



MAIC

Jornada entre expertos



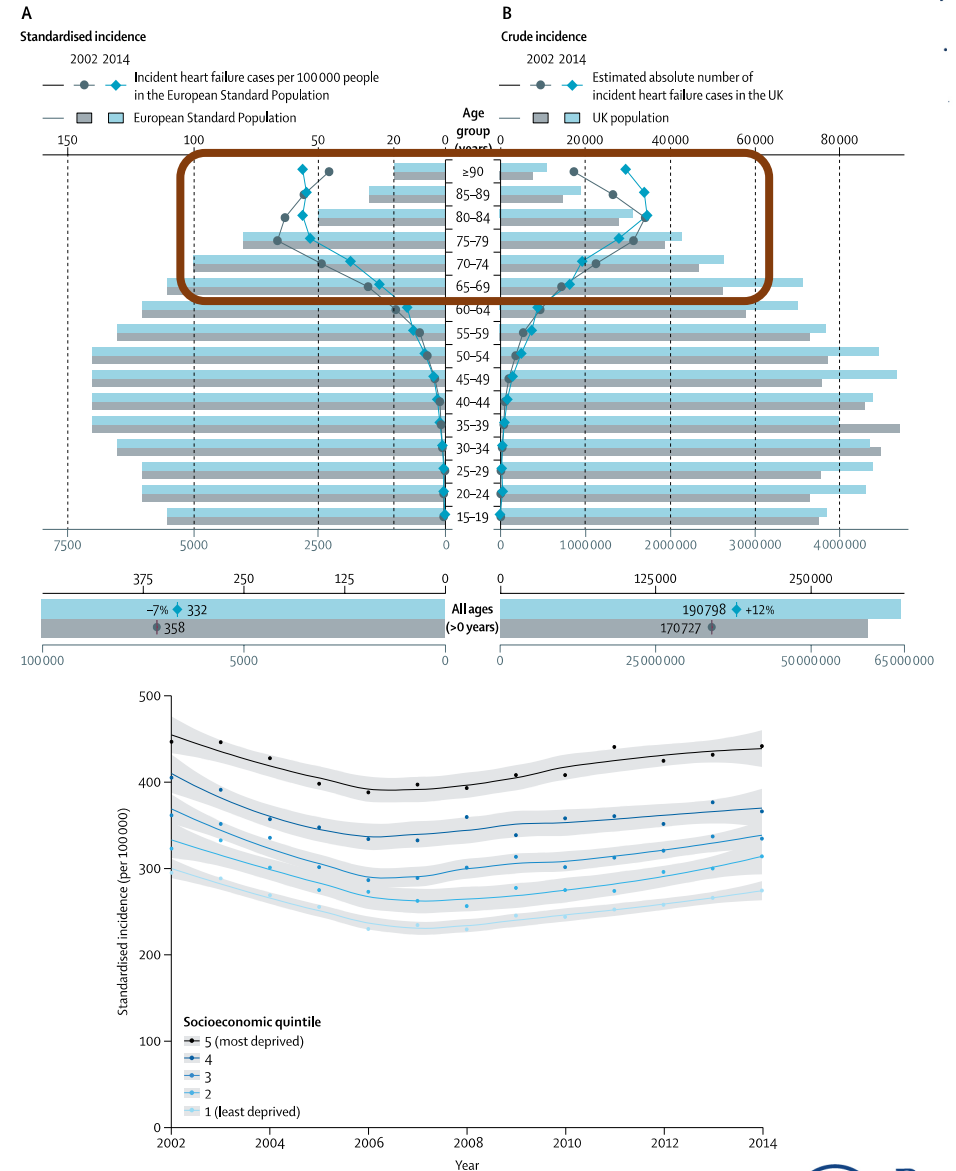
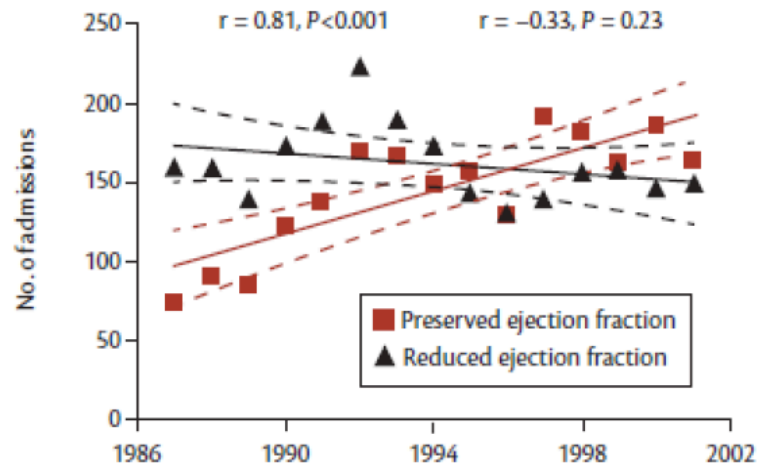
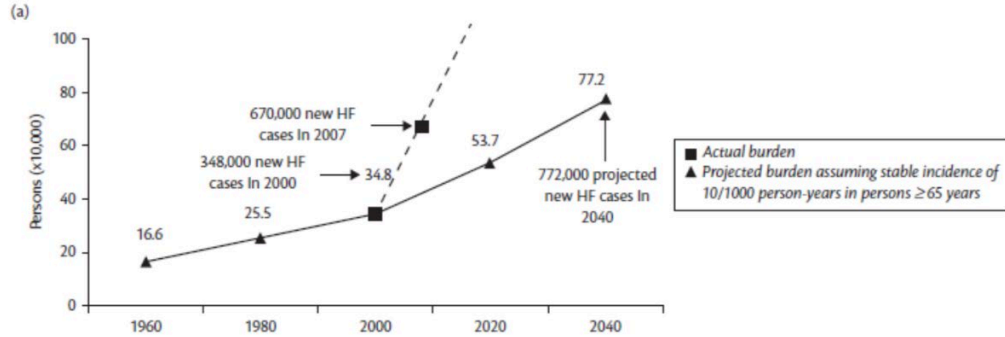
Boehringer
Ingelheim

