2021 Linee guida sulla gestione dello scompenso cardiaco

Prof. Massimo Volpe MD, FAHA, FESC,

Chair of Cardiology, Director of the Specialty School in Cardiovascular Disease
Department of Clinical and Molecular Medicine
Faculty of Medicine and Psychology, University of Rome Sapienza, Rome, Italy
ProRector Research Planning, University of Rome Sapienza
Immediate past-Dean of Medicine, Faculty of Medicine and Psychology, University of Rome Sapienza
Head of the Division of Cardiology and of Cardiothoracic and Vascular Science Department
Sant'Andrea Hospital, Rome, Italy

E-mail: massimo.volpe@uniroma1.it

Conflict of Interest Statement

Massimo Volpe **E: massimo.volpe@uniroma1.it**

Title	MD, Full Professor of Cardiology, FESC, FAHA
Current Occupation	University of Rome Sapienza, Department of Clinical and Molecular Medicine
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ESC European Society of Cardiology
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ESC GUIDELINES

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

Developed by the Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)

With the special contribution of the Heart Failure Association (HFA) of the ESC

Authors/Task Force Members: Theresa A. McDonagh* (Chairperson) (United Kingdom), Marco Metra * (Chairperson) (Italy), Marianna Adamo (Task Force Coordinator) (Italy), Roy S. Gardner (Task Force Coordinator) (United Kingdom), Andreas Baumbach (United Kingdom), Michael Böhm (Germany), Haran Burri (Switzerland), Javed Butler (United States of America), Jelena Čelutkienė (Lithuania), Ovidiu Chioncel (Romania), John G.F. Cleland (United Kingdom), Andrew J.S. Coats (United Kingdom), Maria G. Crespo-Leiro (Spain), Dimitrios Farmakis (Greece), Martine Gilard (France), Stephane Heymans (Netherlands), Arno W. Hoes (Netherlands), Tiny Jaarsma (Sweden), Ewa A. Jankowska (Poland), Mitja Lainscak (Slovenia), Carolyn S.P. Lam (Singapore), Alexander R. Lyon (United Kingdom), John J.V. McMurray (United Kingdom), Alex Mebazaa (France), Richard Mindham (United Kingdom), Claudio Muneretto (Italy), Massimo Francesco Piepoli (Italy), Susanna Price (United Kingdom), Giuseppe M.C. Rosano (United Kingdom), Frank Ruschitzka (Switzerland), Anne Kathrine Skibelund (Denmark), ESC Scientific Document Group

Document Reviewers: Rudolf A. de Boer (CPG Review Coordinator) (Netherlands), P. Christian Schulze (CPG Review Coordinator) (Germany), Magdy Abdelhamid (Egypt), Victor Aboyans (France), Stamatis Adamopoulos (Greece), Stefan D. Anker (Germany), Elena Arbelo (Spain), Riccardo Asteggiano (Italy), Johann Bauersachs (Germany), Antoni Bayes-Genis (Spain), Michael A. Borger (Germany), Werner Budts (Belgium), Maja Cikes (Croatia), Kevin Damman (Netherlands), Victoria Delgado (Netherlands), Paul Dendale (Belgium), Polychronis Dilaveris (Greece), Heinz Drexel (Austria), Justin Ezekowitz (Canada), Volkmar Falk (Germany), Laurent Fauchier (France), Gerasimos Filippatos (Greece), Alan Fraser (United Kingdom), Norbert Frey (Germany), Chris P. Gale (United Kingdom), Finn Gustafsson (Denmark), Julie Harris (United Kingdom), Bernard Iung (France), Stefan Janssens (Belgium), Mariell Jessup (United States of America), Aleksandra Konradi (Russia), Dipak Kotecha (United Kingdom), Ekaterini Lambrinou (Cyprus), Patrizio Lancellotti (Belgium), Ulf Landmesser (Germany), Christophe Leclercq (France), Basil S. Lewis (Israel), Francisco Leyva (United Kingdom), Ales Linhart (Czech Republic), Maja-Lisa Løchen (Norway), Lars H. Lund (Sweden), Donna Mancini (United States of America), Josep Masip (Spain), Davor Milicic (Croatia), Christian Mueller (Switzerland), Holger Nef (Germany), Jens-Cosedis Nielsen (Denmark), Lis Neubeck (United Kingdom), Michel Noutsias (Germany), Steffen E. Petersen (United Kingdom), Anna Sonia Petronio (Italy), Piotr Ponikowski (Poland), Eva Prescott (Denmark), Amina Rakisheva (Kazakhstan), Dimitrios J. Richter (Greece), Evgeny Schlyakhto (Russia), Petar Seferovic (Serbia), Michele Senni (Italy), Marta Sitges (Spain), Miguel Sousa-Uva (Portugal), Carlo G. Tocchetti (Italy), Rhian M. Touyz (United Kingdom), Carsten Tschoepe (Germany), Johannes Waltenberger (Germany)

