

IMATGE CARDÍACA EN EL MINOCA: la clau del diagnòstic



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CONFLICTES D'INTERÈS: CAP



MINOCA : Introducció

- MINOCA representa 4-15 % dels síndromes coronaris aguts (Glasser J et al. JAMA 2002)
- Es més prevalent en dones, població més jove, sense tants FRCV tradicionals.
- La importància de confirmar el seu diagnòstic recau en el seu tractament i pronòstic. Hem après que no és tan benigne com ens pensàvem. Andersson HB et al . Eur Heart J. 2018
- Les tècniques d'imatge no invasives tenen un rol primordial per poder aclarir el diagnòstic de MINOCA.

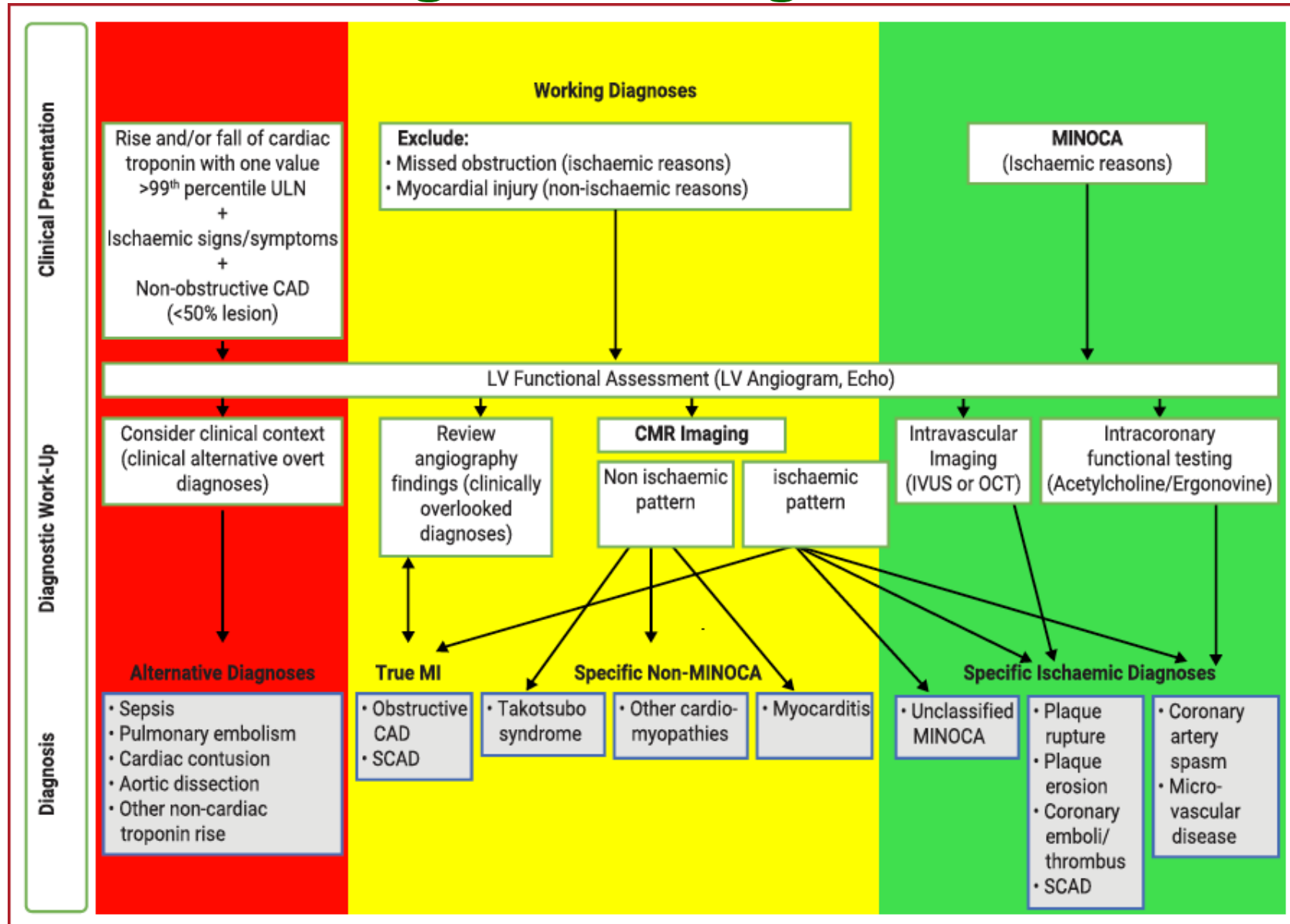


2020 ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation

The Task Force for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation of the European Society of Cardiology (ESC)

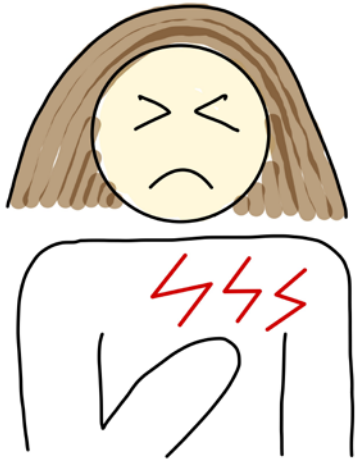
Authors/Task Force Members: Jean-Philippe Collet * (Chairperson) (France), Holger Thiele * (Chairperson) (Germany), Emanuele Barbato (Italy), Olivier Barthélémy (France), Johann Bauersachs (Germany), Deepak L. Bhatt (United States of America), Paul Dendale (Belgium), Maria Dorobantu (Romania), Thor Edvardsen (Norway), Thierry Folliguet (France), Chris P. Gale (United Kingdom), Martine Gilard (France), Alexander Jobs (Germany), Peter Jüni (Canada), Ekaterini Lambrinou (Cyprus), Basil S. Lewis (Israel), Julinda Mehilli (Germany), Emanuele Meliga (Italy), Béla Merkely (Hungary), Christian Mueller (Switzerland), Marco Roffi (Switzerland), Frans H. Rutten (Netherlands), Dirk Sibbing (Germany), George C.M. Siontis (Switzerland)

