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LES NOUVELLES DE RECOMMANDATIONS DE L'INSUFFISANCE CARDIAQUE 2021

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Art. 51 Innovation En santé

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The Process

- **Task Force (n=31)**
  - "COVID-19 GL"
  - 2 face to face meetings
  - Numerous Zoom Sessions
  - Considered published evidence until 31/03/
  - GL now finalised
  - Presented in full (simultaneous publication) at the ESC 2021
- **Evidence**
  - "High quality"
  - ESC rules for Classes of Recommendations (COR)/Levels of Evidence (LOE)
  - Voting (≥75% for a COR/LOE in a Table of Recommendations)

Heart Failure 2021

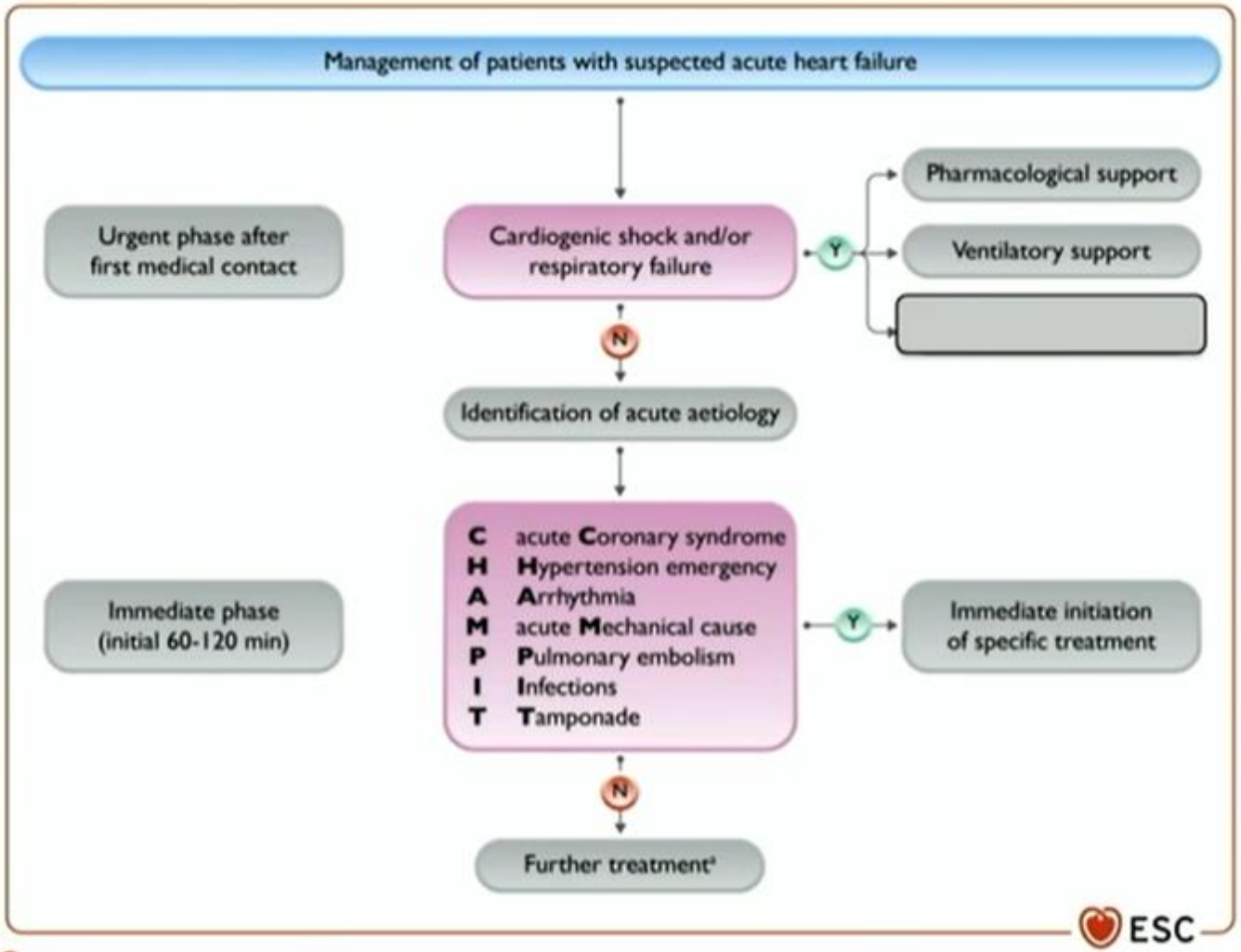
Table 1.1 Classes of recommendations

Classes of recommendations	Definition	Suggested wording to use
Class I	Evidence and/or general agreement that a given treatment or procedure is beneficial, useful, effective.	Is recommended/is indicated
Class II	Conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of the given treatment or procedure.	
Class IIa	*Weight of evidence/opinion is in favour of usefulness/efficacy.*	Should be considered
Class IIb	*Usefulness/efficacy is less well established by evidence/opinion.*	May be considered
Class III	Evidence or general agreement that the given treatment or procedure is not useful/effective, and in some cases may be harmful.	Is not recommended

Table 1.2 Level of evidence

Level of evidence A	Data derived from multiple randomized clinical trials or meta-analyses.
Level of evidence B	Data derived from a single randomized clinical trial or large non-randomized studies.
Level of evidence C	Consensus of opinion of the experts and/or small studies, retrospective studies, registries.

Initial management of acute heart failure.



Clinical presentations of acute heart failure

	Acutely decompensated heart failure (ADHF)	Acute pulmonary oedema	Isolated right ventricular failure	Cardiogenic Shock