All experts involved in the development of these guidelines have submitted declarations of interest. These have been compiled in a report and published in a supplementary document simultaneously to the guidelines. The report is also available on the ESC website www.escardio.org/guidelines

For the Supplementary Data which include background information and detailed discussion of the data that have provided the basis for the guidelines see *European Heart Journal* online

Novità Linee guida 2021 in sintesi

2.1 What is new

New concepts

A change of the term 'heart failure with mid-range ejection fraction' to 'heart failure with mildly reduced ejection fraction' (HFmrEF).	Nuova definizione di scompenso cardiaco a frazione d'eiezione moderatamente ridotta «MIDLY REDUCED»
A new simplified treatment algorithm for HFrEF.	Algoritmo terapeutico semplificato
The addition of a treatment algorithm for HFrEF according to phenotypes.	Nuovo algoritmo terapeutico per HFrEF considerando i diversi fenotipi di pazienti
Modified classification for acute HF.	
Updated treatments for most non-cardiovascular comorbidities including diabetes, hyperkalaemia, iron deficiency, and cancer.	
Updates on cardiomyopathies including the role of genetic testing and new treatments.	
The addition of key quality indicators.	Indicatori di qualità

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HF = heart failure.

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Novità Linee guida 2021

- **Algoritmo semplificato** di HFrEF basato sull'uso di 4 classi terapeutiche: ACEi/**ARNI**, BBs, MRA, SGLT2i in aggiunta alla triplice terapia di base
- Algoritmo di trattamento semplificato
- **Raccomandazioni per HFmrEF**
- **Fenotipizzazione di HFrEF**
- **Guida pratica per l'uso delle diverse classi farmacologiche**
- **Inserimento di indicatori di qualità**

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Definizione e classificazione dello scompenso cardiaco

Table 3 **Definition of heart failure with reduced ejection fraction, mildly reduced ejection fraction and preserved ejection fraction**

Type of HF		HFrEF	HFmrEF	HFpEF
CRITERIA	1	Symptoms ± Signs[a]	Symptoms ± Signs[a]	Symptoms ± Signs[a]
	2	LVEF ≤40%	LVEF 41–49%[b]	LVEF ≥50%
	3	–	–	Objective evidence of cardiac structural and/or functional abnormalities consistent with the presence of LV diastolic dysfunction/raised LV filling pressures, including raised natriuretic peptides[c]

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Pazienti con **LVEF 41-49%** hanno una funzione sistolica moderatamente ridotta, **HFmrEF**. Un'analisi retrostettiva si RCTs ha dimostrato che questi pazienti **possono beneficiare della stessa terapia per i pazienti con LVEF ≤ 40%.**

patterns of cardiac remodelling, and outcomes among the LVEF categories in HF. Patients with HFmrEF have, on average, features that are more similar to HFrEF than HFpEF, in that they are more com-