MINOCA: Algoritme diagnòstic : semàfor

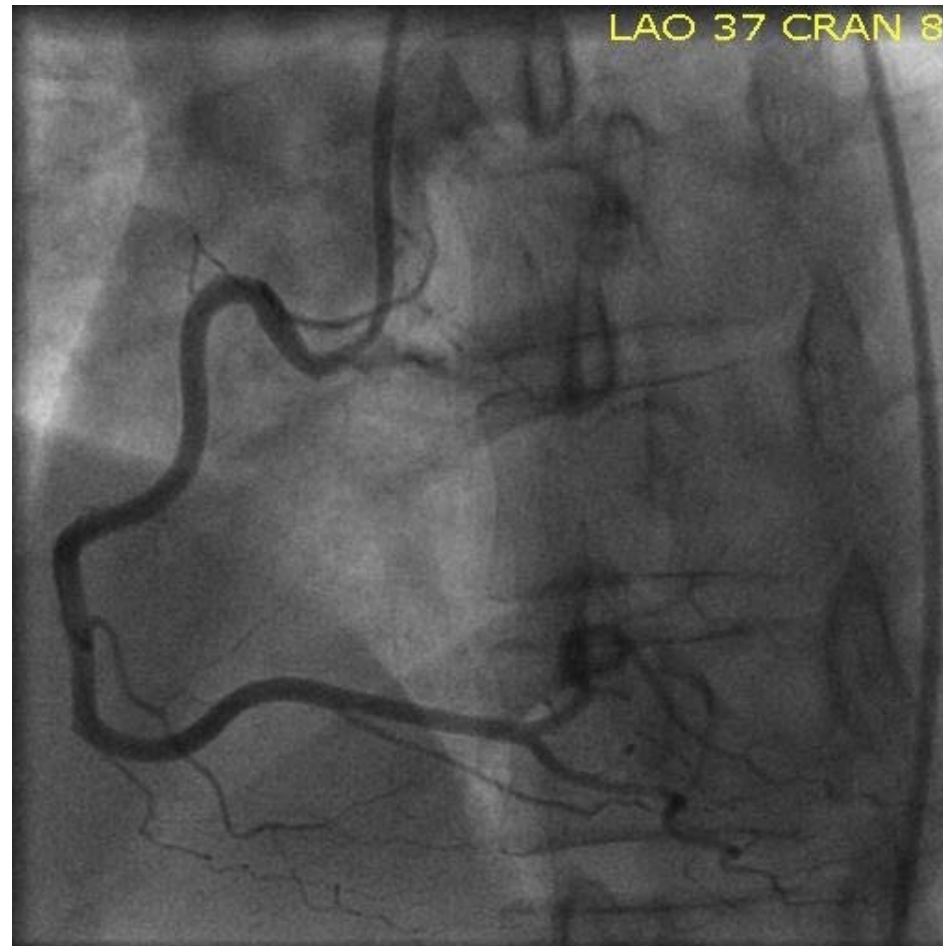


MINOCA : Definició

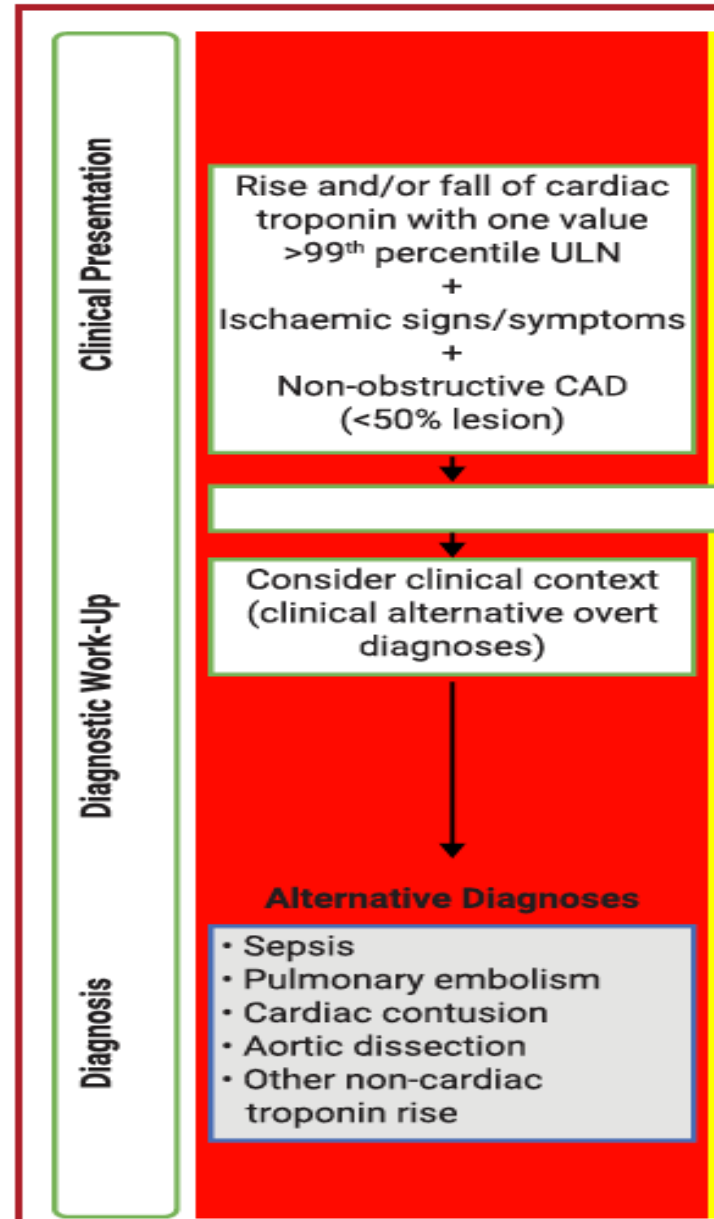
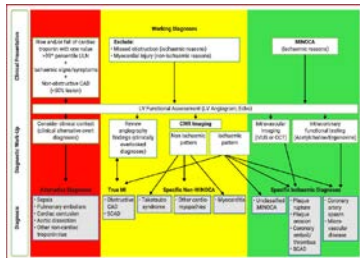
Cateterisme : $< 50\%$ estenosis coronaria



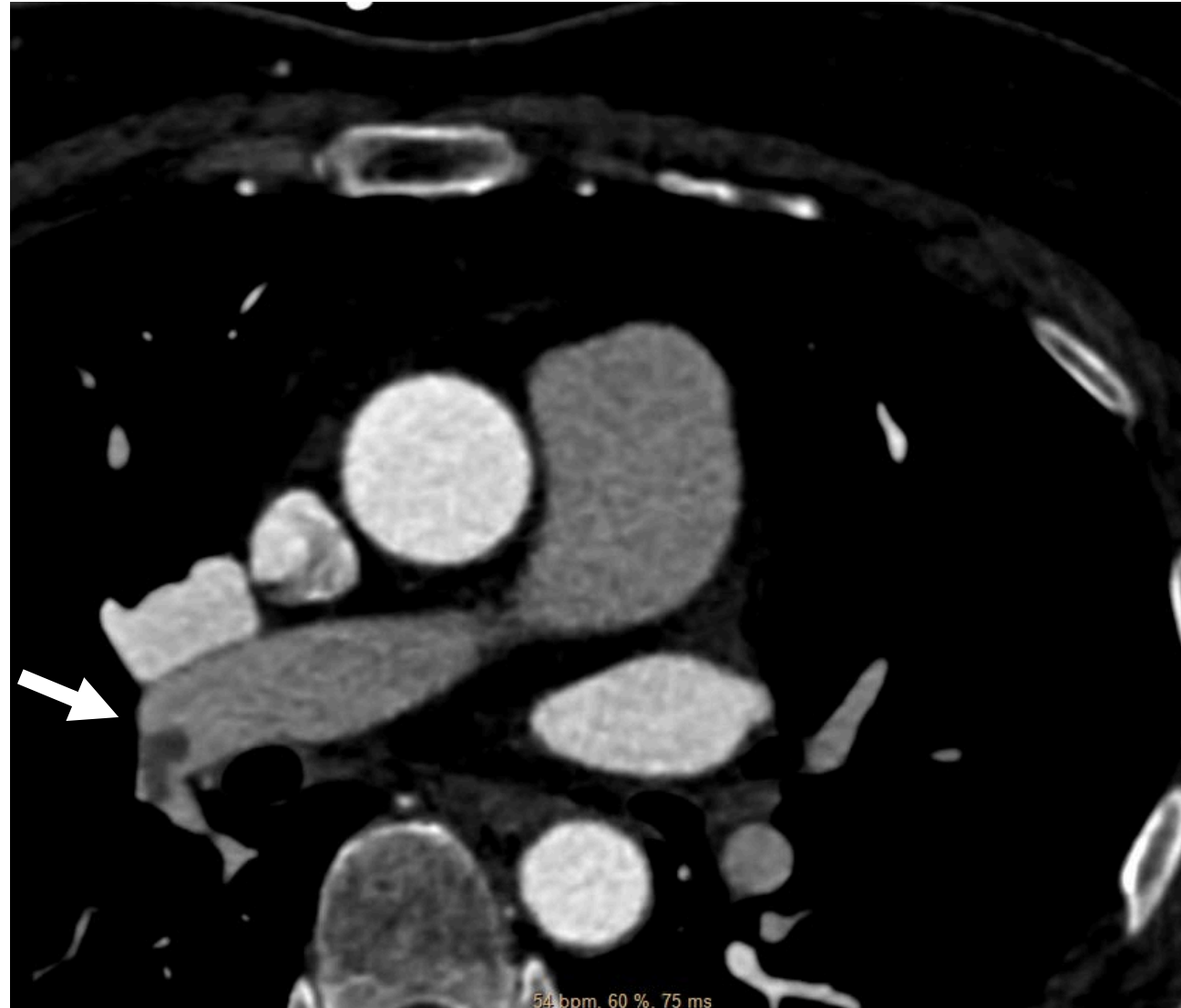
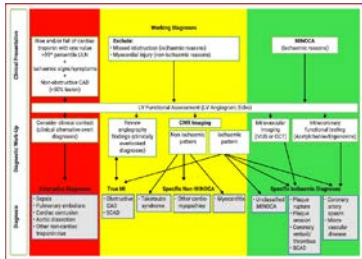
**DOLOR TORÀCIC
TROPONINES +
CANVIS ELÈCTRICS +/-**



MINOCA :Diagnòstic diferencial/alternatiu

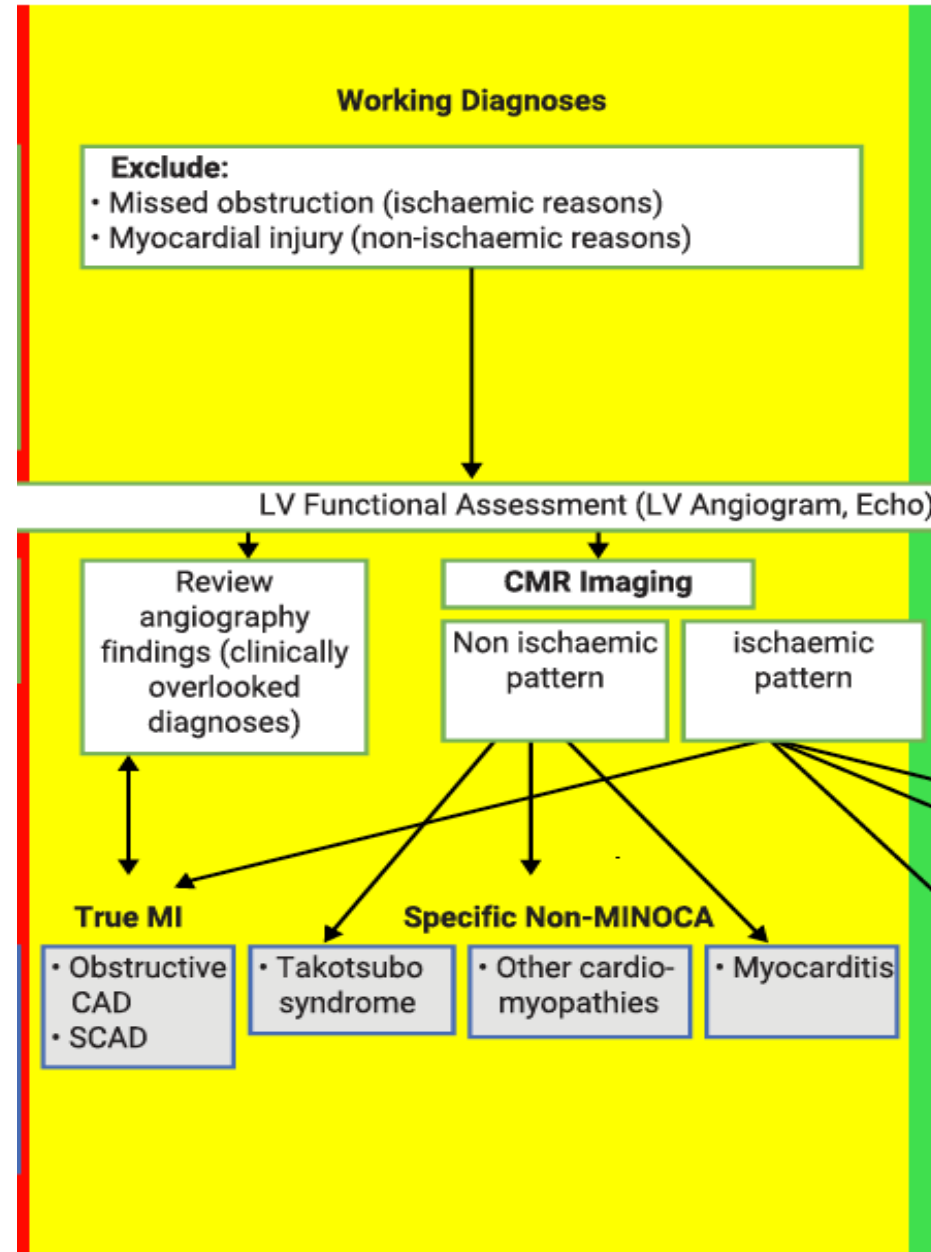
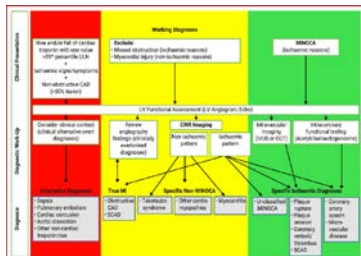


