THE MIGHTY MEDIC GLOBAL SCENTIFIC SOCIETY

12th LIPID CLUB AND THERAPEUTIC APHERESIS 2017 MAY 3-4, 2017 ROME

CLINICAL CASES

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ROLE OF IMAGING IN DYSLIPIDEMIA

ASSESSING THE PRESENCE OR THE ABSENCE OF CARDIOVASCULAR DESEASE

TO MONITOR PROGRESSION OR REGRESSION

CLINICAL RESEARCH

CARDIAC CATHETERIZATION	CT-A	MR-A	ECHO	PET
GOLD STANDARD	FOLLOW UP	VOLUMES MASS KINETIC MIOCARDIAL TISSUE VITALITY	VALVES	CLINICAL RESEARCH

CLINICAL CASES

PATIENT 1

- Age 60 years
- Diagnosis: HoFH
- LDL–R activity ≥20% receptor negative
- First Visit: July 1986

CTOT	CHDL	CLDL
503	36	441

- First LA Apheresis 1987
- First Cardiac Cath. 1990

PATIENT 2

- Age 33 years
- Diagnosis: HoFH
- LDL–R activity ≥ 9% receptor negative
- First Visit: Mar 1989

CTOT	HDL	CLDL
752	28	705

- First LA Apheresis 1990
- First Cardiac Cath. 1990

CARDIOVASCULAR SET-UP AT INITIATION OF LA

PATIENT 1

(LA INITIATION AT 32 YEARS)

MT	DISTAL STENOSIS 50%
DA	OCCLUDED AT THE ORIGIN
CX	LESION FREE
RC	OCCLUDED AT THE ORIGIN

PATIENT 2

(LA INITIATION AT 6 YEARS)