Main mechanisms	LV dysfunction Sodium and water renal retention	Increased afterload and/or predominant LV diastolic dysfunction Valvular heart disease	RV dysfunction and/or pulmonary hypertension	Severe cardiac dysfunction
Main cause of symptoms	Fluid accumulation, increased intraventricular pressure	Fluid redistribution to the lungs and acute respiratory failure	Increased central venous pressure and often systemic hypoperfusion	Systemic hypoperfusion
Onset	Gradual (days)	Rapid (hours)	Gradual or rapid	Gradual or rapid
Main haemodynamic abnormalities	Increased LVEDP and PCWP[a] Low or normal cardiac output Normal to low SBP	Increased LVEDP and PCWP[a] Normal cardiac output Normal to high SBP	Increased RVEDP Low cardiac output Low SBP	Increased LVEDP and PCWP[a] Low cardiac output Low SBP
Main clinical presentations[1,446]	Wet and warm OR Wet and cold	Wet and warm	Wet and cold	Wet and cold
Main treatment	Diuretics Inotropic agents/vasopressors (if peripheral hypoperfusion/ hypotension) Short-term MCS if needed	Diuretics Vasodilators	Diuretics for peripheral congestion Inotropic agents/vasopressors (if peripheral hypoperfusion/ hypotension) Short-term MCS if needed	Inotropic agents/ vasopressors Short-term MCS

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New recommendations for pre-discharge and early post-discharge follow-up of patients hospitalized for acute heart failure

Recommendations	Class[a]	Level[b]
It is recommended that patients hospitalized for HF be carefully evaluated to exclude persistent signs of congestion before discharge and to optimize oral treatment.	I	C
It is recommended that evidence based oral medical treatment be administered before discharge.	I	C
An early follow-up visit is recommended at 1-2 weeks after discharge to assess signs of congestion, drugs' tolerance and start and/or uptitrate evidence-based therapy.	I	C
Ferric carboxymaltose should be considered for iron deficiency, defined as serum ferritin <100 ng/mL or serum ferritin 100-299 ng/mL with TSAT <20%, to improve symptoms and reduce rehospitalizations.	IIa	B

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[a]Class of recommendation. [b]Level of evidence