MINOCA :Diagnòstic diferencial/alternatiu



TEP

MINOCA : Diagnòstic de treball

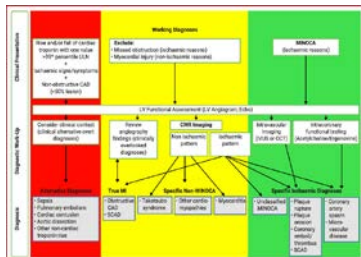
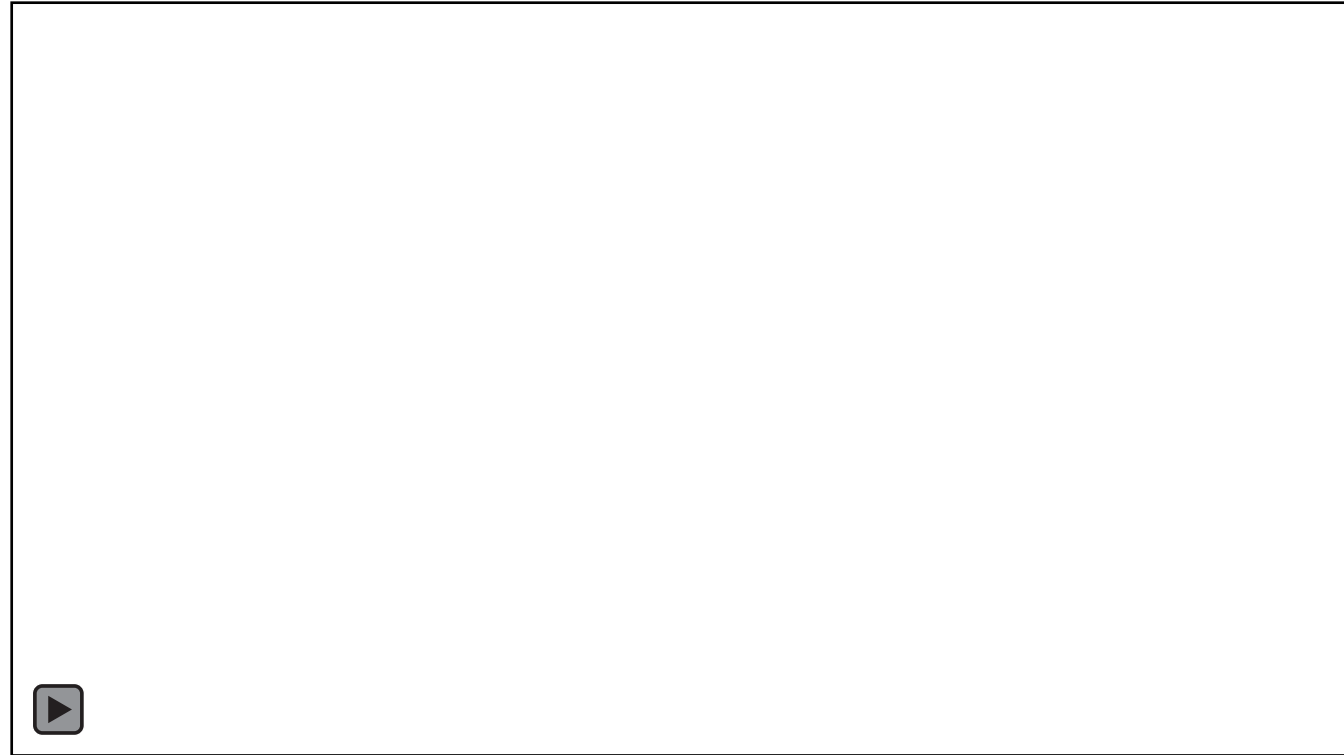


MINOCA : Diagnòstic de treball (escenari 1)

Ventriculografia



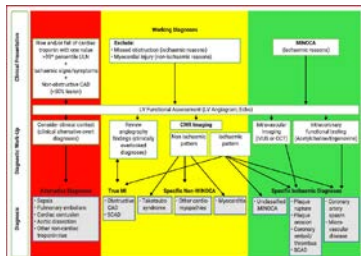
Alteracions de la contractilitat segmentària



MINOCA : Diagnòstic de treball (escenari 1)

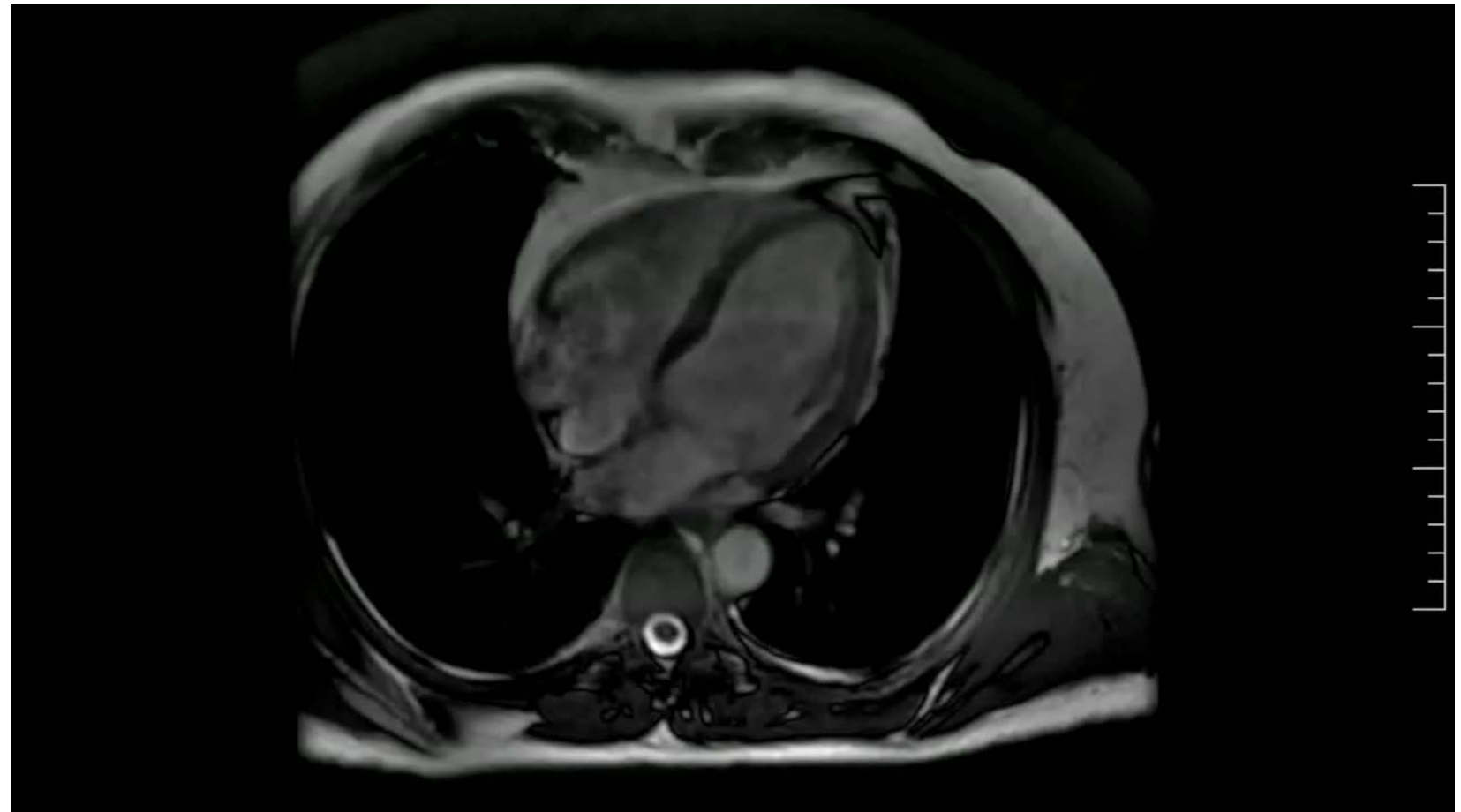
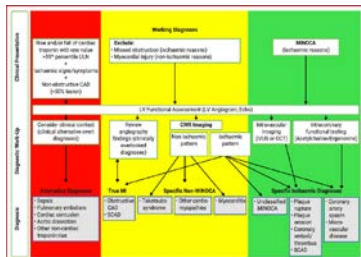
Ecocardiograma

- Alteracions de la contractilitat segmentària
- Trombus
- Masses (mixoma, etc)



MINOCA : Diagnòstic de treball (escenari 1)

RMC : Cine 4 CH



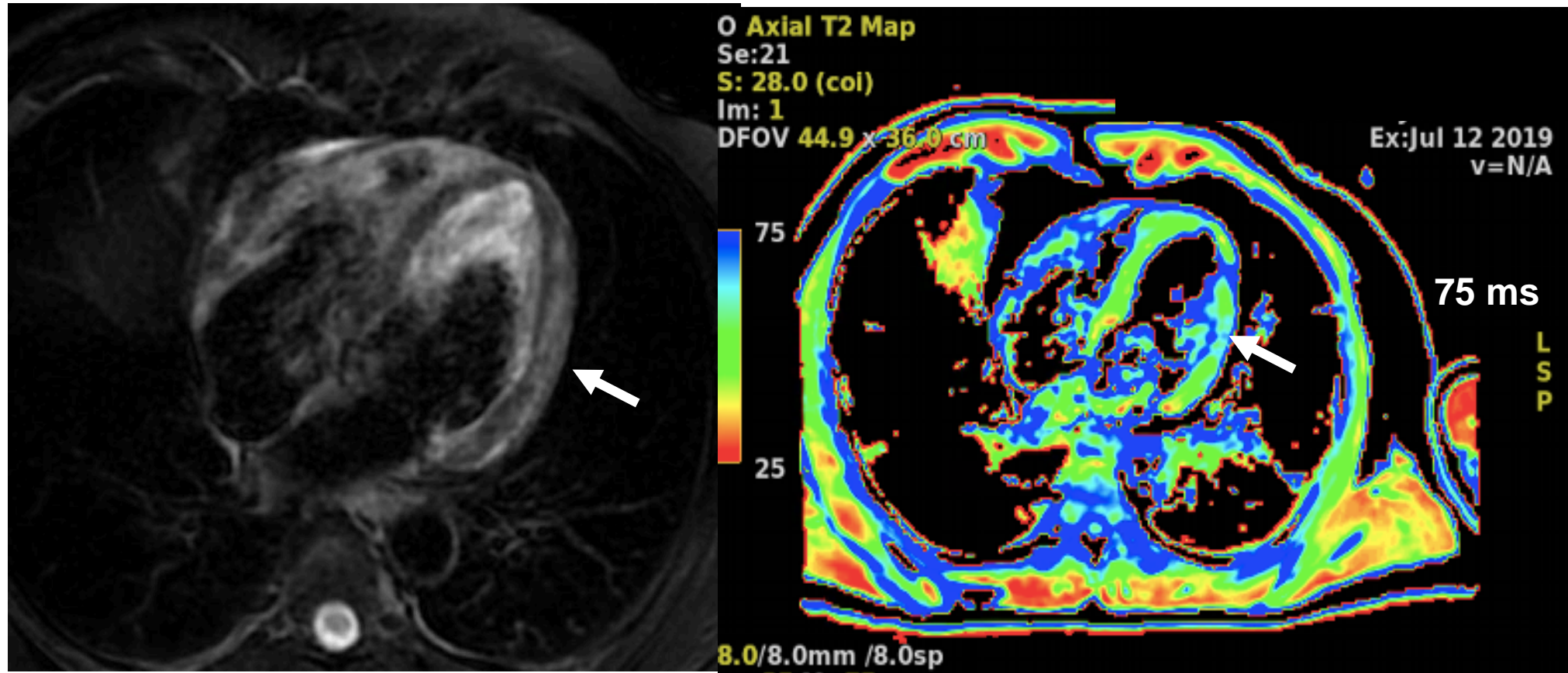
MINOCA : Diagnòstic de treball (escenari 1)

