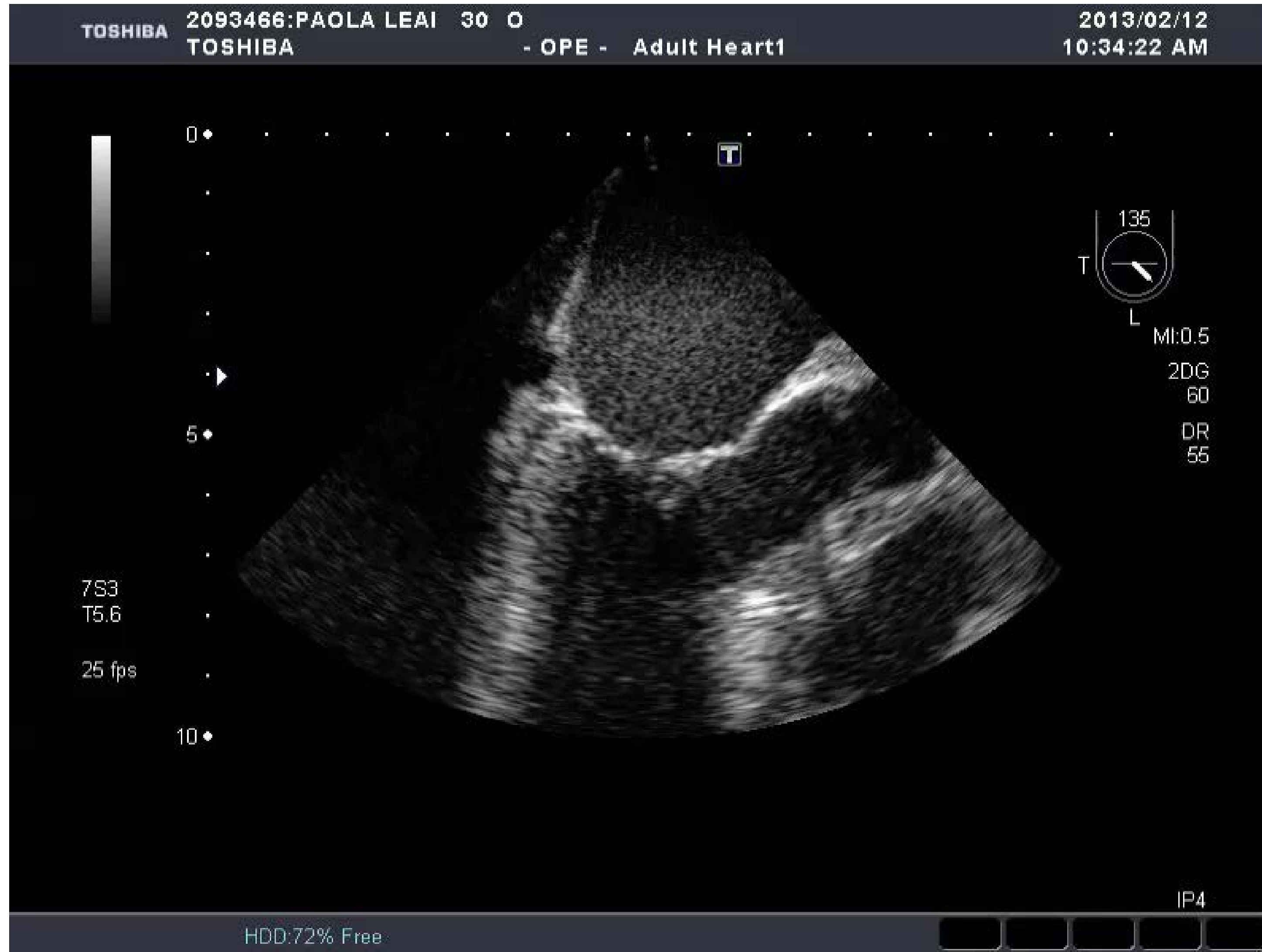
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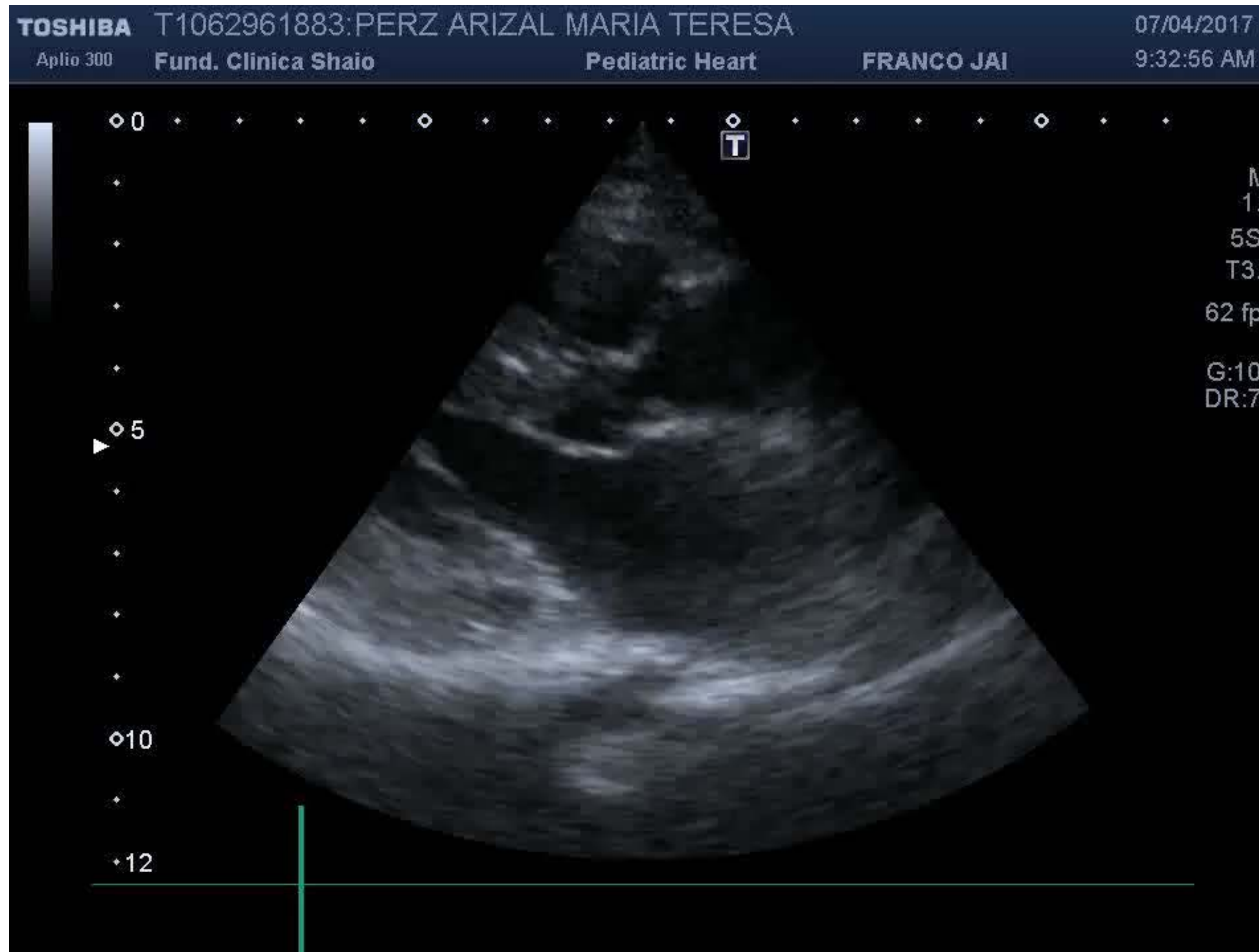