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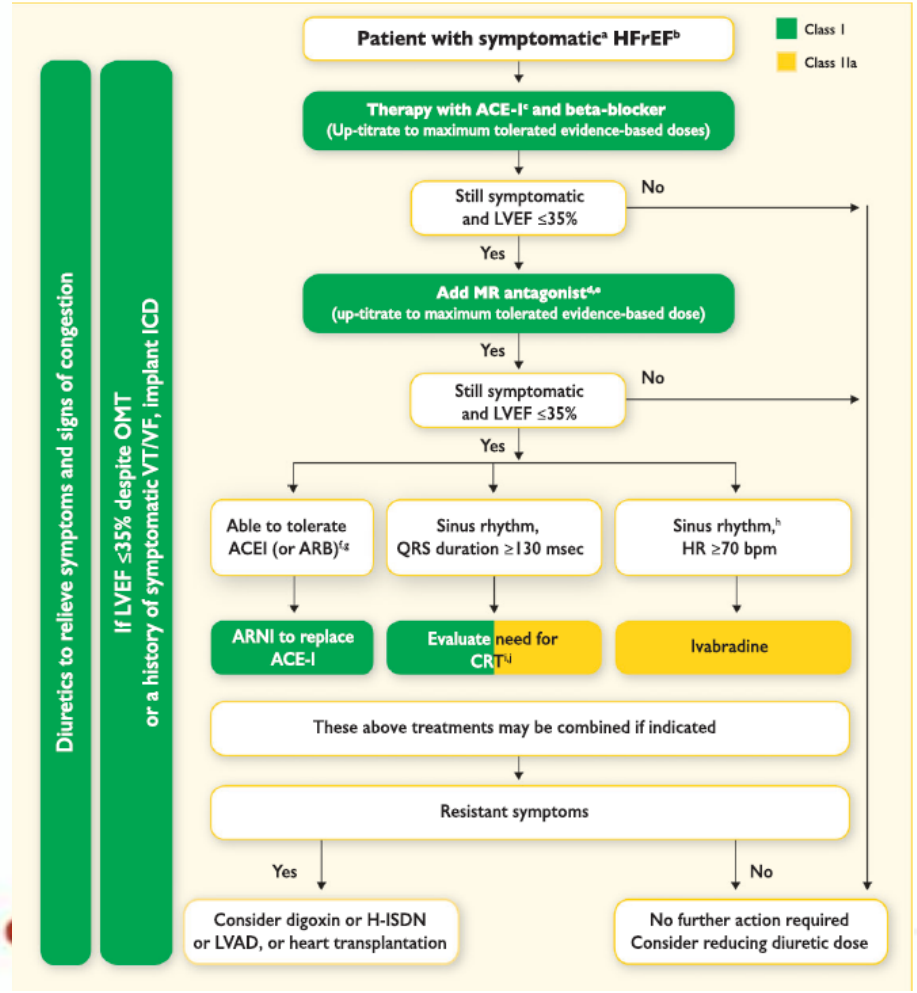
HF-REF