RMC : potenciada T2

Mapes T2



Class	Working Hypothesis	MINOCA
Class I	Myocardial Ischemia	MINOCA
Class II	Myocardial Injury	MINOCA
Class III	Myocardial Inflammation	MINOCA
Class IV	Myocardial Fibrosis	MINOCA
Class V	Myocardial Dissection	MINOCA
Class VI	Myocardial Infarction	MINOCA
Class VII	Myocardial Necrosis	MINOCA
Class VIII	Myocardial Stenosis	MINOCA
Class IX	Myocardial Hypertrophy	MINOCA
Class X	Myocardial Dilatation	MINOCA
Class XI	Myocardial Aneurysm	MINOCA
Class XII	Myocardial Pericarditis	MINOCA
Class XIII	Myocardial Conduction System Disease	MINOCA
Class XIV	Myocardial Electrical Coupling	MINOCA
Class XV	Myocardial Mechanical Coupling	MINOCA
Class XVI	Myocardial Hemodynamic Coupling	MINOCA
Class XVII	Myocardial Metabolic Coupling	MINOCA
Class XVIII	Myocardial Genetic Coupling	MINOCA
Class XIX	Myocardial Environmental Coupling	MINOCA
Class XX	Myocardial Systemic Coupling	MINOCA

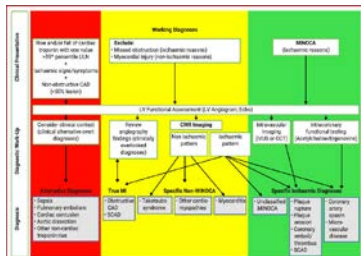
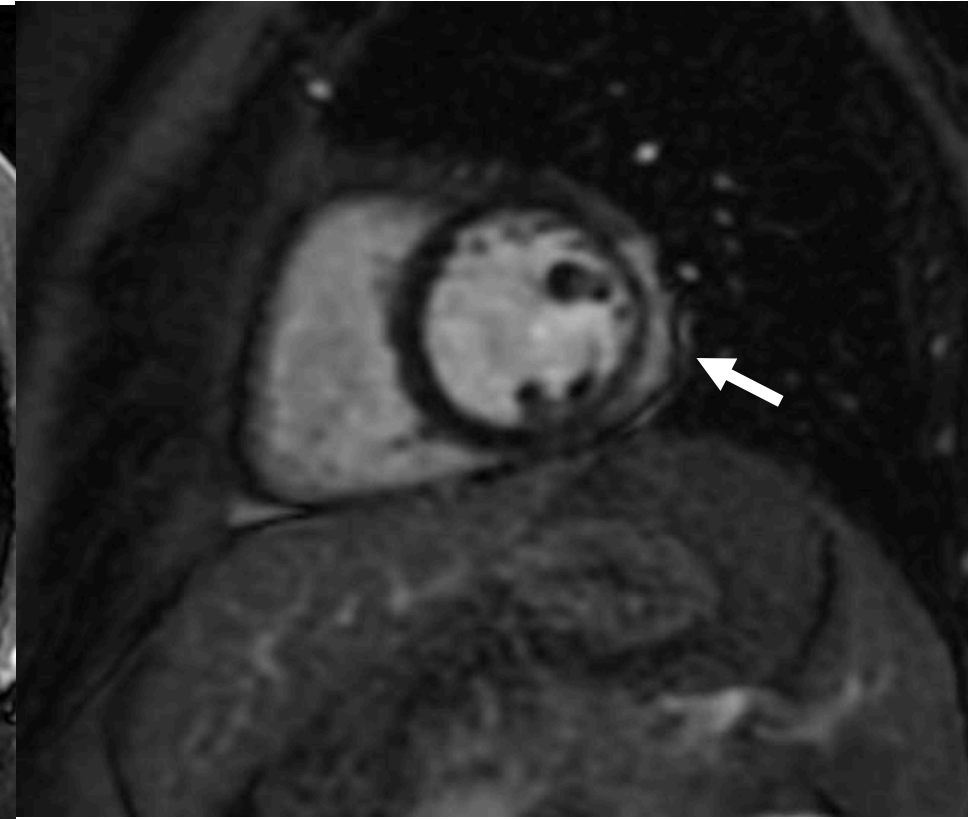
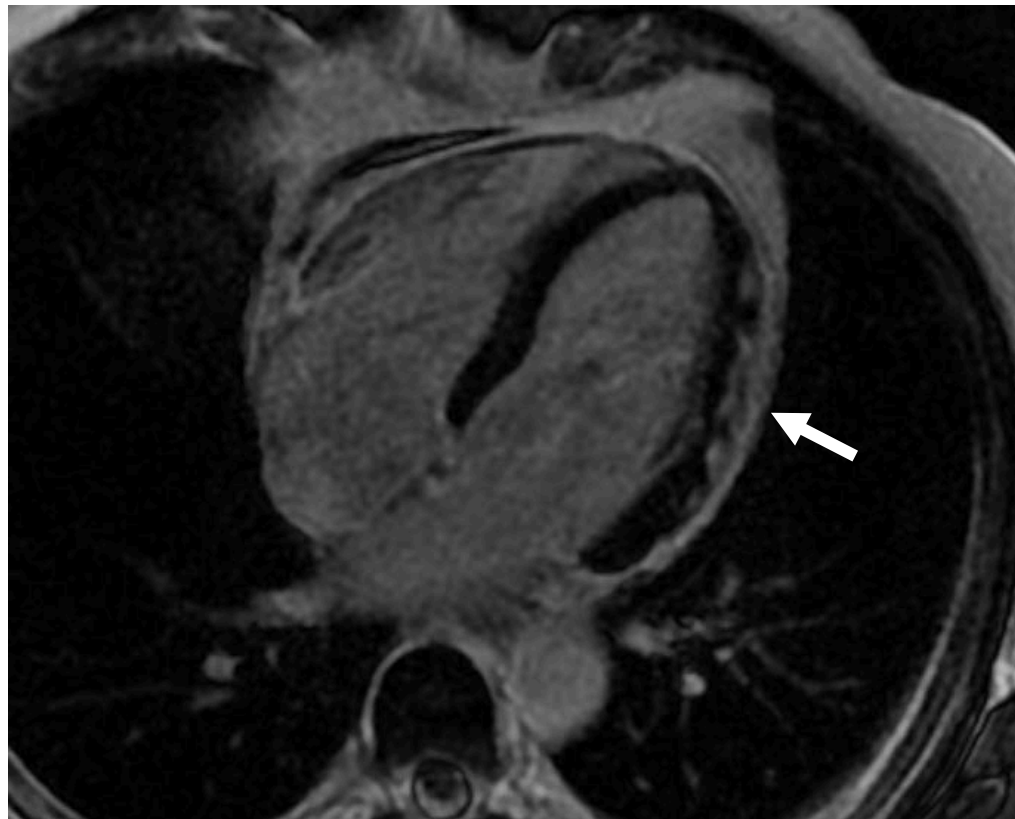


edema miocàrdic anterolateral

MINOCA : Diagnòstic de treball (escenari 1)

RMC :