MT	LESION FREE
DA	LESION FREE
CX	LESION FREE
RC	LESION FREE

CARDIOVASCULAR STATE AFTER 25 YEARS OF LA

MT	
DA	?
CX	
RC	

MT	
DA	?
CX	
RC	

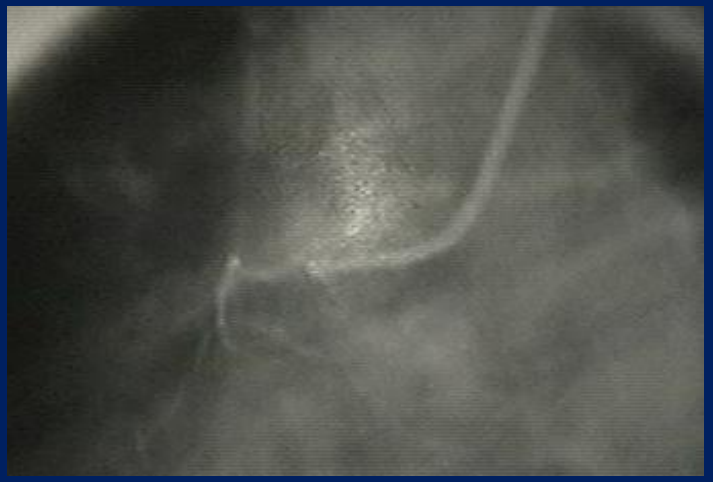
PATIENT 1

RIGHT CORONARY ARTERY

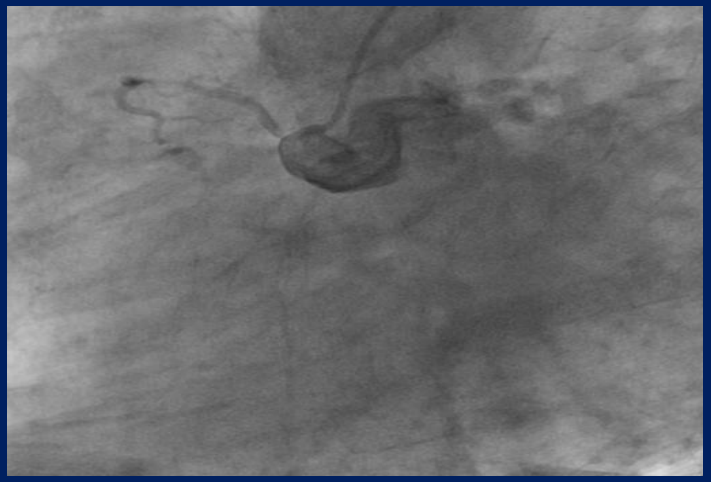
OCCLUDED AT THE ORIGIN

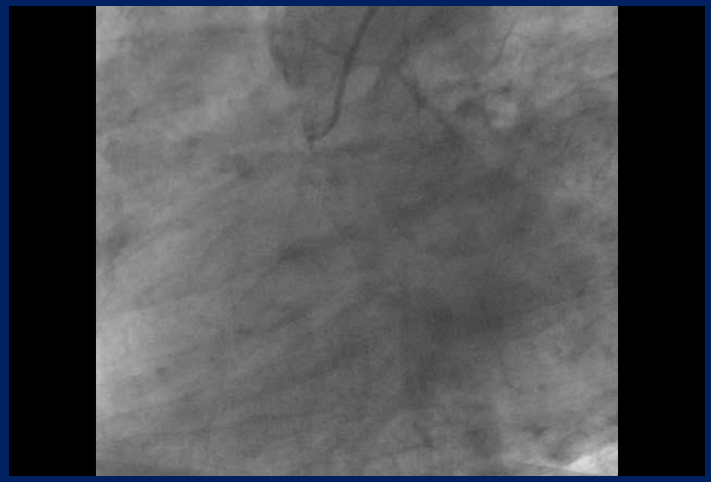
1994

2000



2009





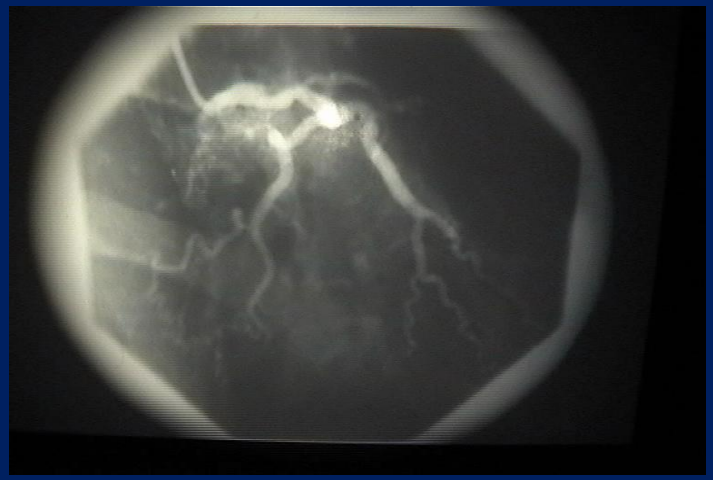
PATIENT 1

LEFT CORONARY ARTERY

CX: LESION FREE

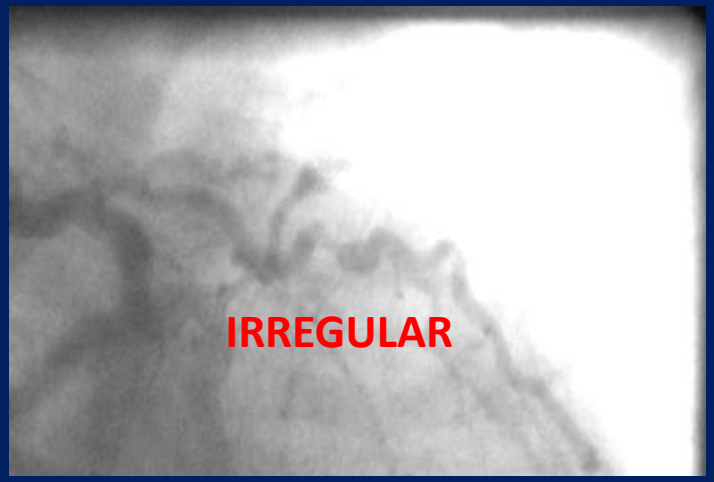
DA: MAIN SEGMENT OCCLUDED