Diagnóstico rápido y preciso de la IC

José Manuel García Pinilla

#JornadaMAIC

Una pandemia...



Savarese G, Lund LH. *Cardiac Failure Review* 2017;3(1):7–11.

Conrad N, et al. *Lancet* 2018; 391: 572–80

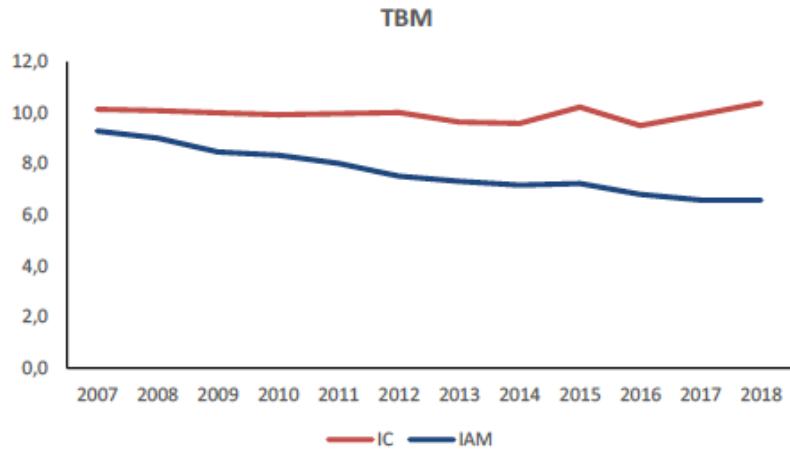
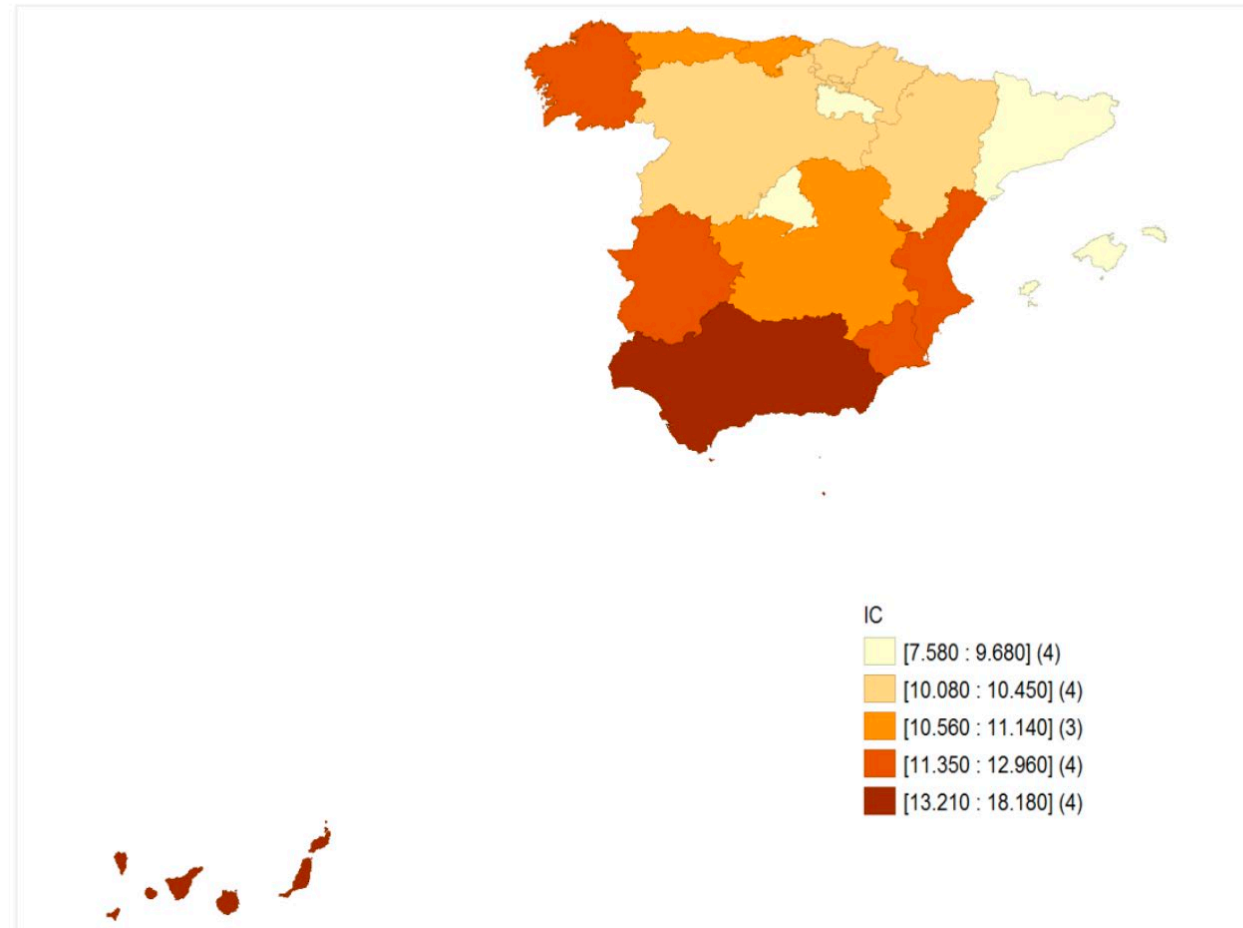


Figura 4.1. Distribución de la mortalidad ajustada a riesgo (RAMER) intrahospitalaria de la insuficiencia cardiaca por Comunidad Autónoma (2018)



Diagnóstico rápido y preciso de la IC

Tabla 3. Factores clave en el diagnóstico rápido y preciso de la IC

Factor clave		Resultado	Altamente prioritario
17.	Establecer vías de derivación a consultas de alta resolución de la IC y promover la valoración integral con AP, tras la valoración de la sospecha diagnóstica.	Adecuado y claramente necesario	✓
18.	Establecer como <i>gold standard</i> del diagnóstico la realización del ecocardiograma por parte del especialista en IC (cardiología o MI).	Adecuado y claramente necesario	
19.	Elaborar protocolos de solicitud de NT-proBNP en AP y urgencias.	Adecuado y claramente necesario	✓
20.	Promover el perfil de consultor referente, presencial o no presencial (cardiología o MI) para dar apoyo a AP en la sospecha diagnóstica de la IC.	Adecuado y claramente necesario	
21.	Planificar agendas para incorporar elementos telemáticos de consulta entre la AH y la AP.	Adecuado y claramente necesario	
22.	Establecer criterios y vías de derivación con las consultas de cardiología general y de MI.	Adecuado y claramente necesario	



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ESC GUIDELINES

2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure

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CLINICAL PRACTICE GUIDELINE: FULL TEXT