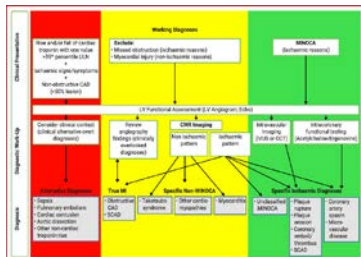
MIOCARDITIS



Realç tardà: patró no isquèmic ; subepicàrdic cara lateral

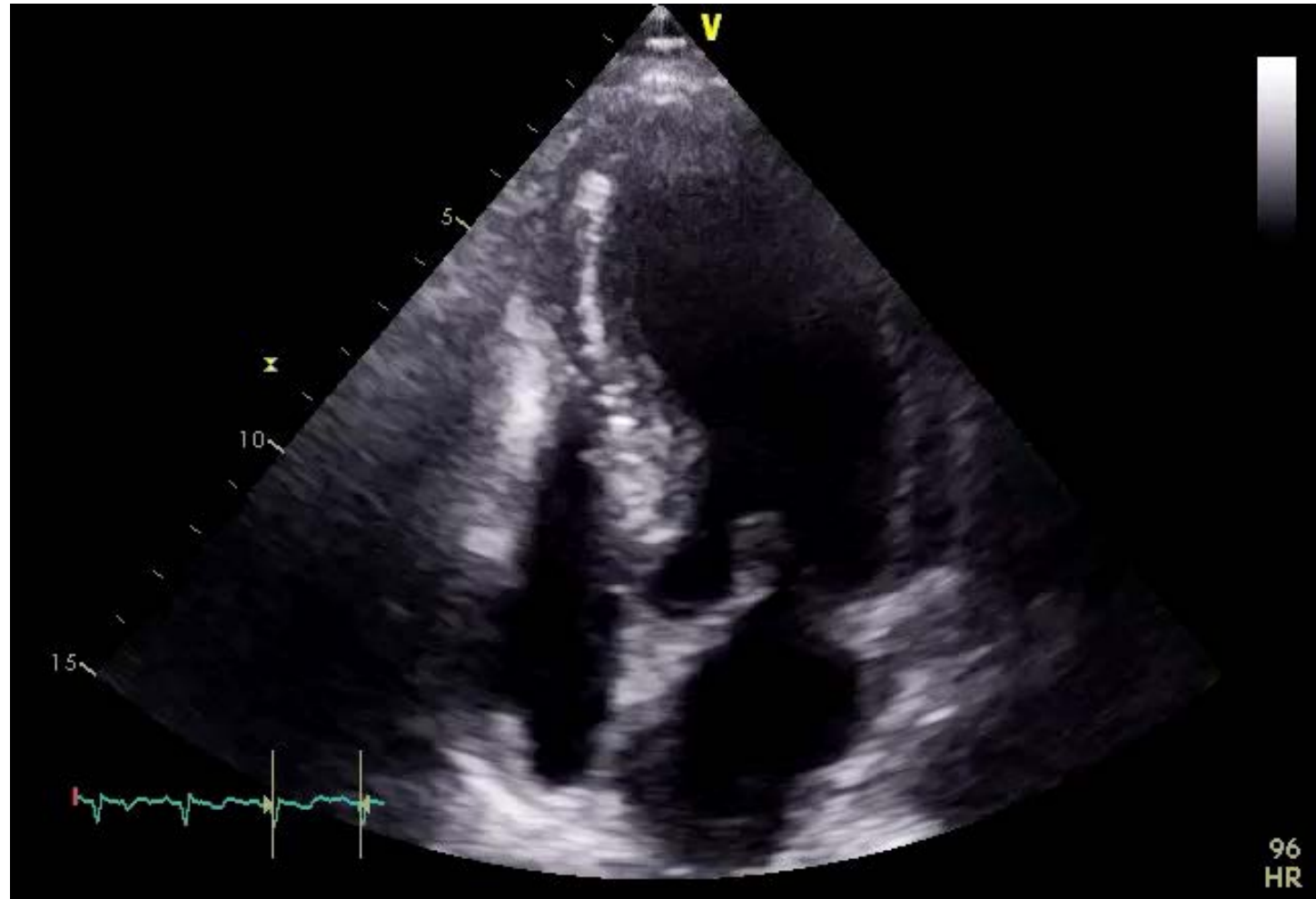
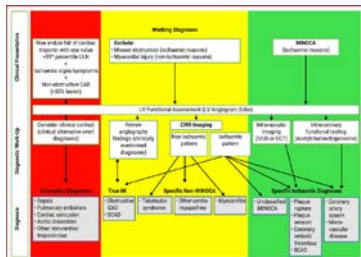
MINOCA : Diagnòstic de treball (escenari 2)

Ventriculografia



MINOCA : Diagnòstic de treball (escenari 2)

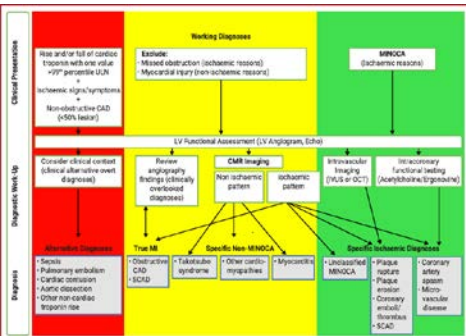
Ecocardiograma



MINOCA : Diagnòstic de treball (escenari 2)



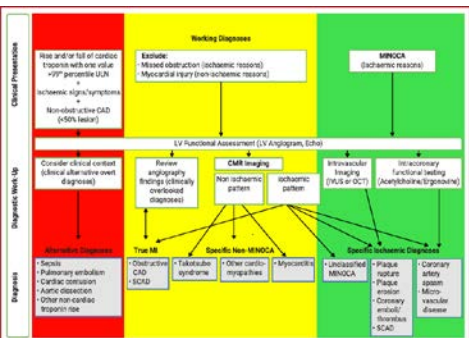
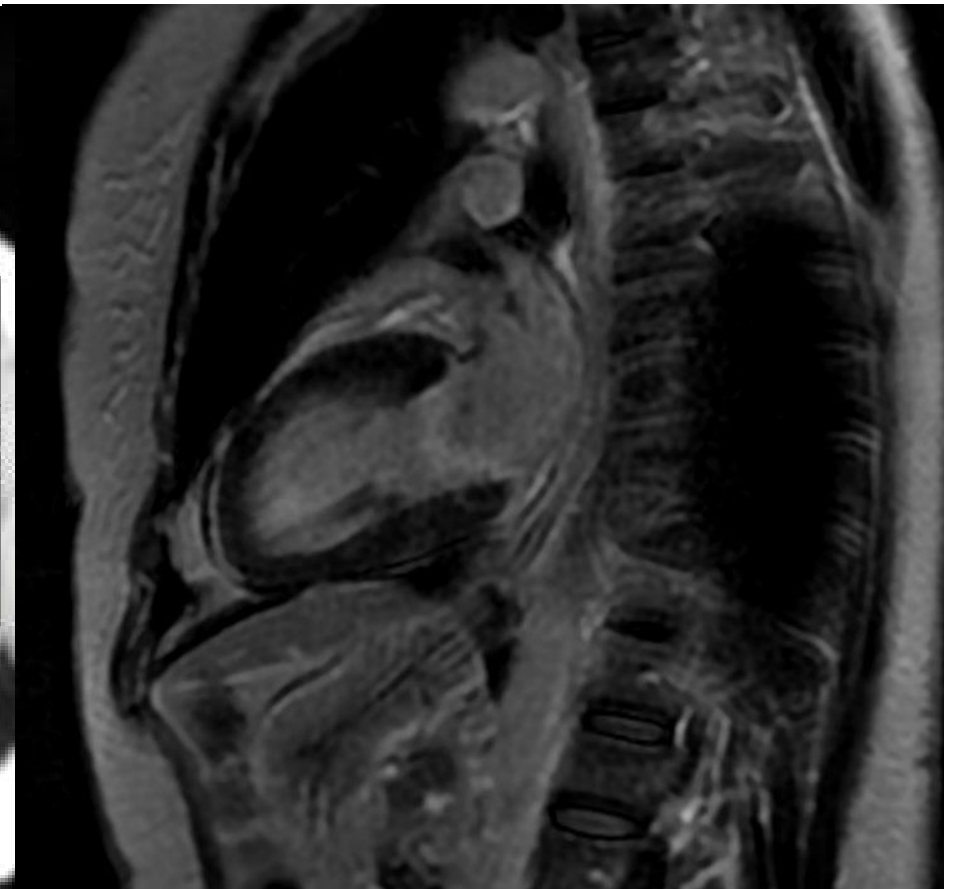
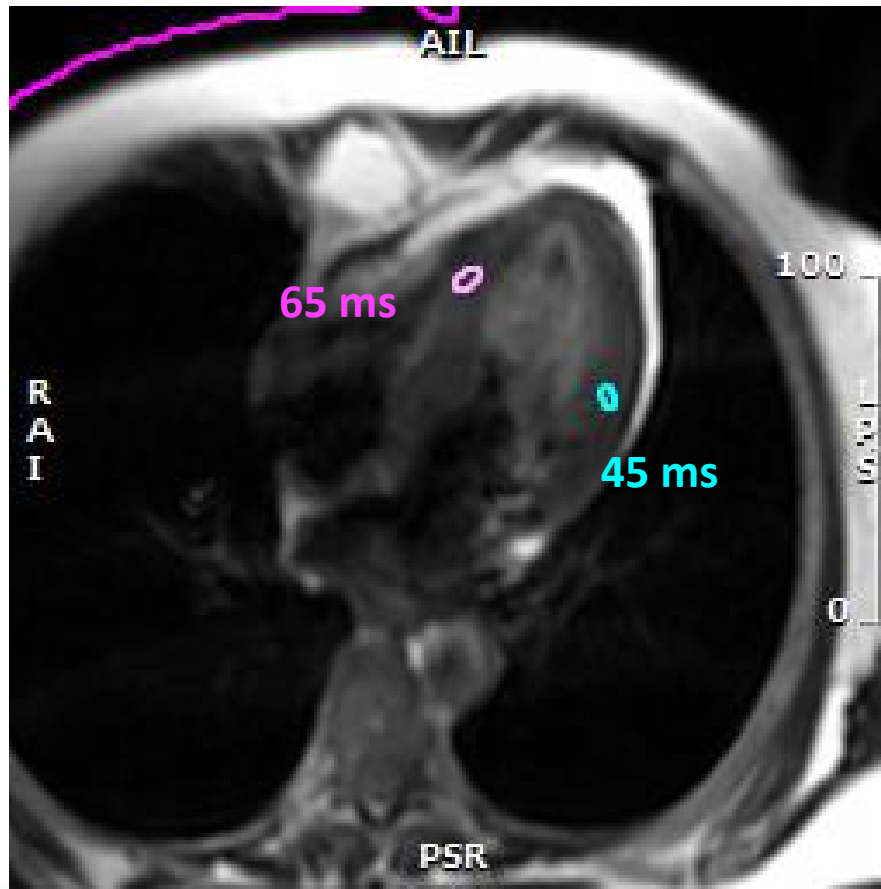
RMC: Cine 2CH



MINOCA : Diagnòstic de treball (escenari 2)