1994



1996

2000



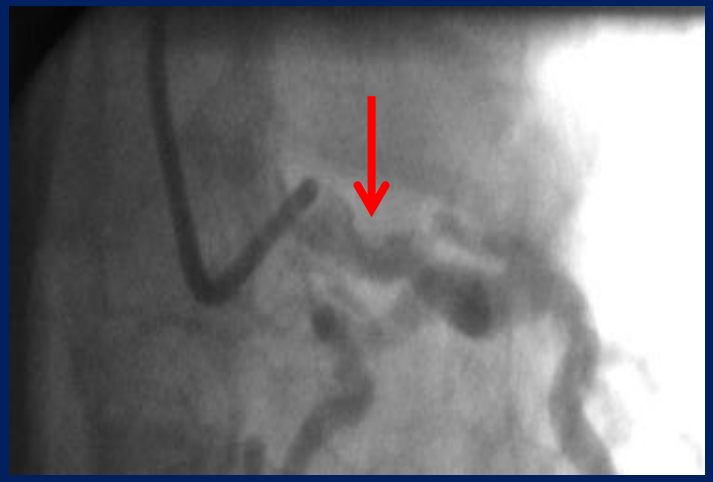
2009

PATIENT 1

MAIN TRUNK

STENOSIS 50% 1994

STENOSIS 40% 2000



STENOSIS 30% 2009

REGRESSION

AORTIC VALVE

MITRAL VALVE

PATIENT 1

VALVE SET-UP

AORTIC VALVE 1990

- **ABNORMAL AORTIC VALVE**
- **ALTERED MORPHOLOGY**
- **ATHEROSCLEROTIC APPOSITIONS**

MITRAL VALVE → **CONTINENT**

Overall Atherogenic Index (OAI)

Number of points

Score for coronary arteries

- 1 point for the presence of stenosis