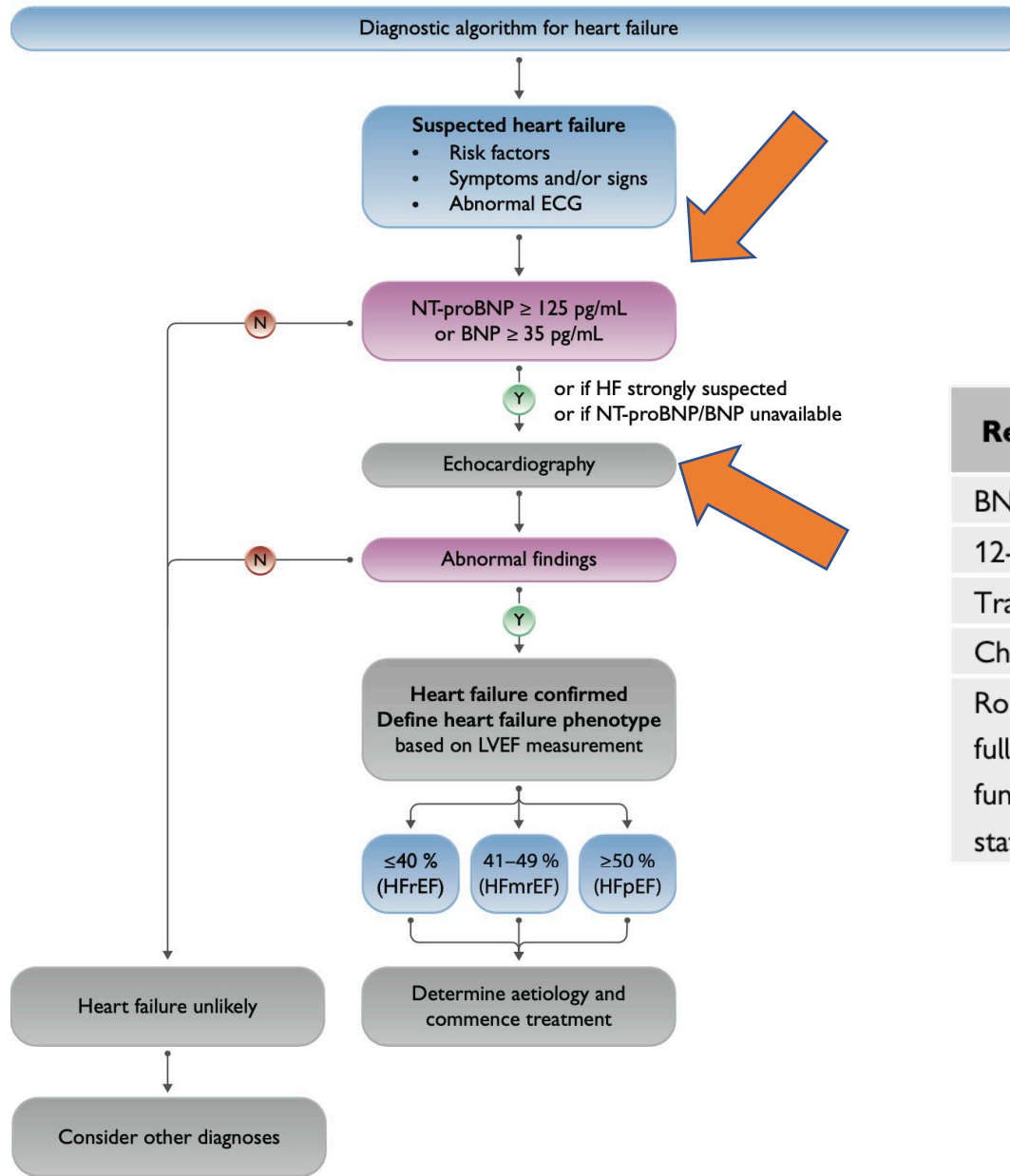
2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure

Symptoms	Signs
Typical	More specific
Breathlessness	Elevated jugular venous pressure
Orthopnoea	Hepatojugular reflux
Paroxysmal nocturnal dyspnoea	Third heart sound (gallop rhythm)
Reduced exercise tolerance	Laterally displaced apical impulse
Fatigue, tiredness, increased time to recover after exercise	
Ankle swelling	
Less typical	Less specific
Nocturnal cough	Weight gain (>2 kg/week)
Wheezing	Weight loss (in advanced HF)
Bloated feeling	Tissue wasting (cachexia)
Loss of appetite	Cardiac murmur
Confusion (especially in the elderly)	Peripheral oedema (ankle, sacral, scrotal)
Depression	Pulmonary crepitations
Palpitation	Pleural effusion
Dizziness	Tachycardia
Syncope	Irregular pulse
Bendopnea ^a	Tachypnoea
	Cheyne-Stokes respiration
	Hepatomegaly
	Ascites
	Cold extremities
	Oliguria
	Narrow pulse pressure