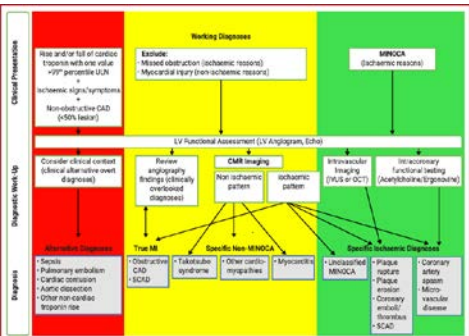
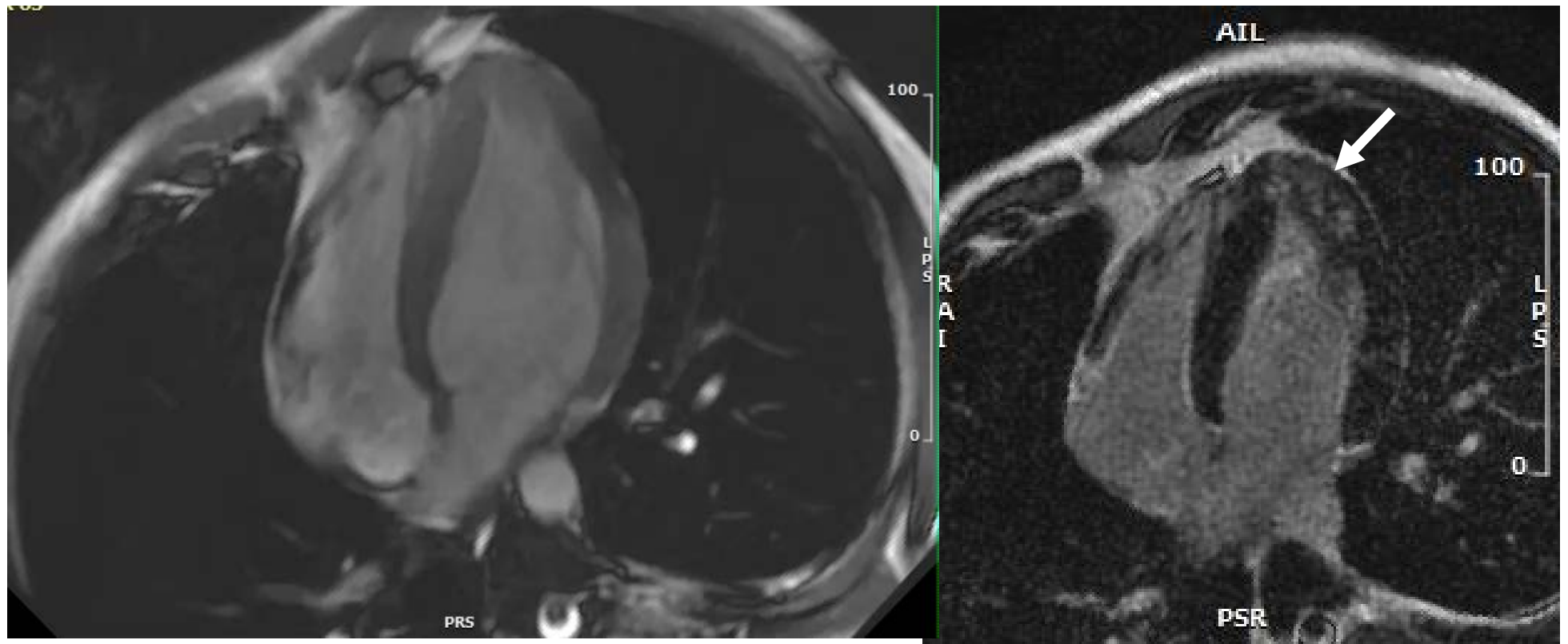
RMC MIOCARDIOPATIA ESTRÉS, SD. TAKOTSUBO



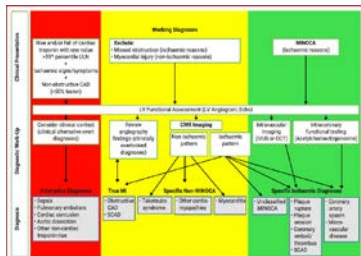
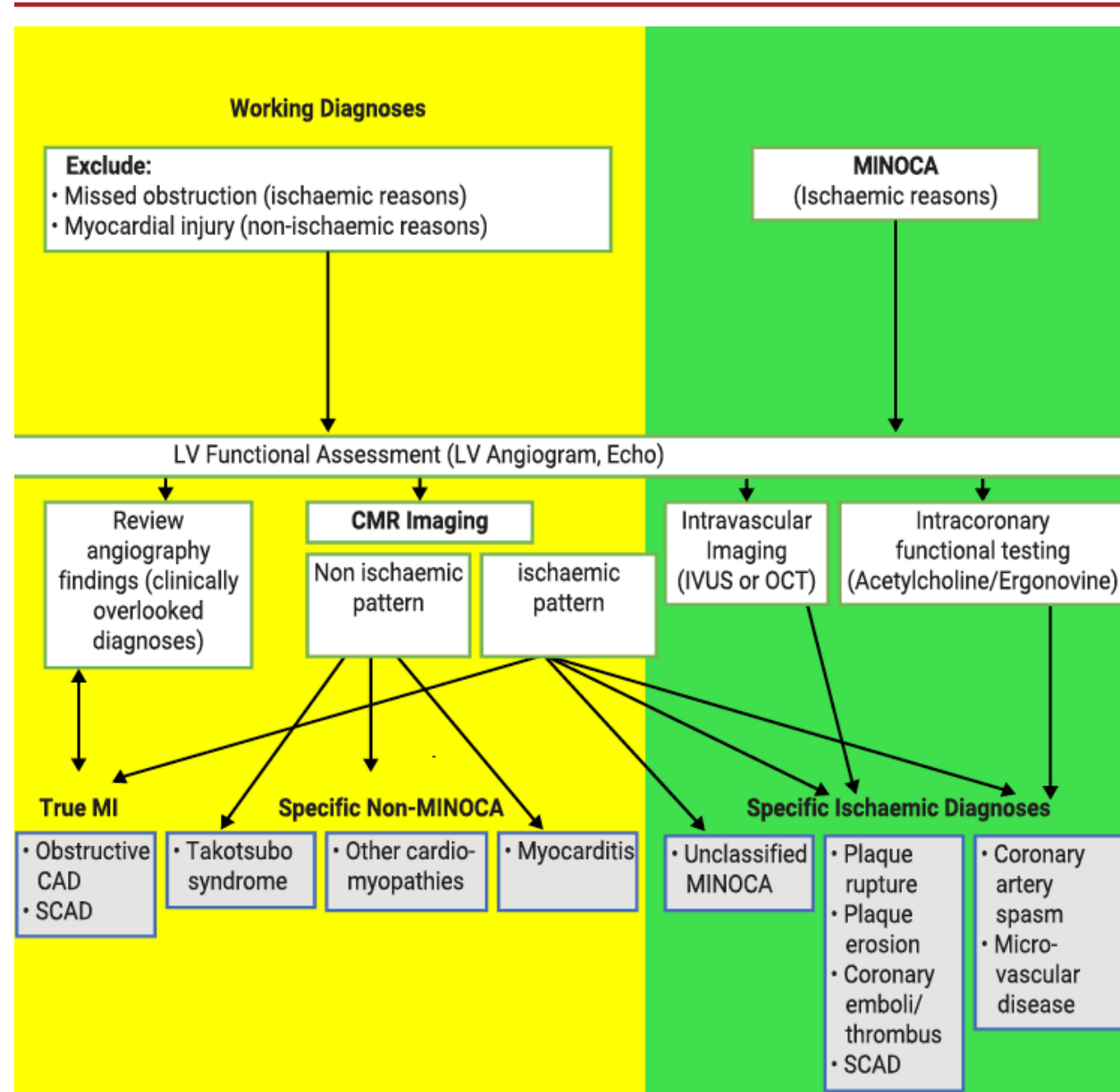
MINOCA : Diagnòstic de treball (escenari 3)



RMC: MIOCARDIOPATIA HIPERTRÒFICA APICAL



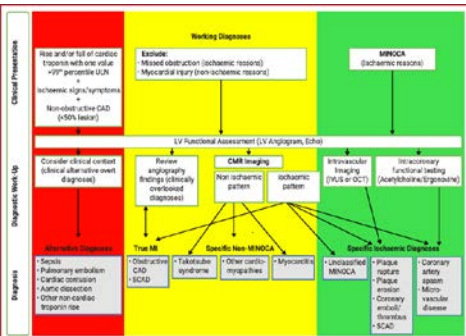
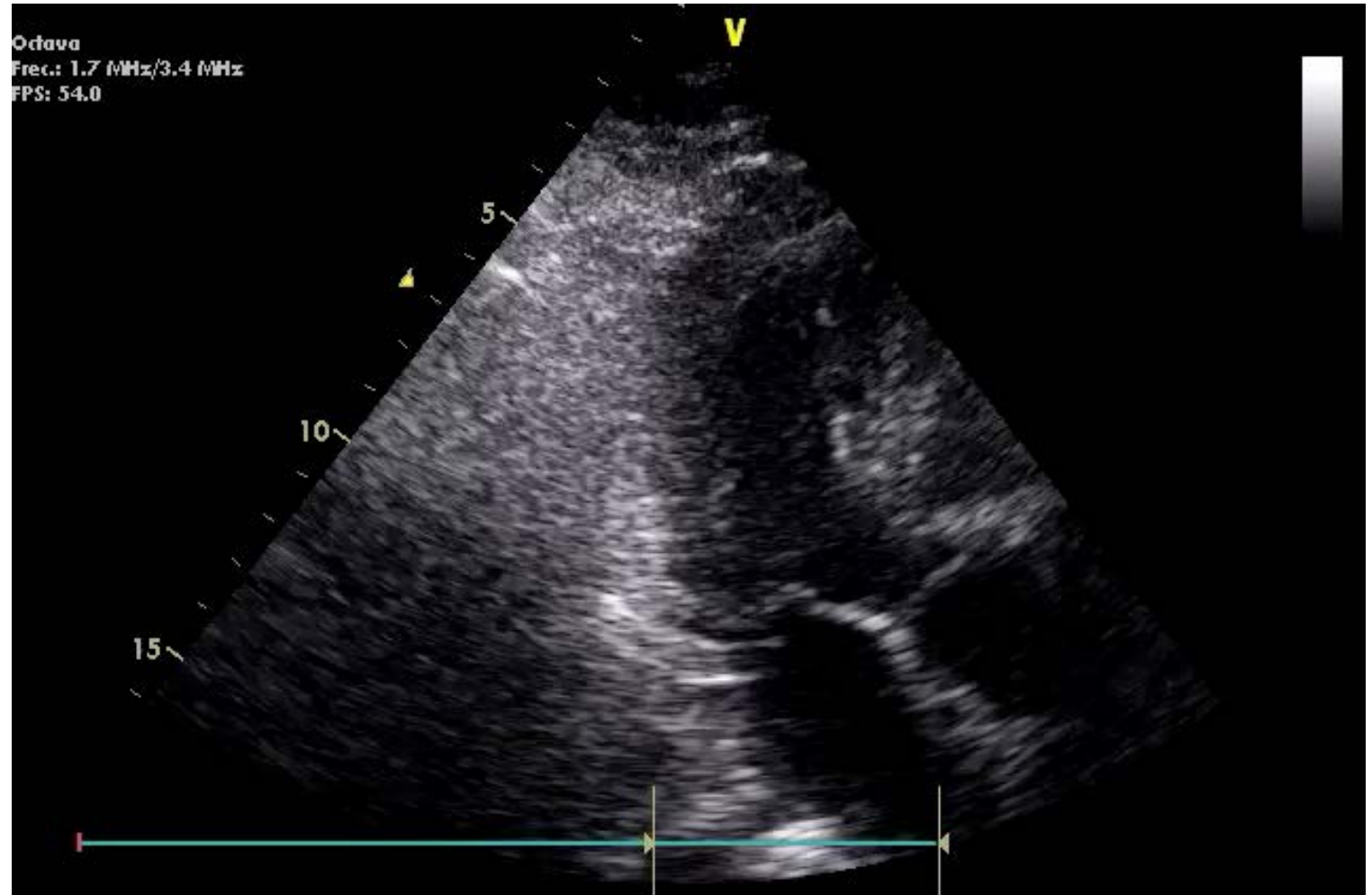
MINOCA : Diagnòstic de treball