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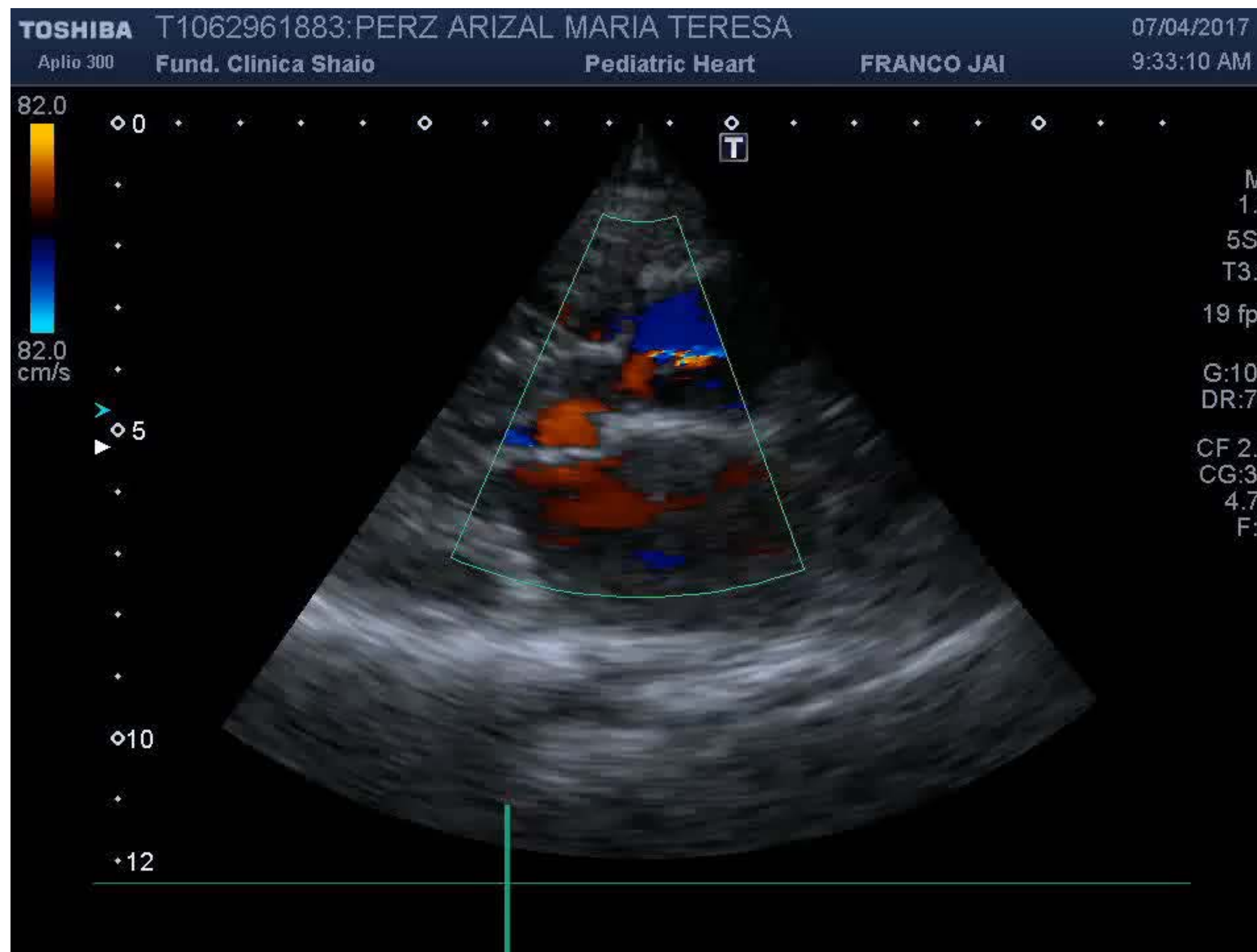
HOCM POST-OP



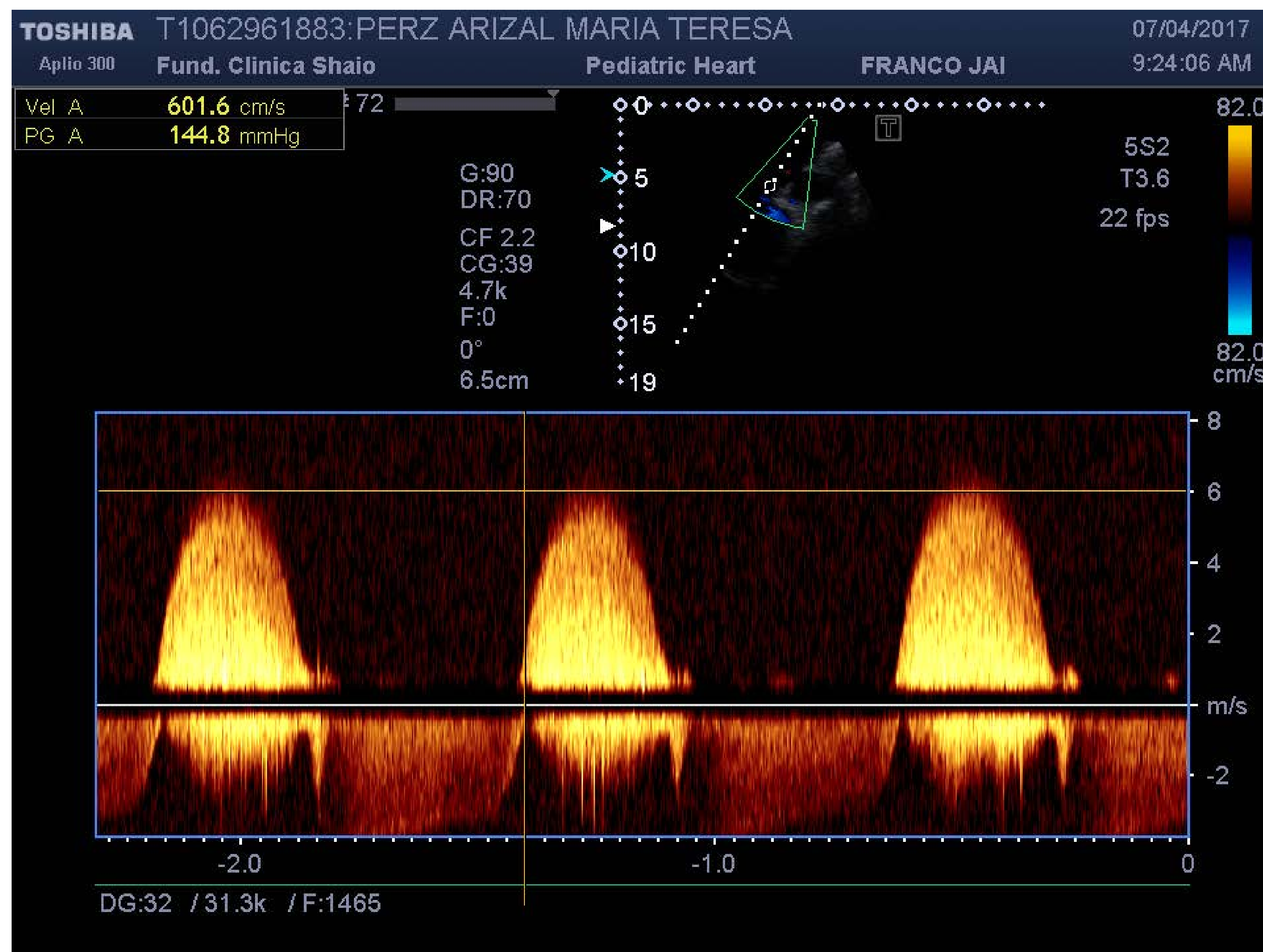
MTP: CIV 2007. KONNO 2017