Table 5 Causes of heart failure, common modes of presentation and specific investigations

Cause	Examples of presentations	Specific investigations	
CAD	Myocardial infarction	Invasive coronary angiography	
	Angina or "angina-equivalent"	CT coronary angiography	
	Arrhythmias	Imaging stress tests (echo, nuclear, CMR)	
Hypertension	Heart failure with preserved systolic function	24 h ambulatory BP	
	Malignant hypertension/acute pulmonary oedema	Plasma metanephrines, renal artery imaging Renin and aldosterone	
Valve disease	Primary valve disease e.g., aortic stenosis	Echo – transoesophageal/stress	
	Secondary valve disease, e.g. functional regurgitation		
	Congenital valve disease		
Arrhythmias	Atrial tachyarrhythmias	Ambulatory ECG recording	
	Ventricular arrhythmias	Electrophysiology study, if indicated	
CMPs	All	CMR, genetic testing	
	Dilated		
	Hypertrophic		
	Restrictive	Right and left heart catheterization	
	ARVC		
	Peripartum		
	Takotsubo syndrome	CMR, angiography	
	Toxins: alcohol, cocaine, iron, copper	Trace elements, toxicology, LFTs, GGT	
Congenital heart disease	Congenitally corrected/repai red transposition of great arteries	CMR	
	Shunt lesions		
	Repaired tetralogy of Fallot		
	Ebstein's anomaly		
	Infective	Viral myocarditis	CMR, EMB
	Chagas disease		
Drug-induced	HIV	Serology	
	Lyme disease		
	Anthracyclines		
	Trastuzumab		
	VEGF inhibitors		
	Immune checkpoint inhibitors		
Infiltrative	Proteasome inhibitors		
	RAF+MEK inhibitors		
	Amyloid	Serum electrophoresis and serum free light chains, Bence Jones protein, Bone scintigraphy, CMR, CT-PET, EMB	
	Sarcoidosis	Serum ACE, CMR, FDG-PET, chest CT, EMB	
Storage disorders	Neoplastic	CMR, EMB	
	Haemochromatosis	Iron studies, genetics, CMR (T2* imaging), EMB	
	Fabry disease	α -galactosidase A, genetics, CMR (T1 mapping)	
Endomyocardial disease	Glycogen storage diseases		
	Radiotherapy	CMR	
	Endomyocardial fibrosis/eosinophilia	EMB	
Pericardial disease	Carcinoid	24 h urine 5-HIAA	
	Calcification	Chest CT, CMR, Right and Left heart catheterisation	
	Infiltrative		
Metabolic	Endocrine disease	TFTs, plasma metanephrines, renin and aldosterone, cortisol	
	Nutritional disease (thiamine, vitamin B1 and selenium deficiencies)	Specific plasma nutrients	
	Autoimmune disease	ANA, ANCA, rheumatology review	
Neuromuscular disease	Friedreich's ataxia	Nerve conduction studies, electromyogram, genetics	
	Muscular dystrophy	CK, electromyogram, genetics	

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Recommendations	Class ^a	Level ^b
BNP/NT-proBNP ^c	I	B
12-lead ECG	I	C
Transthoracic echocardiography	I	C
Chest radiography (X-ray)	I	C
Routine blood tests for comorbidities, including full blood count, urea and electrolytes, thyroid function, fasting glucose and HbA1c, lipids, iron status (TSAT and ferritin)	I	C