MINOCA : Diagnòstic de treball (escenari 4)



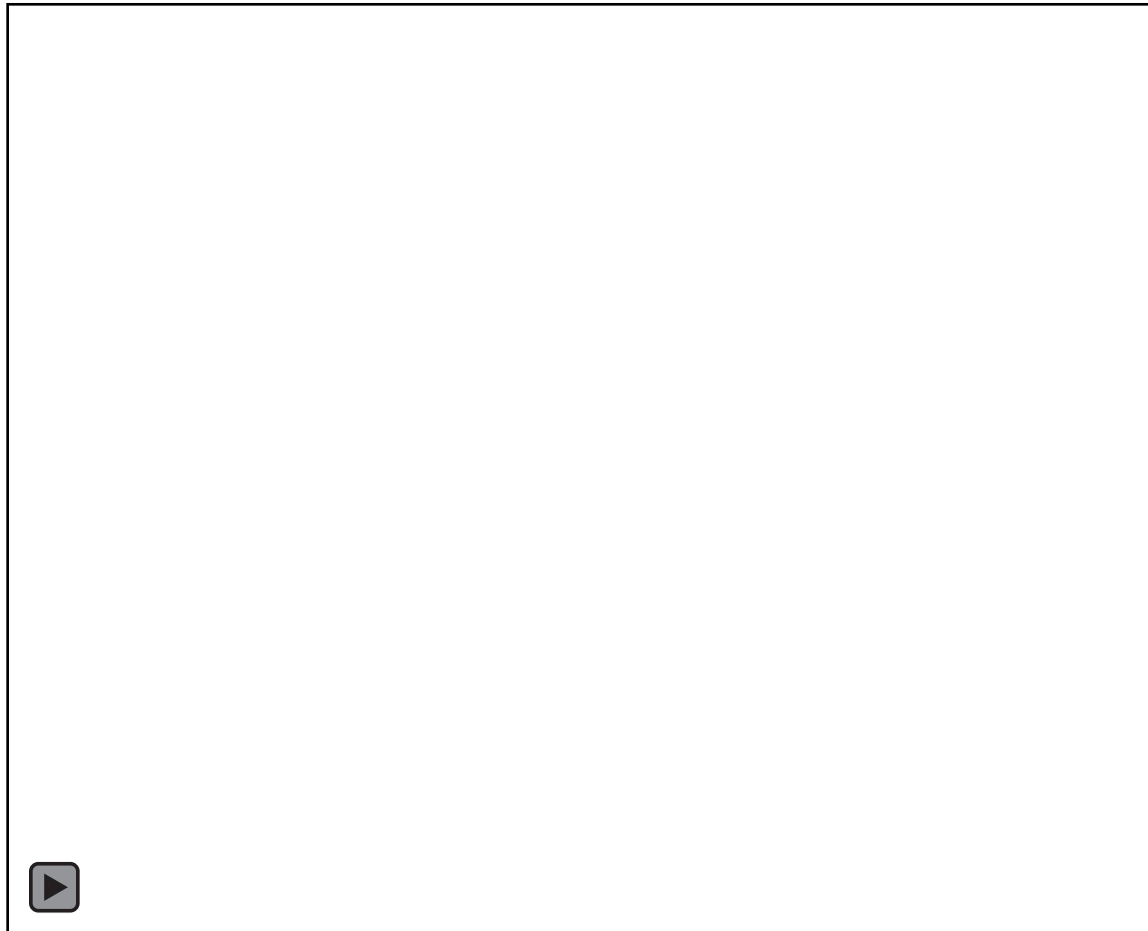
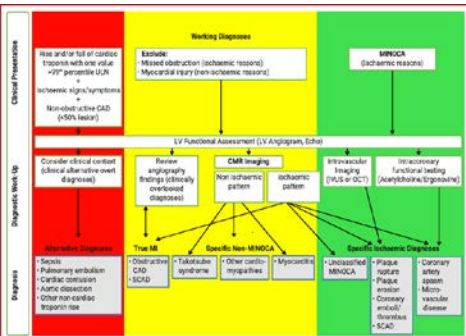
Ecocardiograma



MINOCA : Diagnòstic de treball (escenari 4)

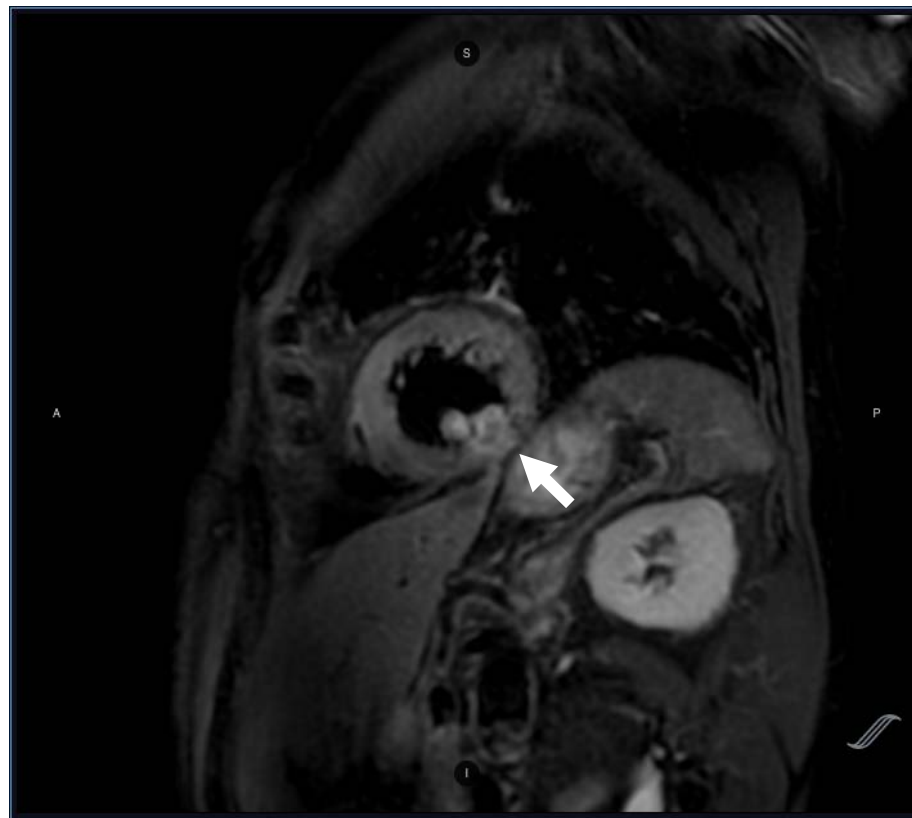
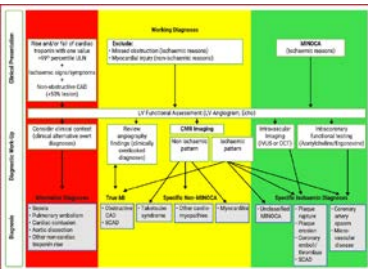


RMC : Cine eix curt

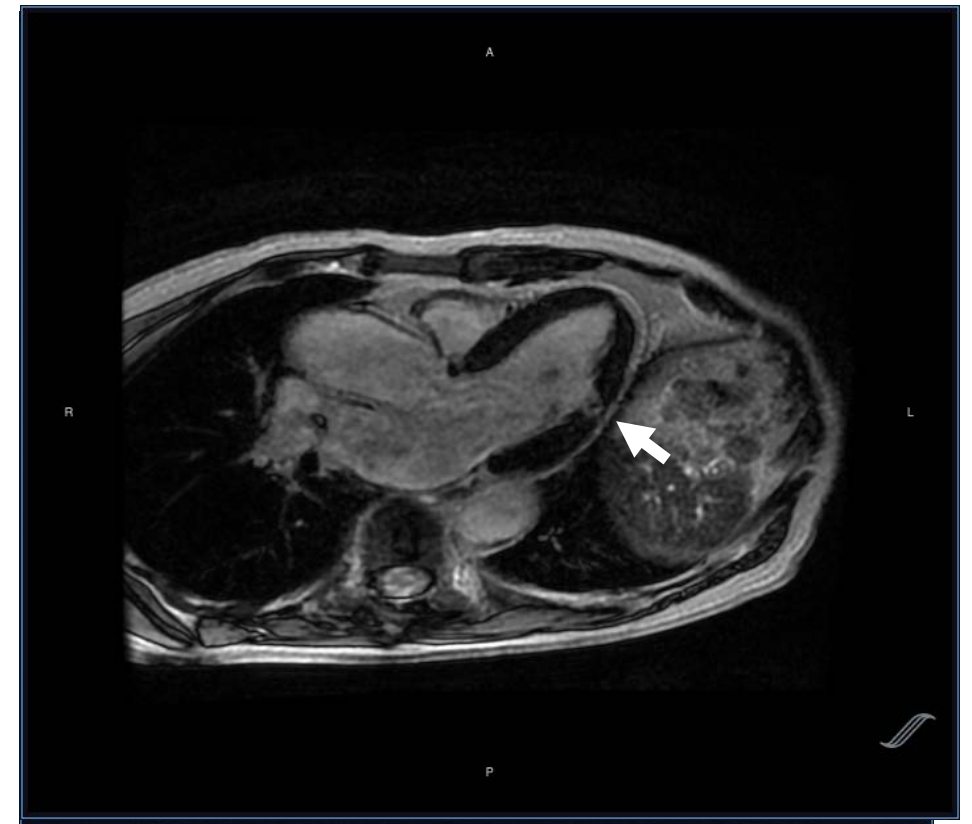


MINOCA : Diagnòstic de treball (escenari 4)

RMC : INFART (Ruptura placa, èmbol, vasoespame??)