- 1 point for the presence of parietal irregularities
- 1 point for the presence of diffused parietal irregularities
- 1/2 point for the presence of district or light parietal irregularities
- 1 point for every decile percentage of stenosis

Score for aortic valve

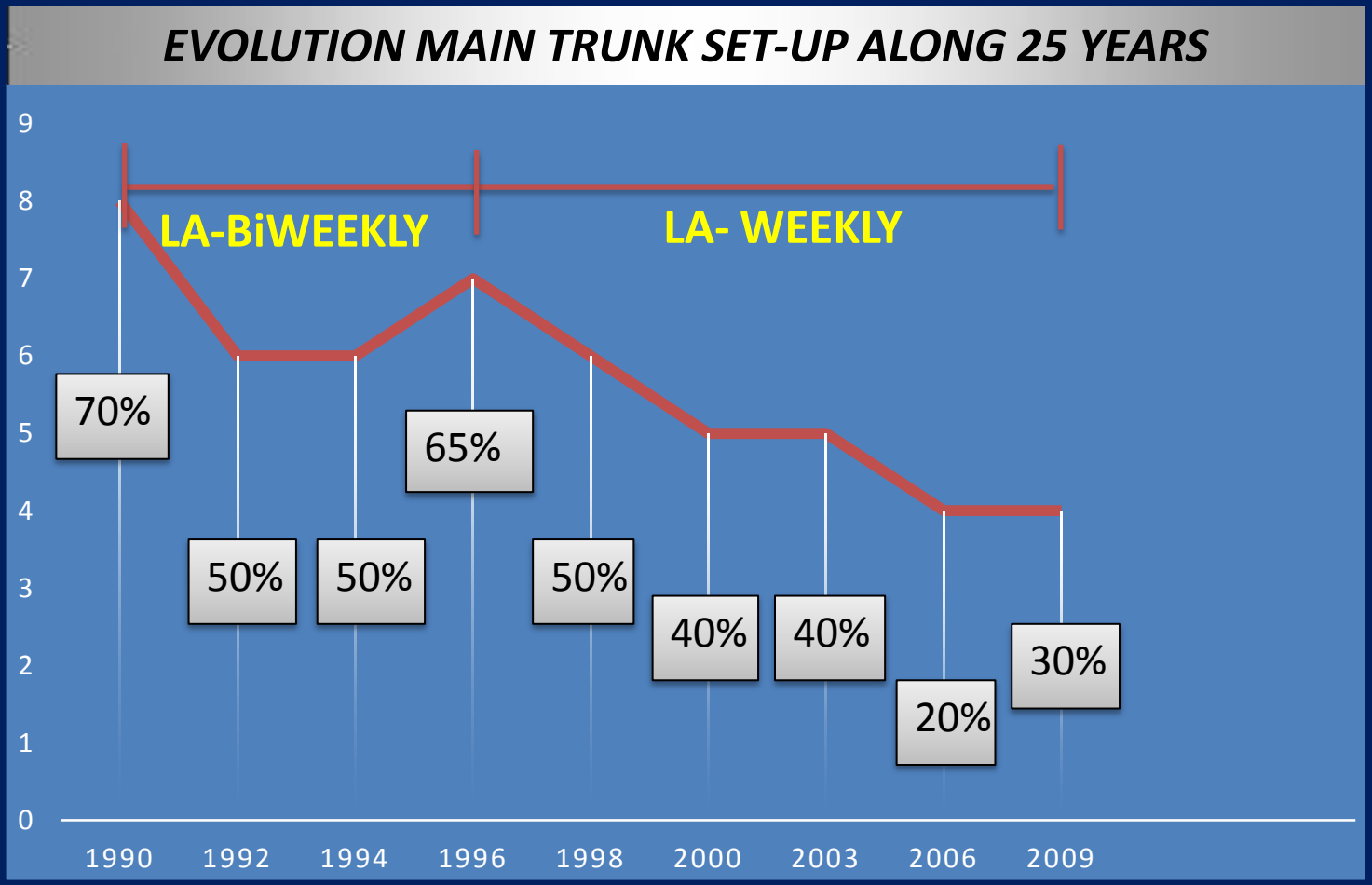
- 1 point for the presence of aortic dilation
- 1 point for the presence of parietal irregularities
- 1 point for the presence of valvular malformation
- 1 point for the presence of valvular insufficiency