Diagnostic Algorithm for Patients With Suspected HF

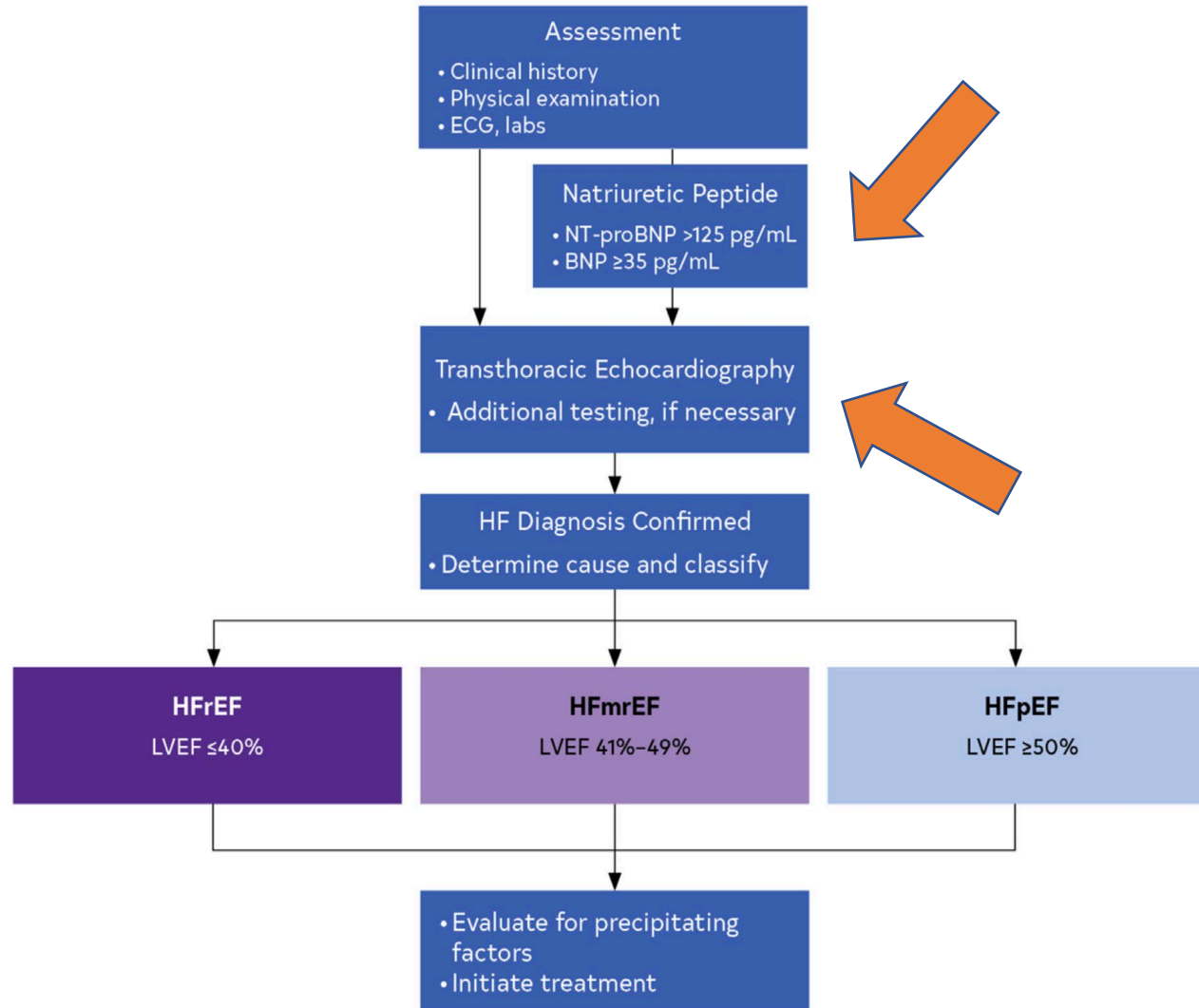
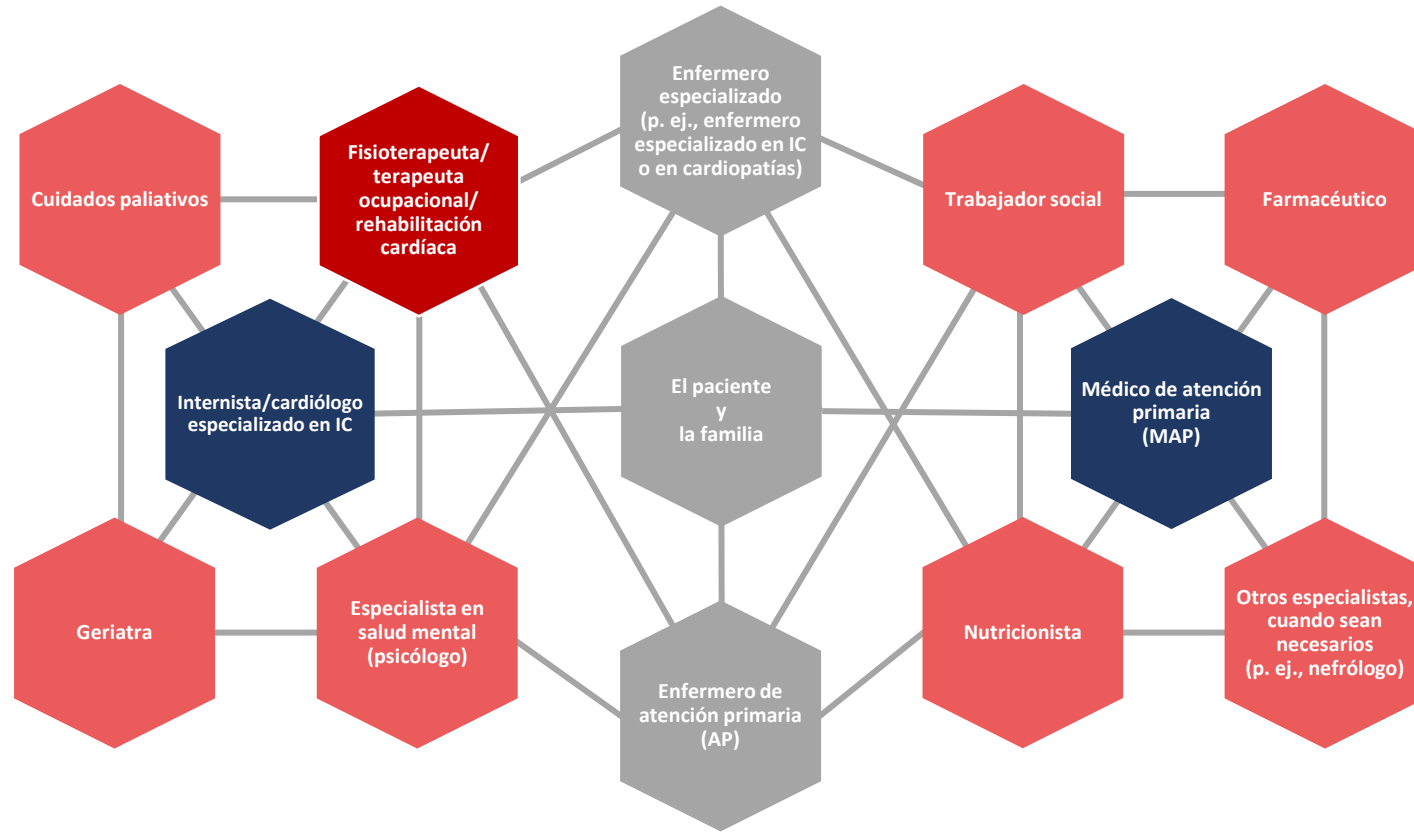