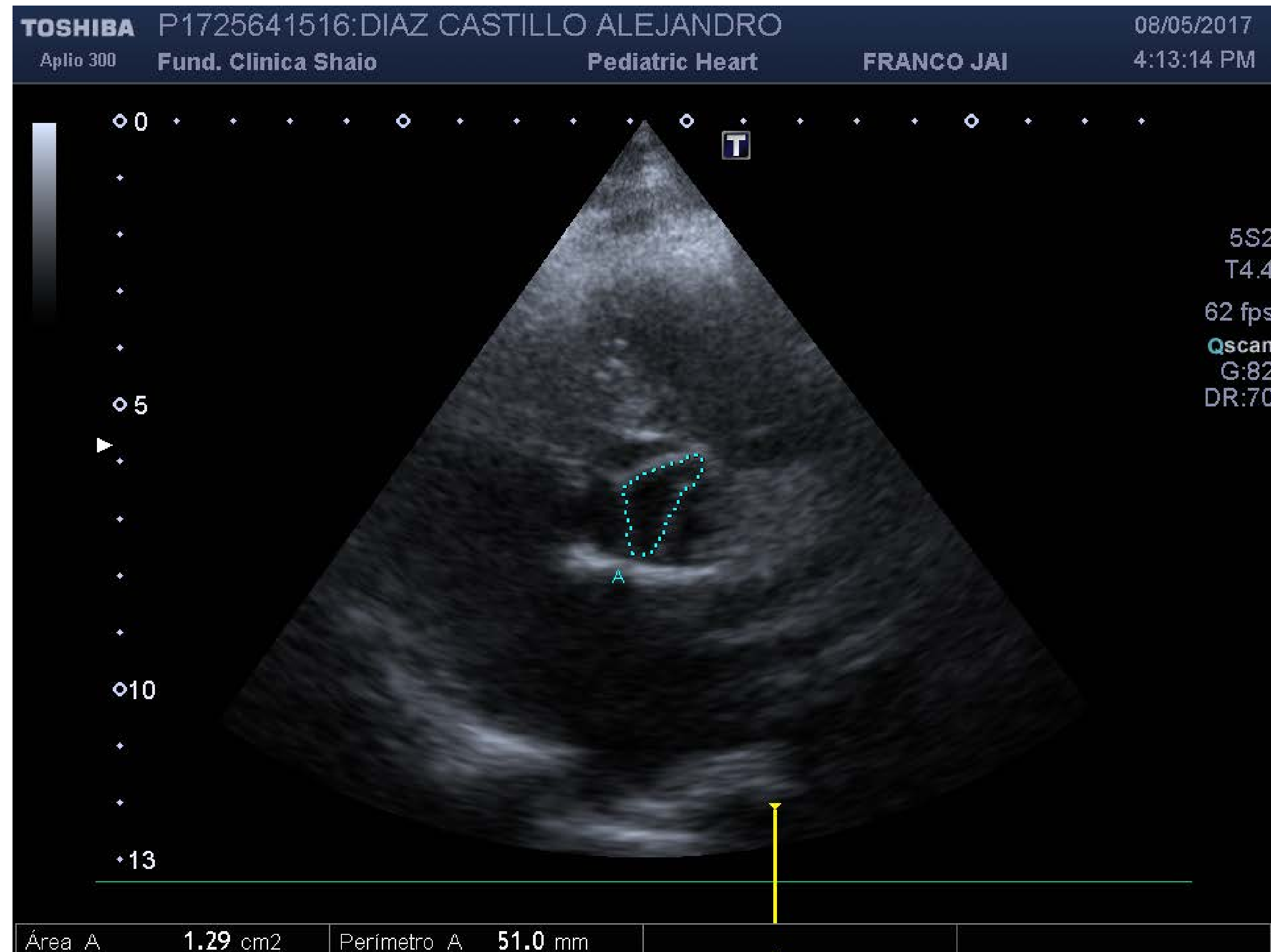
MTP: VSD 2007. KONNO 2017. PG 100



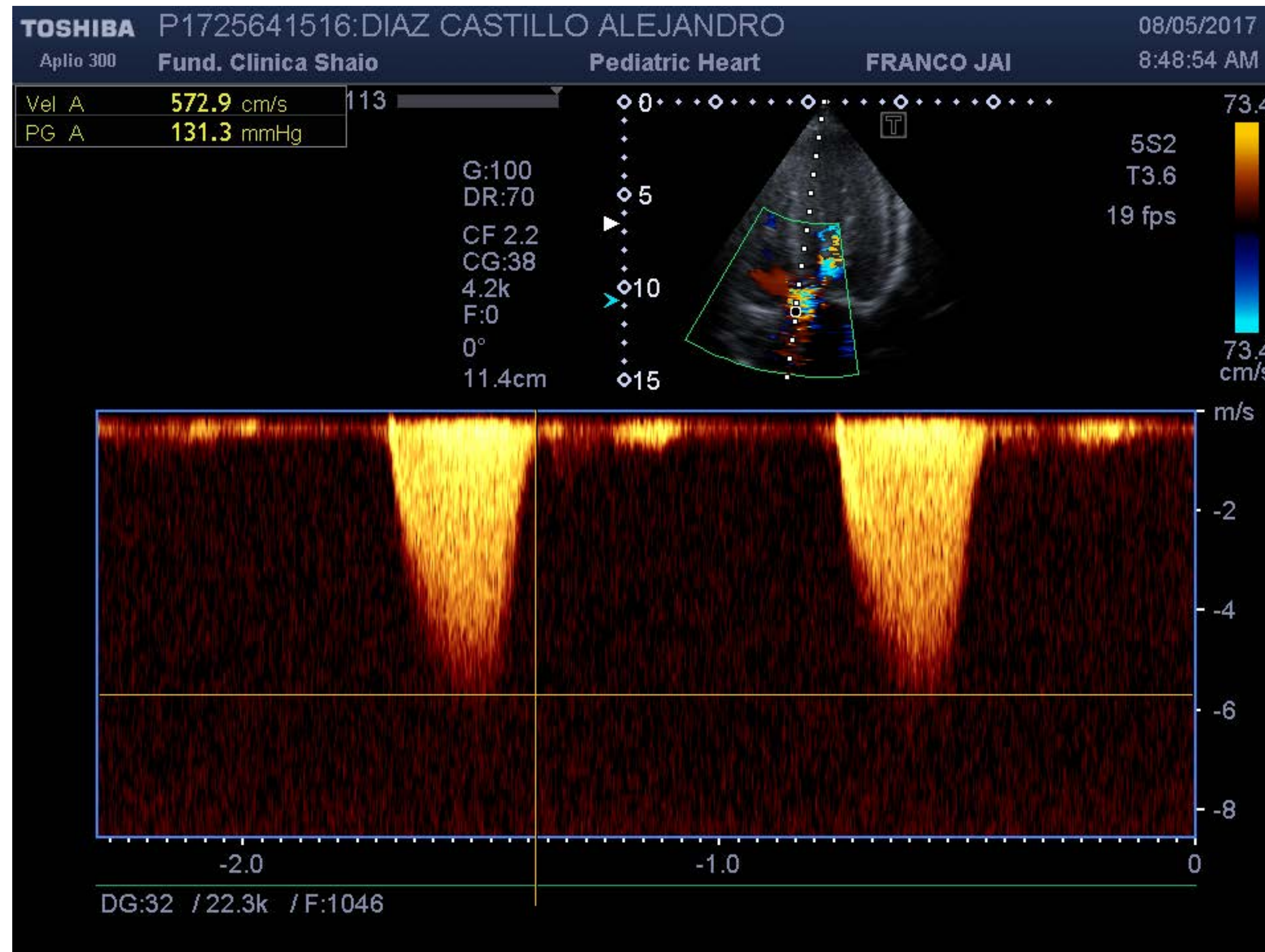
MTP: Velocity 6 mts/sec PG 145 mmHg