Transfusion 2009 Jul;49(7):1461-70. doi: 10.1111/j.1537-2995.2009.02135.x. Epub 2009 Mar 23

Adapted from agaston AS et al.: Jam Coll cardiol, 1990

PATIENT 1

OAI - OUTCOME



Therapeutic interval intensification effects

CARDIOVASCULAR SET-UP AT INITIATION OF LA

PATIENT 1

(LA INITIATION AT 32 YEARS)

MT	DISTAL STENOSIS 50%
DA	OCCLUDED AT THE ORIGIN
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RC	OCCLUDED AT THE ORIGIN

REGRESSION

PATIENT 2

(LA INITIATION AT 6 YEARS)

MT	LESION FREE
DA	LESION FREE
CX	LESION FREE
RC	LESION FREE

CARDIOVASCULAR STATE AFTER 25 YEARS OF LA

STABLE

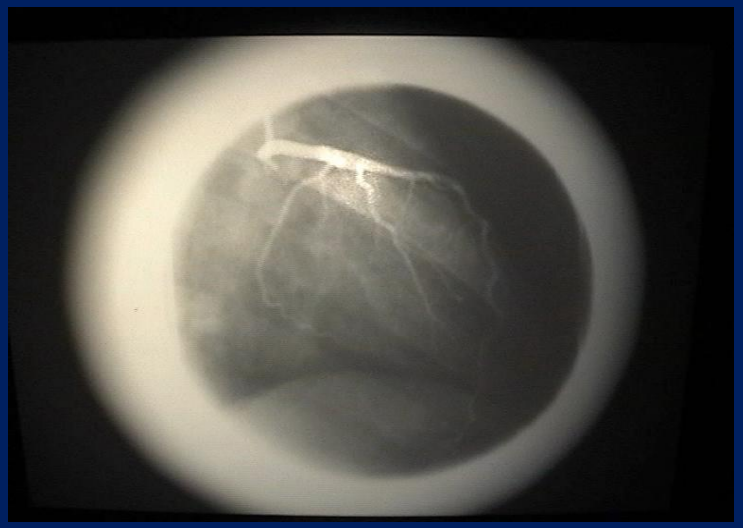
MT	DISTAL STENOSIS 30%
DA	OCCLUDED AT THE ORIGIN
CX	LESION FREE
RC	OCCLUDED AT THE ORIGIN