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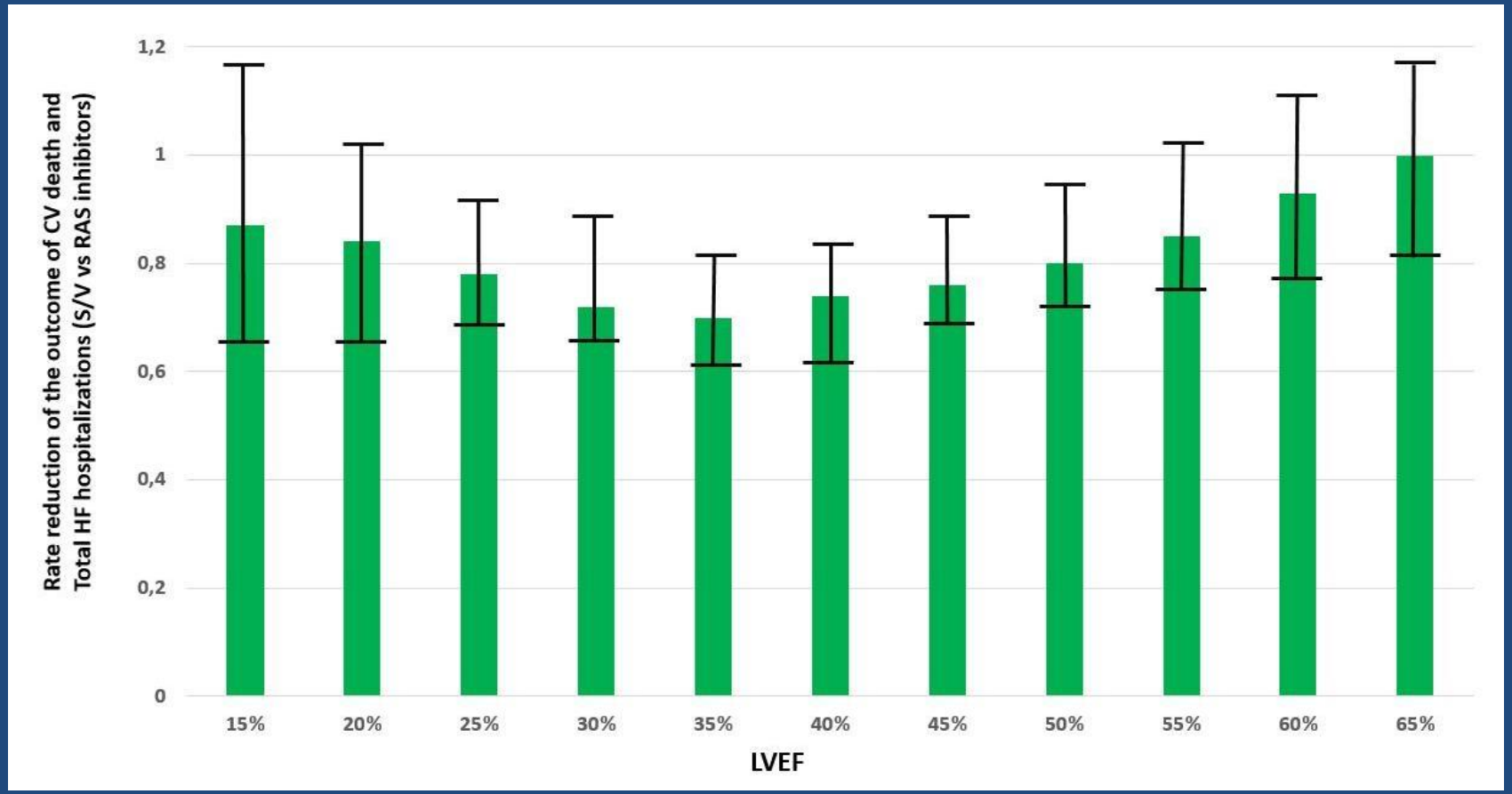
Recent Clinical Trials and Guidelines in HF