Seq potenciada en T2: edema



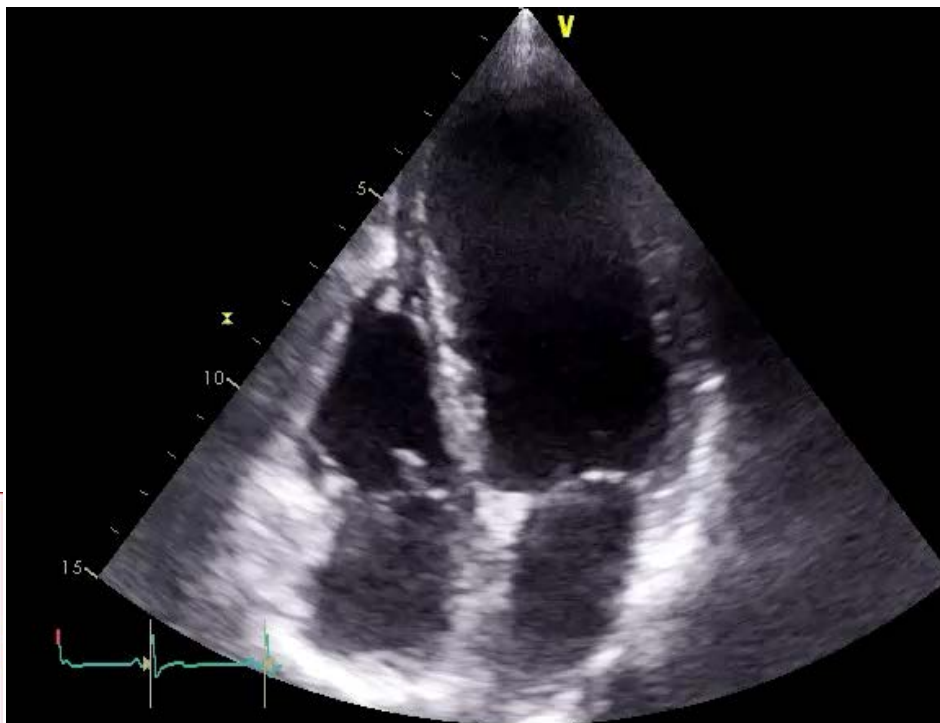
Realç tardà , patró isquèmic: infart inferolateral

MINOCA : Diagnòstic de treball (escenari 5)

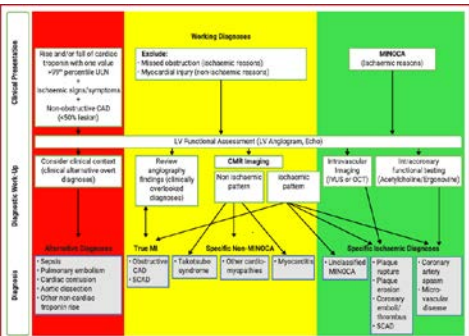
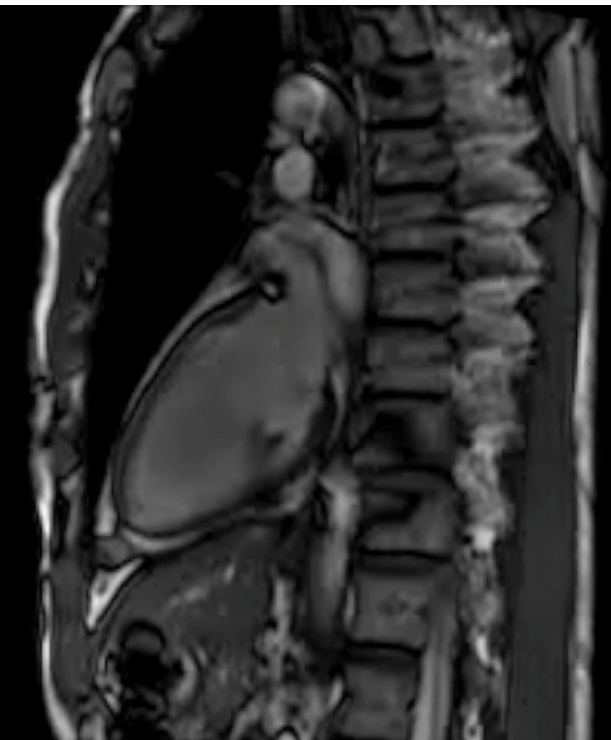


Ecocardiograma

RMC: cine



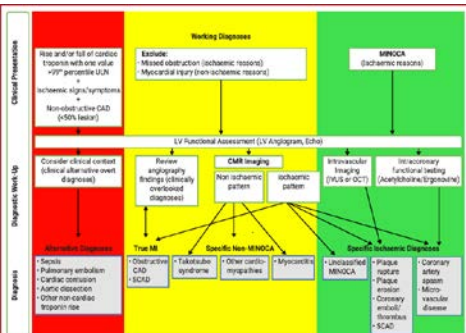
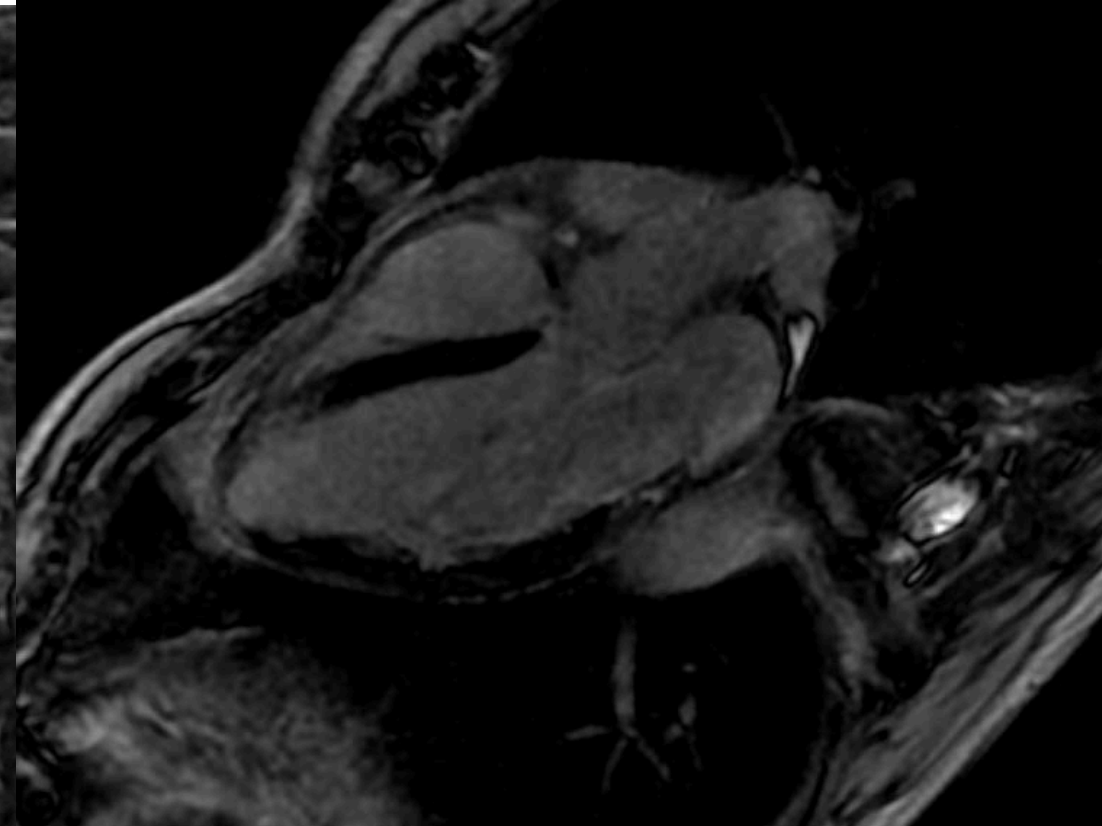
57 HR



MINOCA : Diagnòstic de treball (escenari 5)



RMC : Dissecció coronària espontànea



MINOCA: RMC

Recommendations for myocardial infarction with non-obstructive coronary arteries

Recommendations	Class ^a	Level ^b
In all patients with an initial working diagnosis of MINOCA, it is recommended to follow a diagnostic algorithm to differentiate true MINOCA from alternative diagnoses	I	C
It is recommended to perform CMR in all MINOCA patients without an obvious underlying cause. ³⁷⁰	I	B
It is recommended to manage patients with an initial diagnosis of MINOCA and a final established underlying cause according to the disease-specific guidelines.	I	C
Patients with a final diagnosis of MINOCA of unknown cause may be treated according to secondary prevention guidelines for atherosclerotic disease.	IIb	C

CMR = cardiac magnetic resonance; MINOCA = myocardial infarction with non-obstructive coronary arteries.

^aClass of recommendation.

^bLevel of evidence.

MINOCA : Quan fem la RMC?

Metanàlisi , 16 estudis , 2500 pacients. (El Iskandarani M, JACC 2020, Volume 75, Issue 11)

- Quan la RMC < 1 **setmana** era diagnòstica: 84% casos
- Si la RMC > 1 **setmana** era diagnòstica: 49% casos
- La detecció de miocarditis per RMC baixava al cap d'una setmana.

MINOCA : CONCLUSIONS

- ECOCARDIOGRAMA inicial: veure alteracions motilitat segmentaria, funció ventricular, descartar trombus.
- Paper principal de la RMC (amb seqüències de cine, edema i realç tardà: patró isquèmic/no isquèmic)
- La RMC quan més aviat millor per poder afinar en el diagnòstic real de MINOCA. Serà llavors quan altres tècniques invasives (OCT, IVUS, test provocació ach) podran intentar aclarar la fisiopatologia del mateix.
- Malgrat tot, hi ha un 25% MINOCA en què no s'aconsegueix aclarir la causa i suposa un dilema terapèutic.

**GRÀCIES A L'EQUIP D'IMATGE CARDÍACA HOSPITAL CLÍNIC
(ECOCARDIO, RMC I CT CORONARI)**

i

MOLT BON NADAL A TOTS !!!