MT	
DA	?
CX	
RC	

PATIENT 2

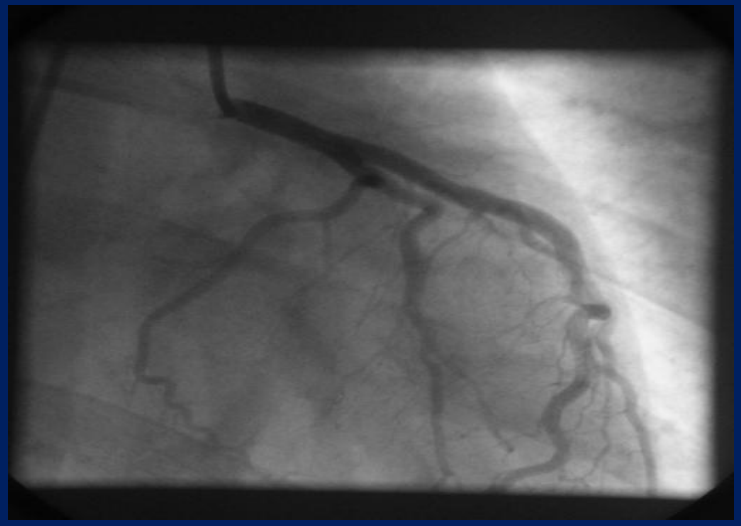
LEFT CORONARY ARTERY

1992



2000

2014



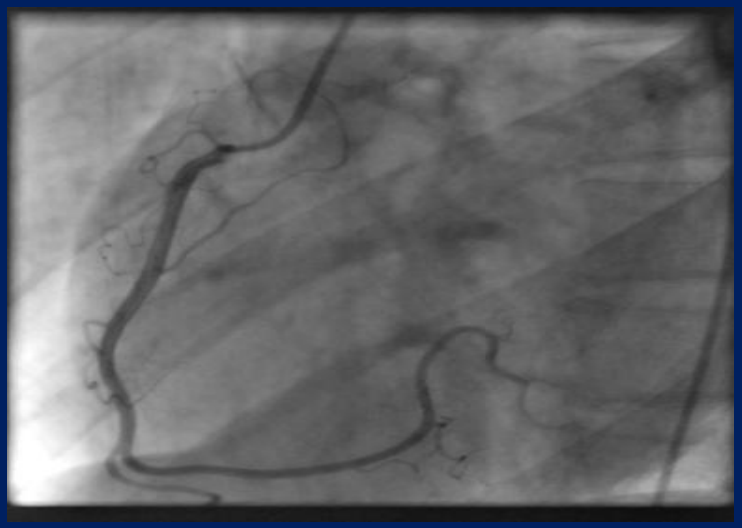
LESION FREEE

PATIENT 2

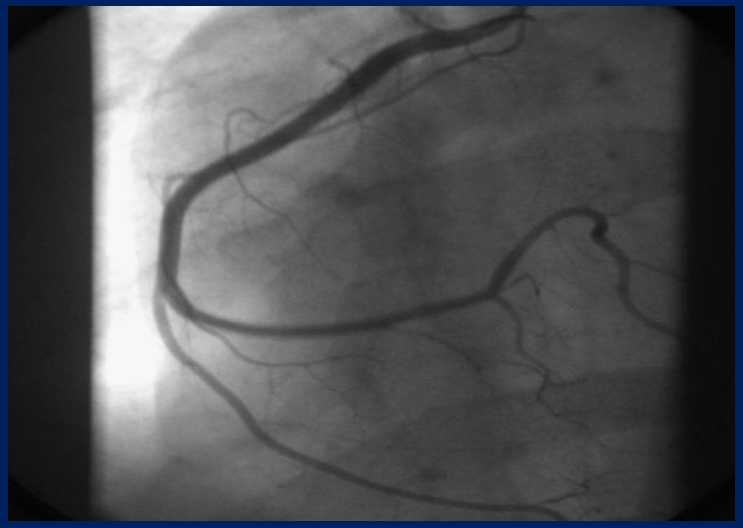
RIGHT CORONARY ARTERY

1992

2000



2014

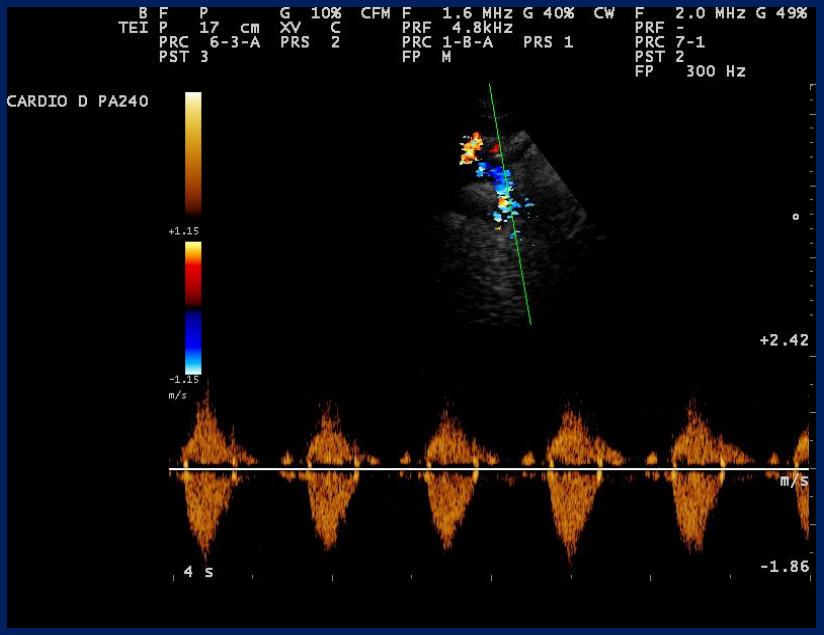


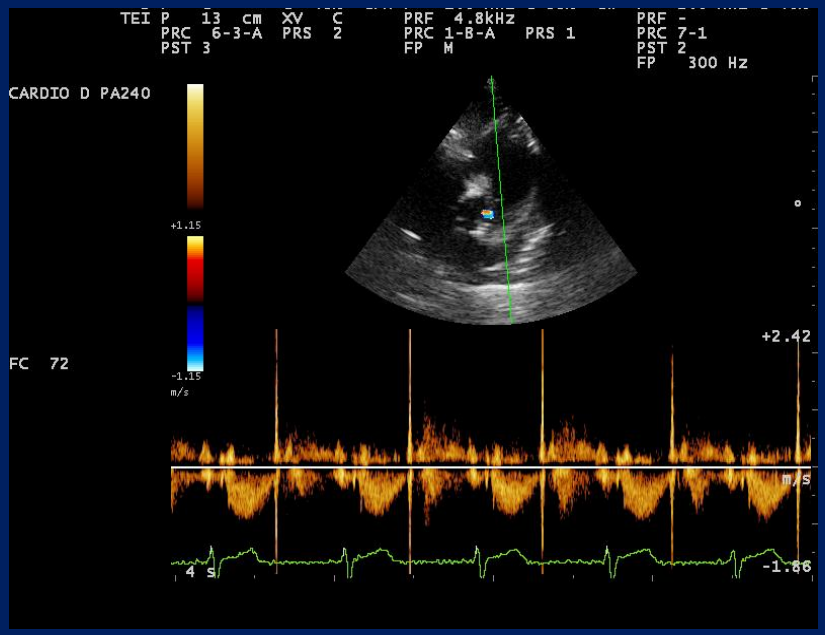
LESION FREEE