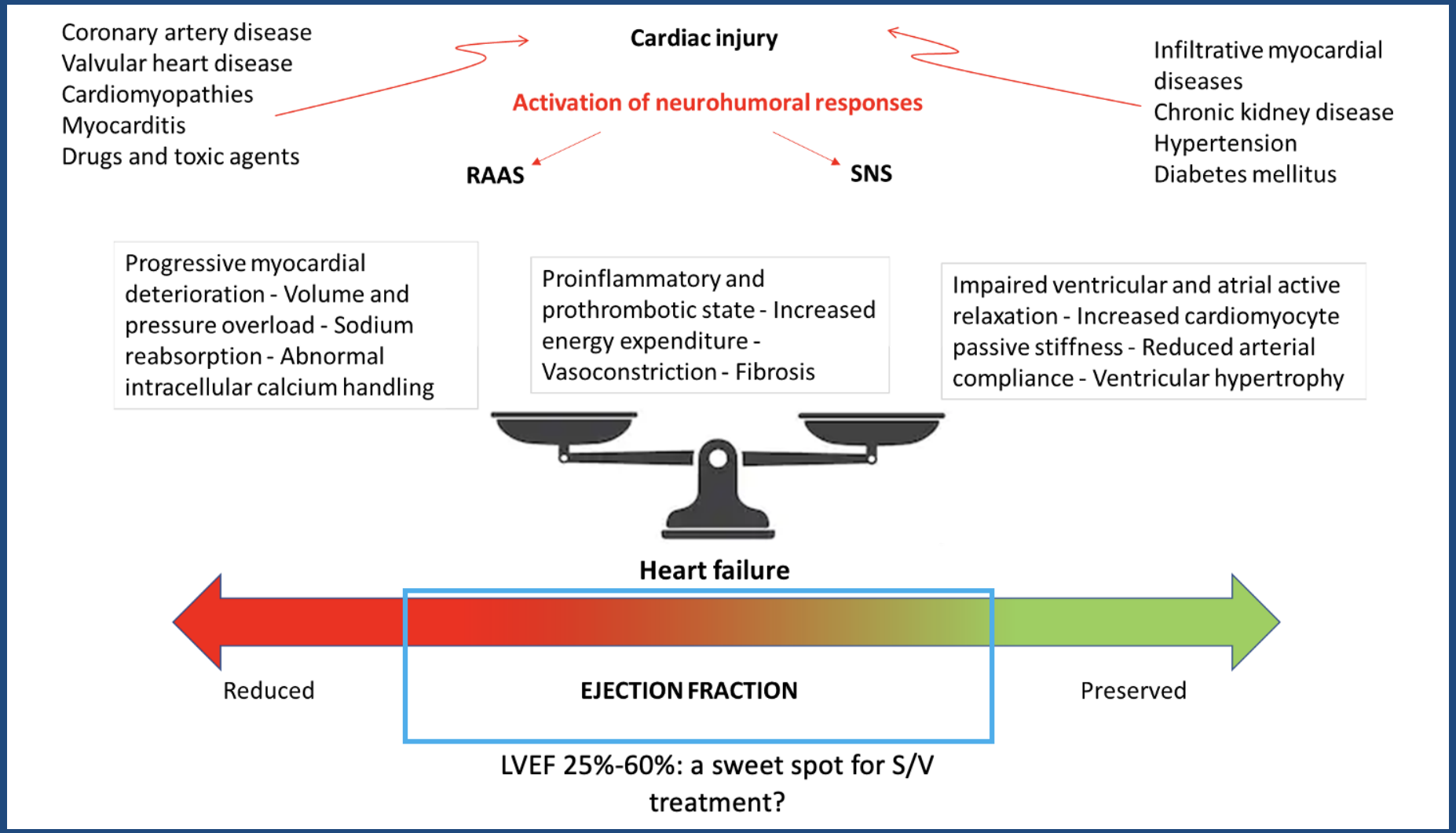
Are we still addressing Heart Failure or « The Ejection Fraction Disease»?