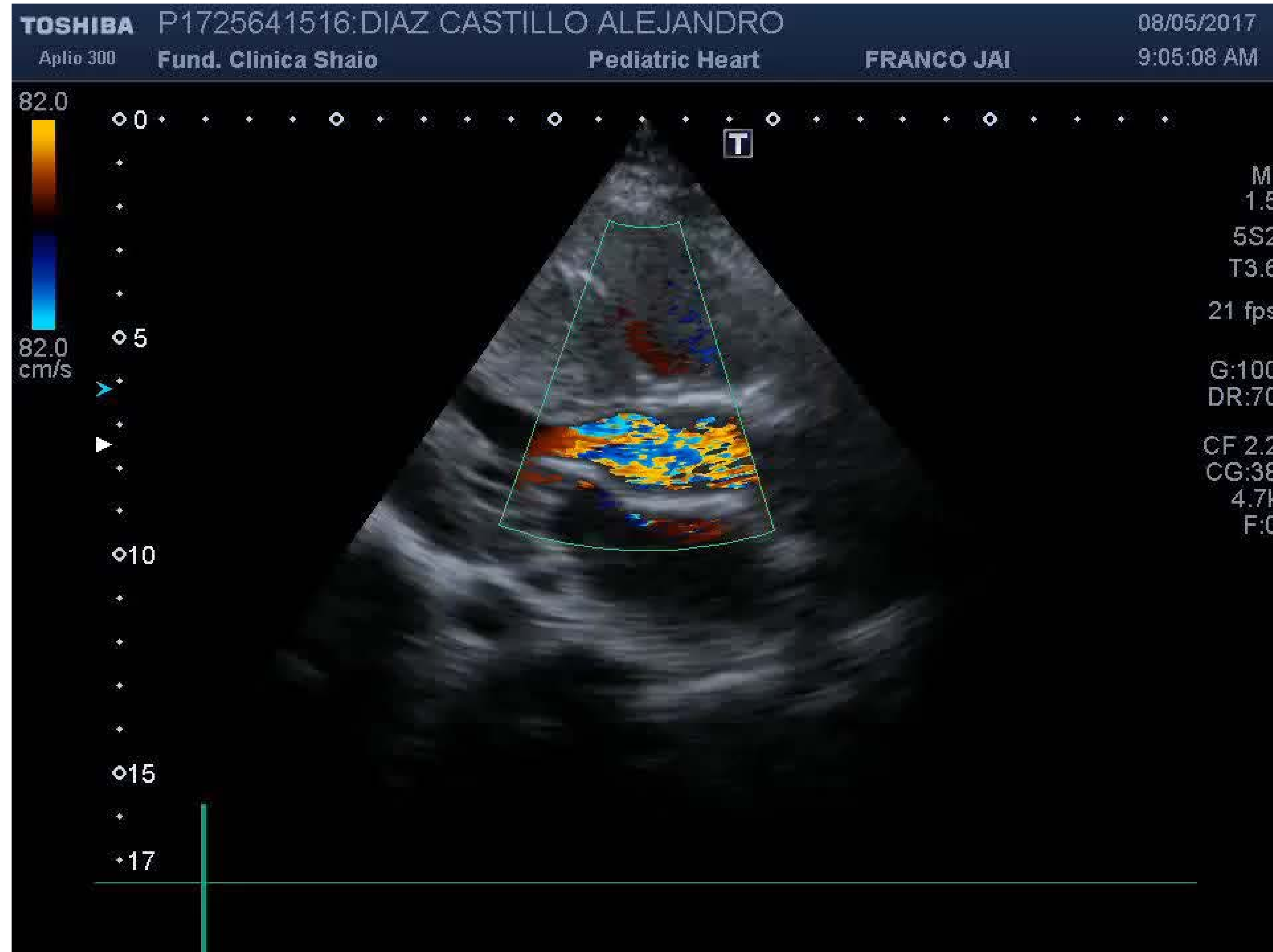
ADC: Bicuspid valve Area 1.29 cm²



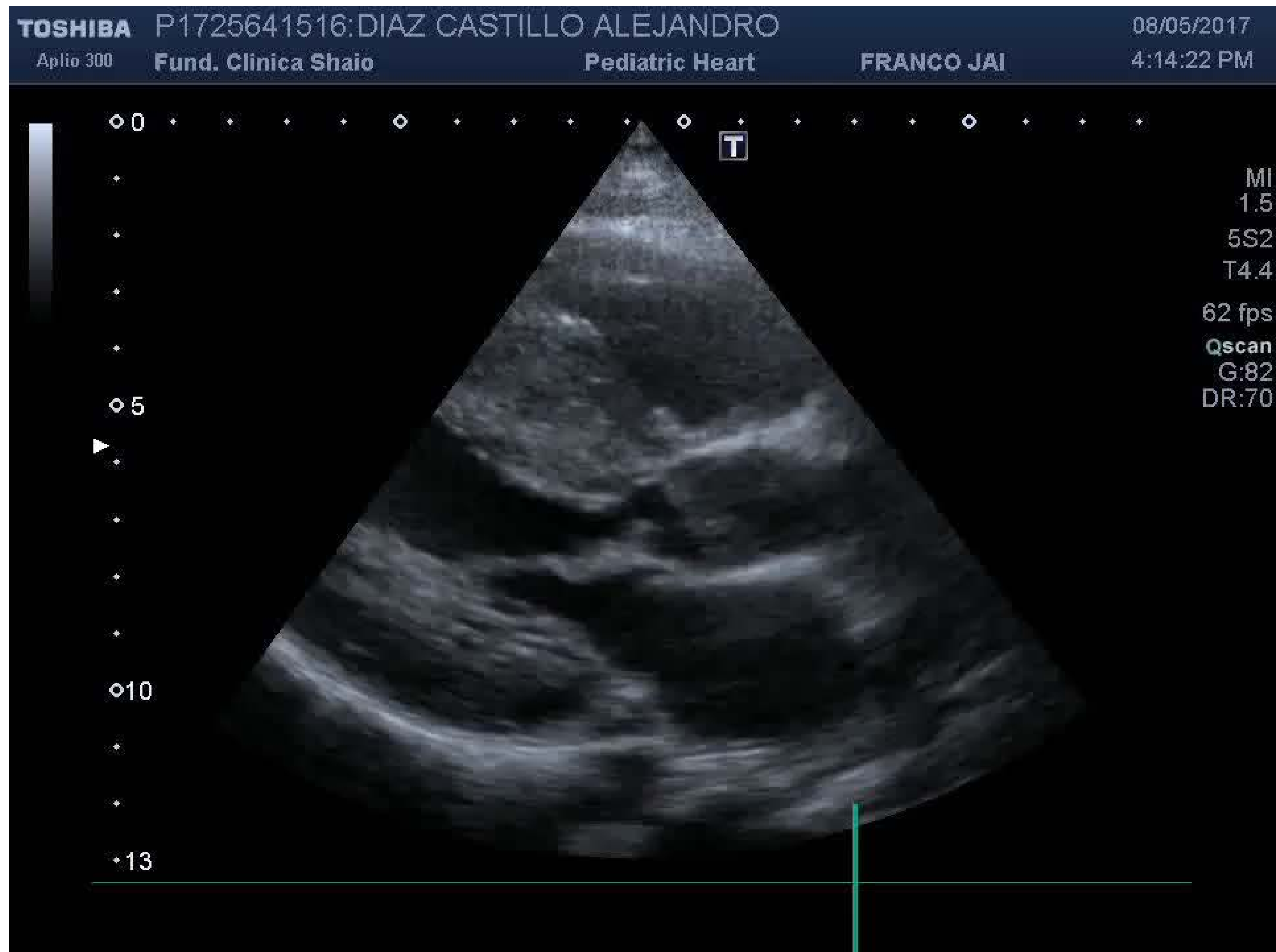
ADC: Velocity 5.72 mts/sec PG 131mmHg



ADC: PG 100 mm Hg. AI G I



ADC: Severe Hipertrophy of LV



SUMMARY

- 1) Modified Konno procedure when possible is the procedure of choice for tunnel type of obstruction.
- 2) There is a tendency to prefer classical Konno with mechanical valve instead of other variations.
- 3) Ross-Konno is indicated in small children when you need growth of the valve.
- 4) After correction of Congenital Heart anomalies patients should have observation for this entity.

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Thank You



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