PATIENT 2

ECOCARDIOGRAPHY

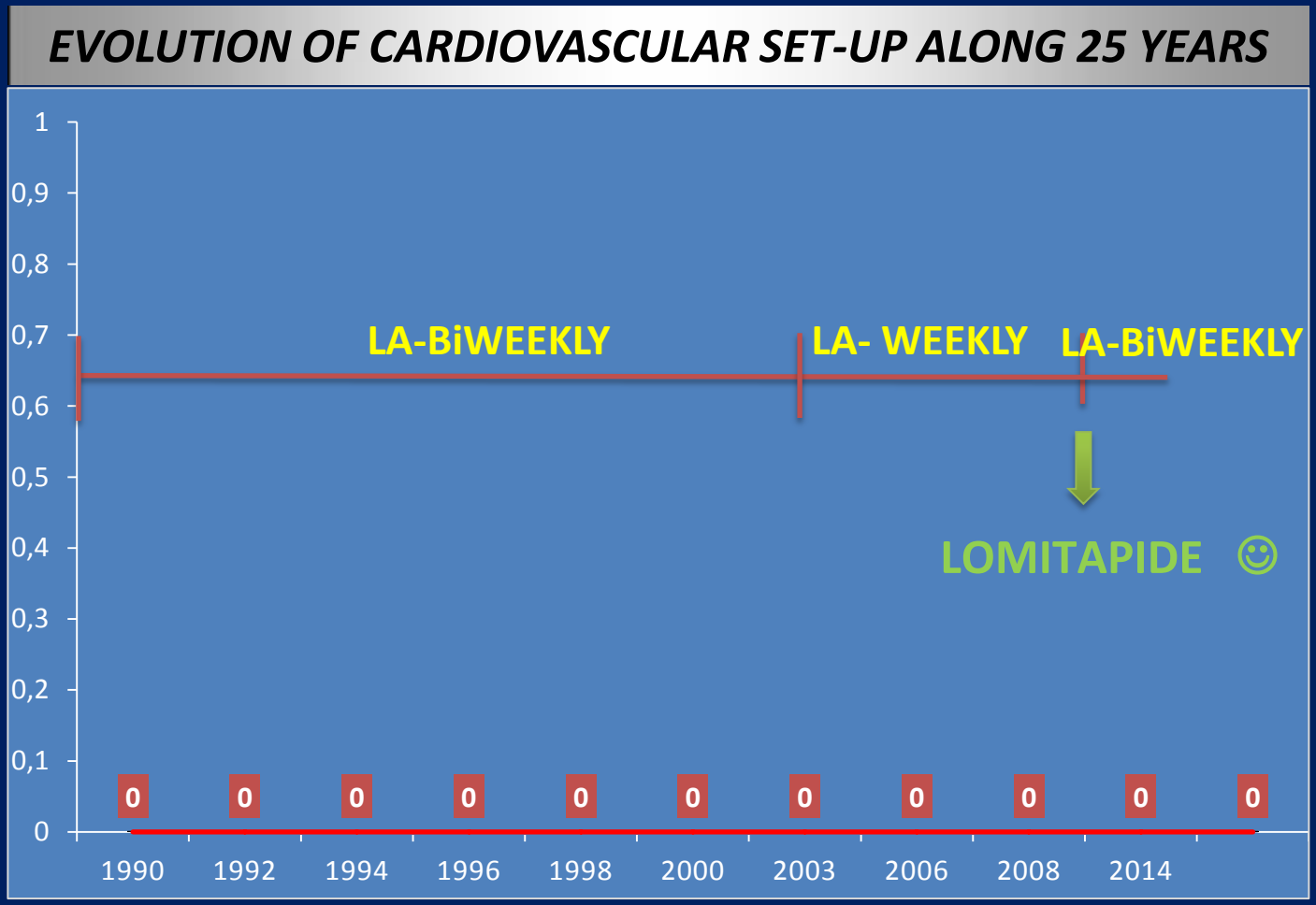
VERY SLIGHT INSUFFICIENCY





PATIENT 2

OAI - OUTCOME



CARDIOVASCULAR SET-UP AT INITIATION OF LA

PATIENT 1

(LA INITIATION 32 YEARS)

MT	DISTAL STENOSIS 50%
DA	OCCLUDED AT THE ORIGIN
CX	LESION FREE
RC	OCCLUDED AT THE ORIGIN

REGRESSION

STABLE

PATIENT 2

(LA INITIATION 6 YEARS)