Beneficial effects of sacubitril/valsartan across the spectrum of ejection fraction



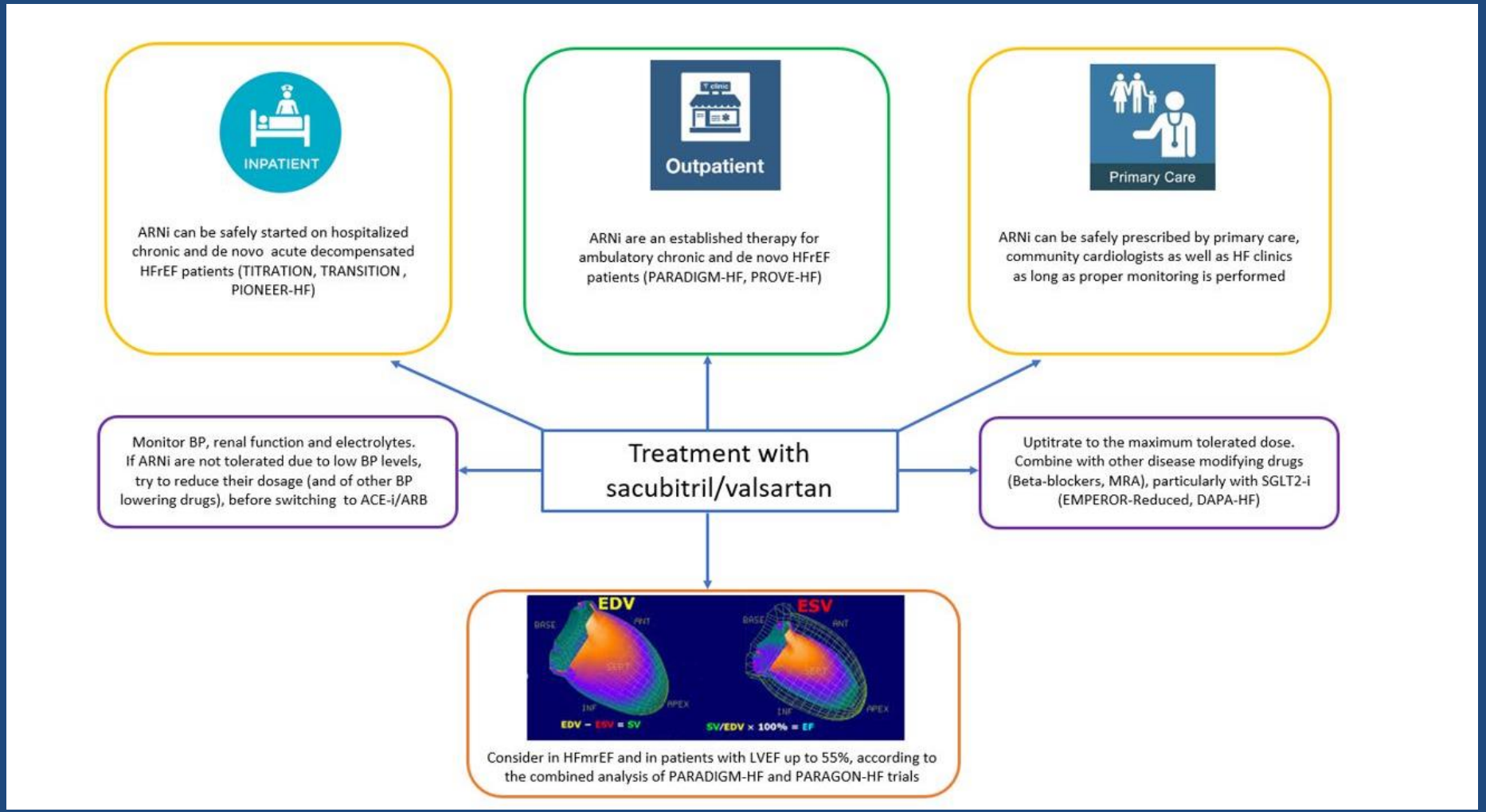
Volpe M et al 2020, IJC 2020

A sweet spot for S/V treatment?