Start Point-ESC HF Guideline 2016: Treatment of HFrEF



No change in evidence

ACEI/ARB/BB/MRA

Diuretics

Digoxin

Ivabradine

Hydralazine-nitrate

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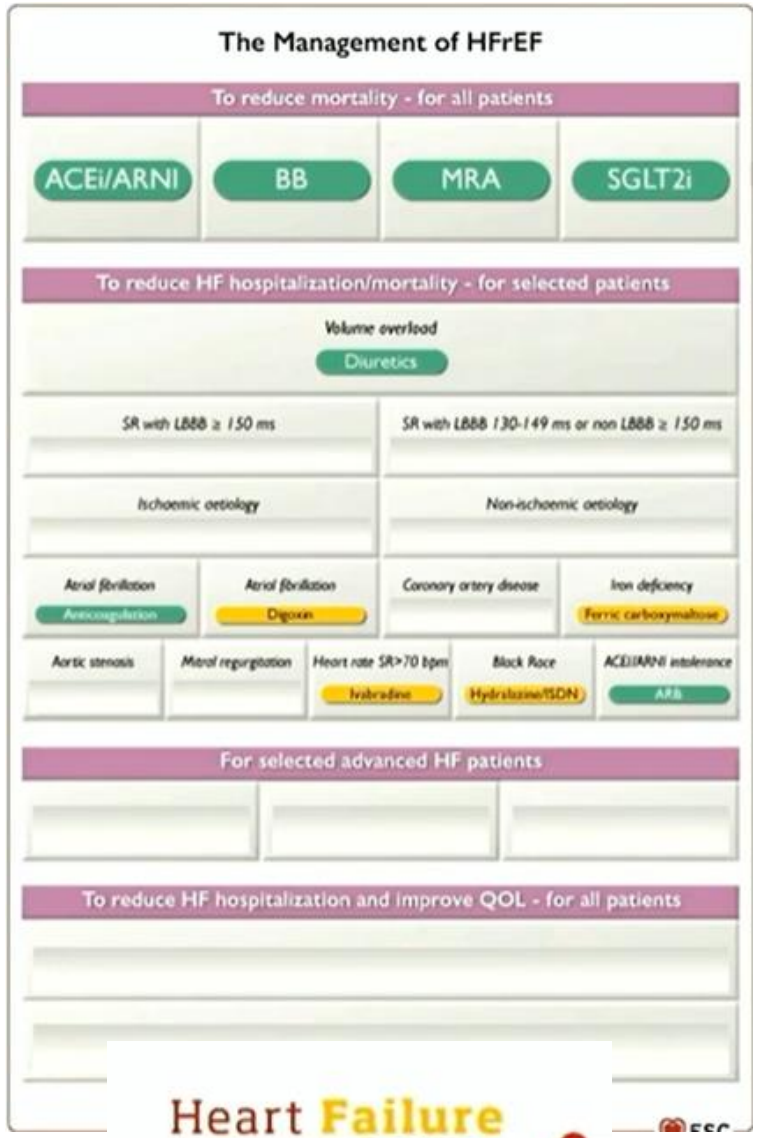
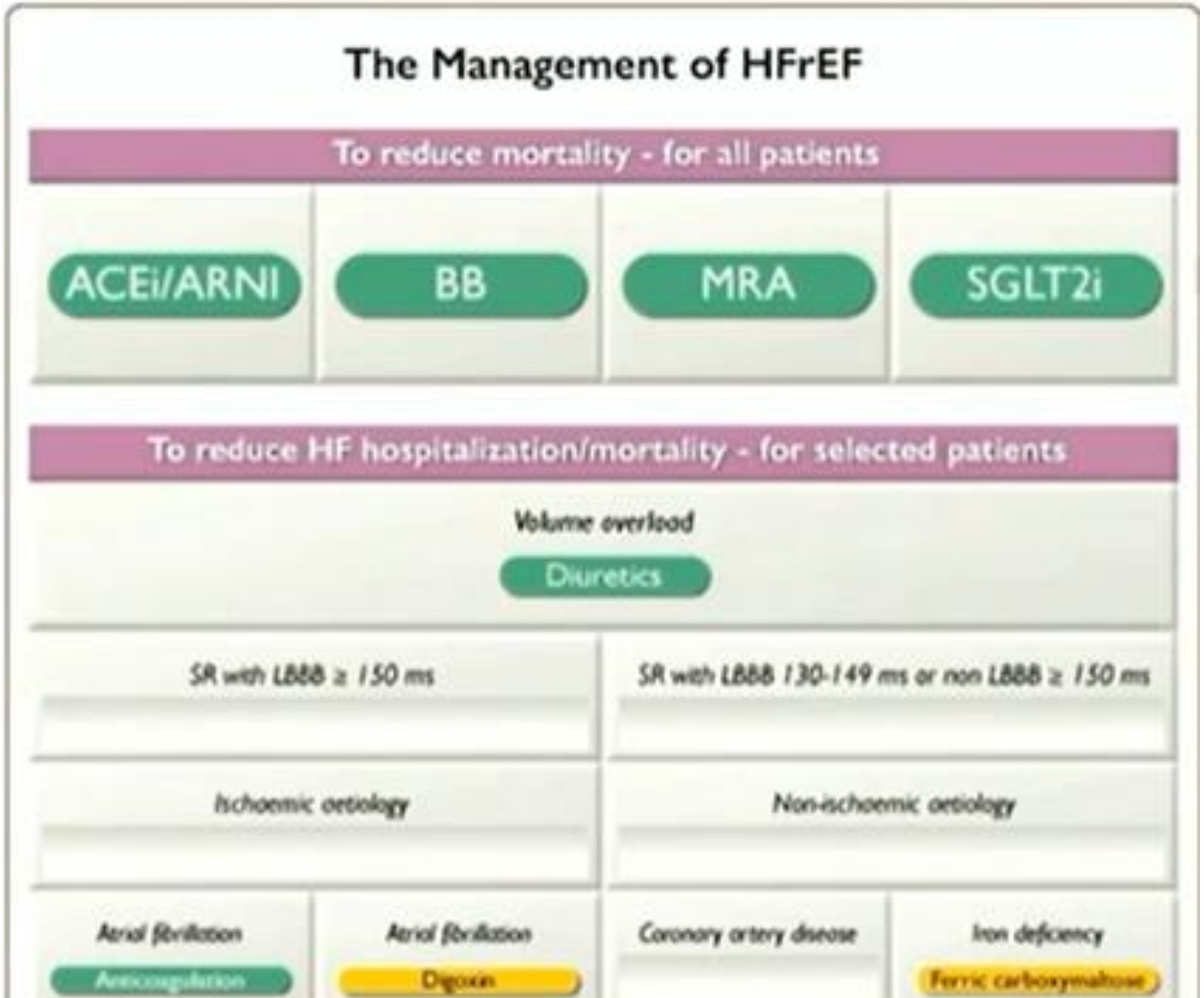
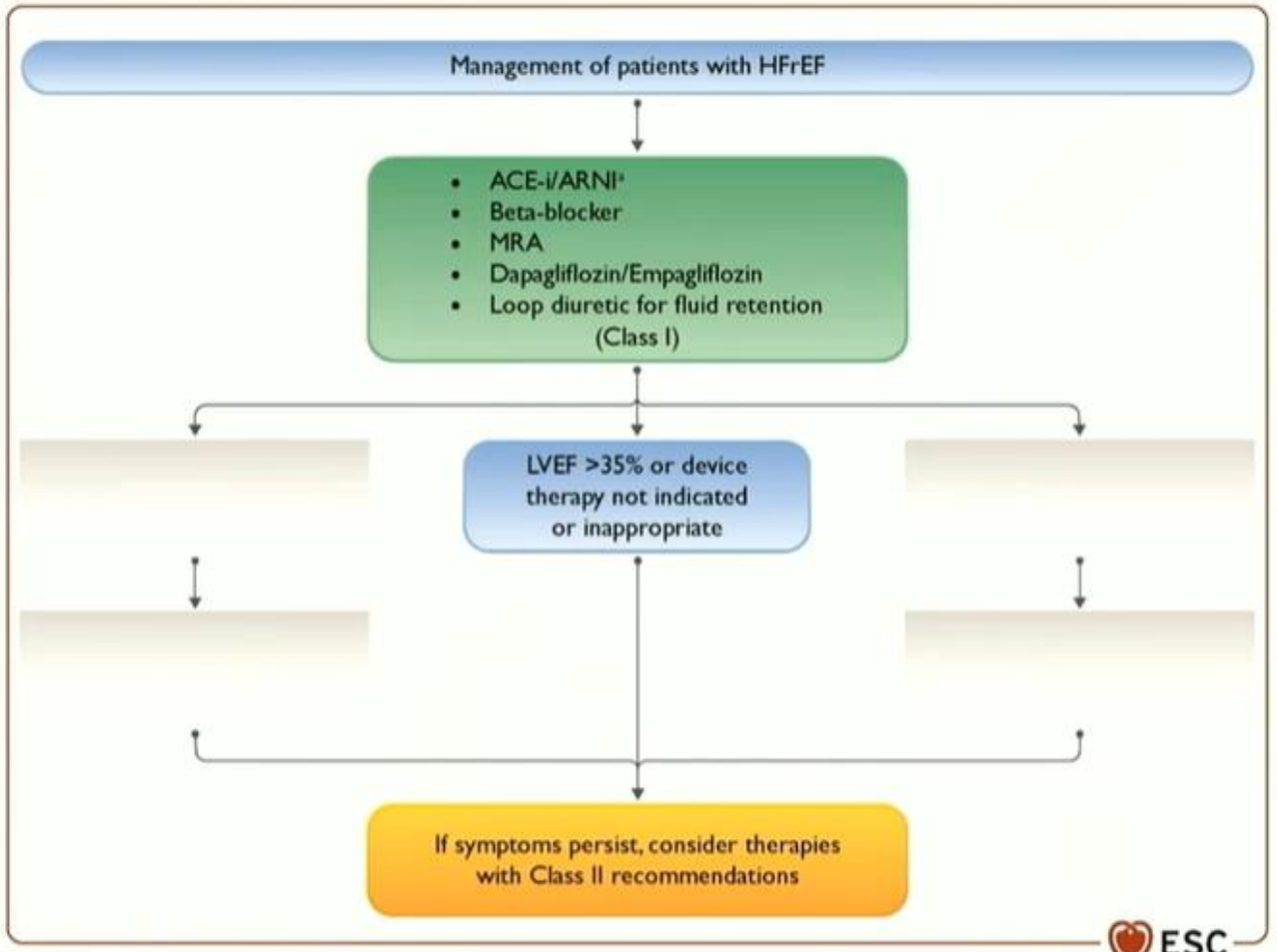
HF-REF