MT	LESION FREE
DA	LESION FREE
CX	LESION FREE
RC	LESION FREE

NO PROGRESSION

CARDIOVASCULAR STATE AFTER 25 YEARS OF LA

MT	DISTAL STENOSIS 50%
DA	OCCLUDED AT THE ORIGIN
CX	LESION FREE
RC	OCCLUDED AT THE ORIGIN

MT	LESION FREE
DA	LESION FREE
CX	LESION FREE
RC	LESION FREE

PATIENT 1

CURRENT STATE

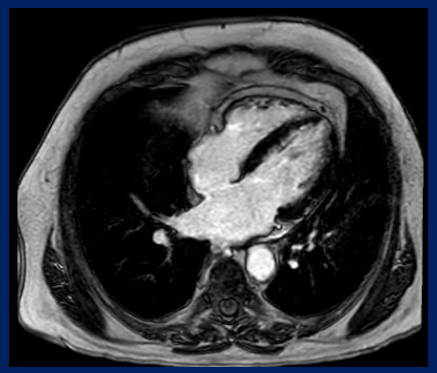
RM

2016

SF: REGULAR

LV: SIZE REGULAR

SEGMENTAL KINETIC MAINTAINED



ECHO

2016

AORTIC VALVE	MITRAL VALVE	TRICUSPID VALVE
SLIGHT	MODERATE	SLIGHT/MEDIUM

SF: Systolic Function; LV: Left Ventricle

SUMMARY

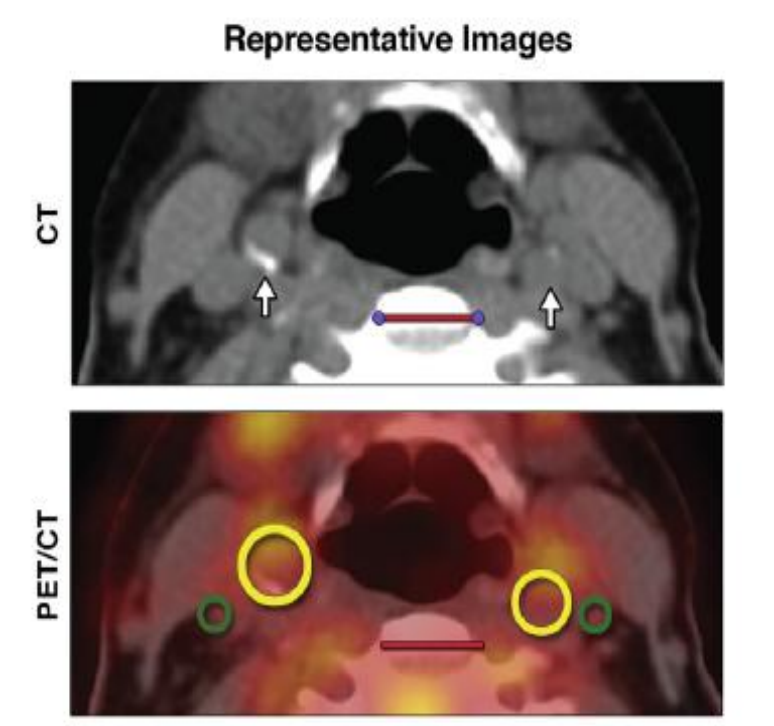
PATIENT 1

IT HAS BEEN DEMONSTRATED BY CORONARY ANGIOGRAPHY IN A PATIENT ALREADY COMPROMISED AT CARDIOVASCULAR LEVEL, REFERRED TO OUR CENTRE 30 YEARS AGO (FOR COMPARING ANGIOGRAMS: 25), THAT ATHS LESIONS DID NOT PROGRESS AND REGRESSED AT MAIN TRUNK LEVEL, SUBSTANTIALLY MAINTAINING STABLE CLINICAL AND CARDIOVASCULAR PROFILE

PATIENT 2

IN A YOUNGER HoFH PATIENT SUBMITTED TO LA SINCE HE WAS 6, REGULARLY AND CONTINUOUSLY TREATED FOR 25 YEARS, THE EXTRACORPOREAL TREATMENT, AND MORE RECENTLY, THE COMBINATION THERAPY WITH LA AND LOMITAPIDE, PROVIDED A LESION-FREE CARDIOVASCULAR SET-UP AND STABLE CLINICAL CONDITION

THE FUTURE



The study considered threshold values of ^{18}F-FDG for arterial wall inflammation in healthy subjects, and patients with CV risk factors and esthablished CVD

Objectives : evaluate inflammation of the arterial wall before and after treatment of subjects submitted to LA

JACC Cardiovasc Imaging. 2016 Oct;9(10):1198-1207. doi: 10.1016/j.jcmg.2016.04.007. Epub 2016 Sep 14

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THANKS FOR THE ATTENTION!!!