Table 7 Causes of elevated concentrations of natriuretic peptides⁸⁶⁻⁸⁸

Cardiac	<ul style="list-style-type: none"> Heart failure ACS Pulmonary embolism Myocarditis Left ventricular hypertrophy Hypertrophic or restrictive cardiomyopathy Valvular heart disease Congenital heart disease Atrial and ventricular tachyarrhythmias Heart contusion Cardioversion, ICD shock Surgical procedures involving the heart Pulmonary hypertension
Non-cardiac	<ul style="list-style-type: none"> Advanced age Ischaemic stroke Subarachnoid haemorrhage Renal dysfunction Liver dysfunction (mainly liver cirrhosis with ascites) Paraneoplastic syndrome COPD Severe infections (including pneumonia and sepsis) Severe burns Anaemia Severe metabolic and hormone abnormalities (e.g. thyrotoxicosis, diabetic ketosis)

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Manejo multidisciplinario: unidades de ICC



COR	LOE	RECOMMENDATIONS
1	B-R	1. In patients with high-risk HF, particularly those with recurrent hospitalizations for HFrEF, referral to multidisciplinary HF disease management programs is recommended to reduce the risk of hospitalization (1-4).
1	B-NR	2. In patients hospitalized with worsening HF, patient-centered discharge instructions with a clear plan for transitional care should be provided before hospital discharge (5,6).
2a	B-NR	3. In patients hospitalized with worsening HF, participation in systems that allow benchmarking to performance measures is reasonable to increase use of evidence-based therapy, and to improve quality of care (7-10).
2a	B-NR	4. In patients being discharged after hospitalization for worsening HF, an early follow-up, generally within 7 days of hospital discharge, is reasonable to optimize care and reduce rehospitalization (11,12).

Conclusiones



Gracias