HF-REF

Management of patients with HFrEF – Therapeutic algorithm



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HF-REF

Drugs recommended in all patients with heart failure with reduced ejection fraction

Recommendations	Class[a]	Level[b]
ACE-I is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
Beta-blocker is recommended for patients with stable HFrEF to reduce the risk of HF hospitalization and death.	I	A
MRA is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
Dapagliflozin or empagliflozin are recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
Sacubitril/valsartan is recommended as a replacement for an ACE-I in patients with HFrEF to reduce the risk of HF hospitalization and death.	I	B

Table 1.2 Level of evidence

Level of evidence A	**Data derived from multiple randomized clinical trials or meta-analyses.**
Level of evidence B	**Data derived from a single randomized clinical trial or large non-randomized studies.**
Level of evidence C	**Consensus of opinion of the experts and/or small studies, retrospective studies, registries.**

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[a]Class of recommendation. [b]Level of evidence

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HF-REF

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ACE-I is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
Beta-blocker is recommended for patients with stable HFrEF to reduce the risk of HF hospitalization and death.	I	A
MRA is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.		
Dapagliflozin or empagliflozin are recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.	I	A
Sacubitril/valsartan is recommended as a replacement for an ACE-I in patients with HFrEF to reduce the risk of HF hospitalization and death.	I	B

New!

Initiation of sacubitril/valsartan in ACE inhibitor naive (i.e. de novo) patients with HFrEF may be considered (class of recommendation IIb, level of evidence B).

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[a]Class of recommendation. [b]Level of evidence

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HF-REF

Other drugs to be considered in selected patients with heart failure with reduced ejection fraction

Recommendations	Class[a]	Level[b]
I_f-channel inhibitor		
Ivabradine should be considered in symptomatic patients with LVEF ≤35%, in SR and a resting heart rate ≥70 bpm despite treatment with an evidence-based dose of beta-blocker (or maximum tolerated dose below that), ACE-I/(or ARNI) and an MRA, to reduce the risk of HF hospitalization and CV death.[139]	IIa	B
Ivabradine should be considered in symptomatic patients with LVEF ≤35%, in SR and a resting heart rate ≥70 bpm who are unable to tolerate or have contraindications for a beta-blocker to reduce the risk of HF hospitalization and CV death. Patients should also receive an ACE-I (or ARNI) and an MRA.[140]	IIa	C
Soluble Guanylate Cyclase Receptor Stimulator		
Vericiguat may be considered in patients in NYHA Class II–IV who have had worsening HF despite treatment with an ACE-I (or ARNI), a beta-blocker and an MRA to reduce the risk of CV mortality or HF hospitalization.[141]	IIb	B

Heart Failure 2021

[a]Class of recommendation. [b]Level of evidence

HF-REF

Other NEW drugs that may be considered in selected patients with heart failure with reduced ejection fraction

Recommendations	Class[a]	Level[b]
Soluble Guanylate Cyclase Receptor Stimulator		
Vericiguat may be considered in patients in NYHA Class II–IV who have had worsening HF despite treatment with an ACE-I (or ARNI), a beta-blocker and an MRA to reduce the risk of CV mortality or HF hospitalization.[141]	IIb	B

Currently, omecamtiv mecarbil is not licensed for use in HF. However, in the future it may be able to be considered, in addition to standard therapy for HFrEF to reduce the risk of CV mortality and hospitalization for HF

[a]Class of recommendation. [b]Level of evidence

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HF MidREF

Pharmacological treatments in patients with (NYHA class II-IV) heart failure with mildly reduced ejection fraction

Recommendations	Class[a]	Level[b]
Diuretics are recommended in patients with congestion and HFmrEF in order to alleviate symptoms and signs.	I	C
An ACE-I may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
An ARB may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
A beta-blocker may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
A MRA may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
Sacubitril/valsartan may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C

	favour of usefulness/efficacy.	
Class IIb	***Usefulness/efficacy is less well established by evidence/opinion.***	**May be considered**

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[a]Class of recommendation. [b]Level of evidence

HF MidREF : NYHA II-IV

Pharmacological treatments in patients with (NYHA class II-IV) heart failure with mildly reduced ejection fraction

Recommendations	Class[a]	Level[b]
Diuretics are recommended in patients with congestion and HFmrEF in order to alleviate symptoms and signs.		
An ACE-I may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
An ARB may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
A beta-blocker may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
A MRA may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C
Sacubitril/valsartan may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.	IIb	C

New!

Class IIb	***Usefulness/efficacy is less well established by evidence/opinion.***	**May be considered**

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[a]Class of recommendation. [b]Level of evidence

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New recommendations for pre-discharge and early post-discharge follow-up of patients hospitalized for acute heart failure

Recommendations	Class[a]	Level[b]
It is recommended that patients hospitalized for HF be carefully evaluated to exclude persistent signs of congestion before discharge and to optimize oral treatment.	I	C
It is recommended that evidence based oral medical treatment be administered before discharge.	I	C
An early follow-up visit is recommended at 1-2 weeks after discharge to assess signs of congestion, drugs' tolerance and start and/or uptitrate evidence-based therapy.	I	C
Ferric carboxymaltose should be considered for iron deficiency, defined as serum ferritin <100 ng/mL or serum ferritin 100-299 ng/mL with TSAT <20%, to improve symptoms and reduce rehospitalizations.	IIa	B

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[a]Class of recommendation. [b]Level of evidence

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HF PEF

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Recommendations for treatment of patients with heart failure with preserved ejection fraction

Recommendations	Class[a]	Level[b]
Screening for, and treatment of, aetiologies, and cardiovascular and non-cardiovascular comorbidities is recommended in patients with HFpEF (see relevant sections of this document).	I	C
Diuretics are recommended in congested patients with HFpEF in order to alleviate symptoms and signs.	I	C

AMYLOSE

Diagnosis and treatment of cardiac amyloidosis: a position statement of the ESC Working Group on Myocardial and Pericardial Diseases

Pablo Garcia-Pavia [1,2,3]*, Claudio Rapezzi[4,5], Yehuda Adler[6], Michael Arad[7], Cristina Basso [3,8,9], Antonio Brucato [10], Ivana Burazor [11], Alida L.P. Caforio [3,12], Thibaud Damy [3,13], Urs Eriksson [14], Marianna Fontana [15], Julian D. Gillmore [15], Esther Gonzalez-Lopez[1,3], Martha Grogan[16], Stephane Heymans[17,18,19], Massimo Imazio [20], Ingrid Kindermann[21], Arnt V. Kristen [22,23], Mathew S. Maurer[24], Giampaolo Merlini [25,26], Antonis Pantazis[27], Sabine Pankuweit[28], Angelos G. Rigopoulos[29], and Ales Linhart [30]

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[a]Class of recommendation. [b]Level of evidence

HF + AF

Changes in recommendations for the treatment of atrial fibrillation in patients with heart failure

2021	Class [a]	2016	Class[a]
Recommendations for management of patients with HF and atrial fibrillation			
DOACs are recommended in preference to VKAs in patients with HF, except in those with moderate or severe mitral stenosis or mechanical prosthetic heart valves.	I	For patients with HF and non-valvular AF eligible for anticoagulation based on a CHA_2DS_2-VASc score, NOACs rather than warfarin should be considered for anticoagulation as NOACs are associated with a lower risk of stroke, intracranial haemorrhage and mortality, which outweigh the increased risk of gastrointestinal haemorrhage.	IIa

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[a]Class of recommendation.

New recommendations for the treatment of diabetes

Recommendations	Class[a]	Level[b]
SGLT2 inhibitors (canagliflozin, dapagliflozin, empagliflozin, ertuglifozin, sotaglifozin) are recommended in patients with T2DM at risk of CV events to reduce hospitalizations for HF, major CV events, end-stage renal dysfunction and CV death.	I	A
SGLT2 inhibitors (dapagliflozin, empagliflozin and sotagliflozin) are recommended in patients with T2DM and HFrEF to reduce hospitalizations for HF and CV death.	I	A

Classes of recommendations	Definition	Suggested wording to use
Class I	Evidence and/or general agreement that a given treatment or procedure is beneficial, useful, effective.	Is recommended/is indicated
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Table 1.2 Level of evidence

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[a]Class of recommendation. [b]Level of evidence

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HF + Iron deficiency

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Recommendations for anaemia and iron deficiency in patients with heart failure

Recommendations	Class[a]	Level[b]
It is recommended that all patients with HF be periodically screened for anaemia and iron deficiency with a full blood count, serum ferritin concentration and TSAT.	I	C
Intravenous iron supplementation with ferric carboxymaltose should be considered in symptomatic patients with LVEF ≤45% and iron deficiency, defined as serum ferritin <100 ng/mL or serum ferritin 100-299 ng/mL with TSAT <20%, to alleviate HF symptoms, improve exercise capacity and QOL.	IIa	A
Intravenous iron supplementation with ferric carboxymaltose should be considered in symptomatic HF patients recently hospitalized for HF and with LVEF < 50% and iron deficiency, defined as serum ferritin <100 ng/mL or serum ferritin 100-299 ng/mL with TSAT <20%, to reduce the risk of heart failure hospitalization.	IIa	B

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[a]Class of recommendation. [b]Level of evidence

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HF + Cancer

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New recommendations for the management of patients with cancer and heart failure

Recommendations	Class[a]	Level[b]
It is recommended that cancer patients at increased risk for cardiotoxicity, defined by a history or risk factors of CV disease, previous cardiotoxicity or exposure to cardiotoxic agents, undergo CV evaluation before scheduled anticancer therapy, preferably by a cardiologist with experience/interest in Cardio-Oncology.	I	C
Treatment with an ACE-I and a beta-blocker (preferably carvedilol) should be considered in cancer patients developing systolic LV dysfunction, defined as a 10% or more decrease in LVEF and to a value lower than 50%, during anthracycline chemotherapy.	IIa	B
A baseline CV risk assessment should be considered in all cancer patients scheduled to receive a cancer treatment with the potential to cause heart failure.	IIa	C

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[a]Class of recommendation. [b]Level of evidence

ATTR-CM

New recommendation for the treatment of transthyretin amyloidosis-cardiac amyloidosis

Recommendations	Class[a]	Level[b]
Tafamidis is recommended in patients with genetic testing proven hereditary hTTR-CMP and NYHA class I or II symptoms to reduce symptoms and CV hospitalization and mortality.	I	B
Tafamidis is recommended in patients with wtTTR-CA and NYHA class I or II symptoms to reduce symptoms and CV hospitalization and mortality.	I	B

Classes of recommendations	Definition	Suggested wording to use
Class I	Evidence and/or general agreement that a given treatment or procedure is beneficial, useful, effective.	Is recommended/is indicated

Table 1.2 Level of evidence

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[a]Class of recommendation. [b]Level of evidence

What's new in medical treatment in the ESC HF Guidelines 2021

- A simplified treatment algorithm for HFrEF based on the early administration of four major classes of drugs: ACEi/ARNI, BBs, MRA, SGLT2i
- Recommendations for the treatment of HFmrEF
- A classification of acute HF
- Treatment algorithms based on phenotypes
  - QRS duration and morphology
  - Aetiology (ischaemic / not ischaemic)
  - Cardiac rhythm, valvular heart disease
  - Diabetes, iron deficiency, electrolyte abnormalities (hyperkaelemia)
  - Cancer
  - Amyloidosis and other cardiomyopathies

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Merci à toutes les IDES-Protocole de Coopération (n>45 en France) et IPA qui s'engagent dans l'IC

La Pitié - Bureau Télésurveillance - Janv2021


Lariboisière Bureau CECICS – Janv2021

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