Gallo G, Volpe M et al. Front. In Physiol. 2021

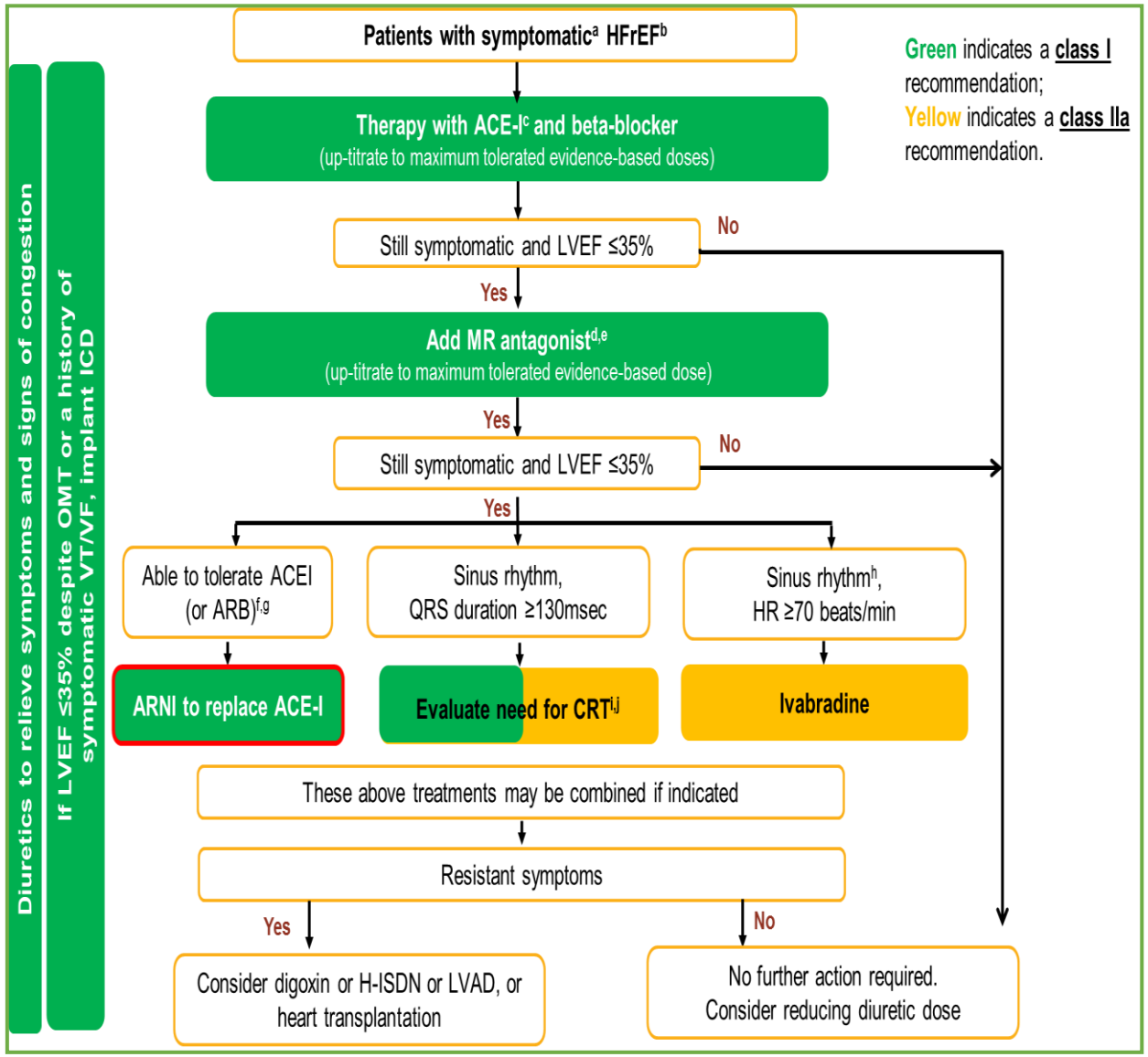
Indications for sacubitril/valsartan treatment in acute and chronic settings of heart failure

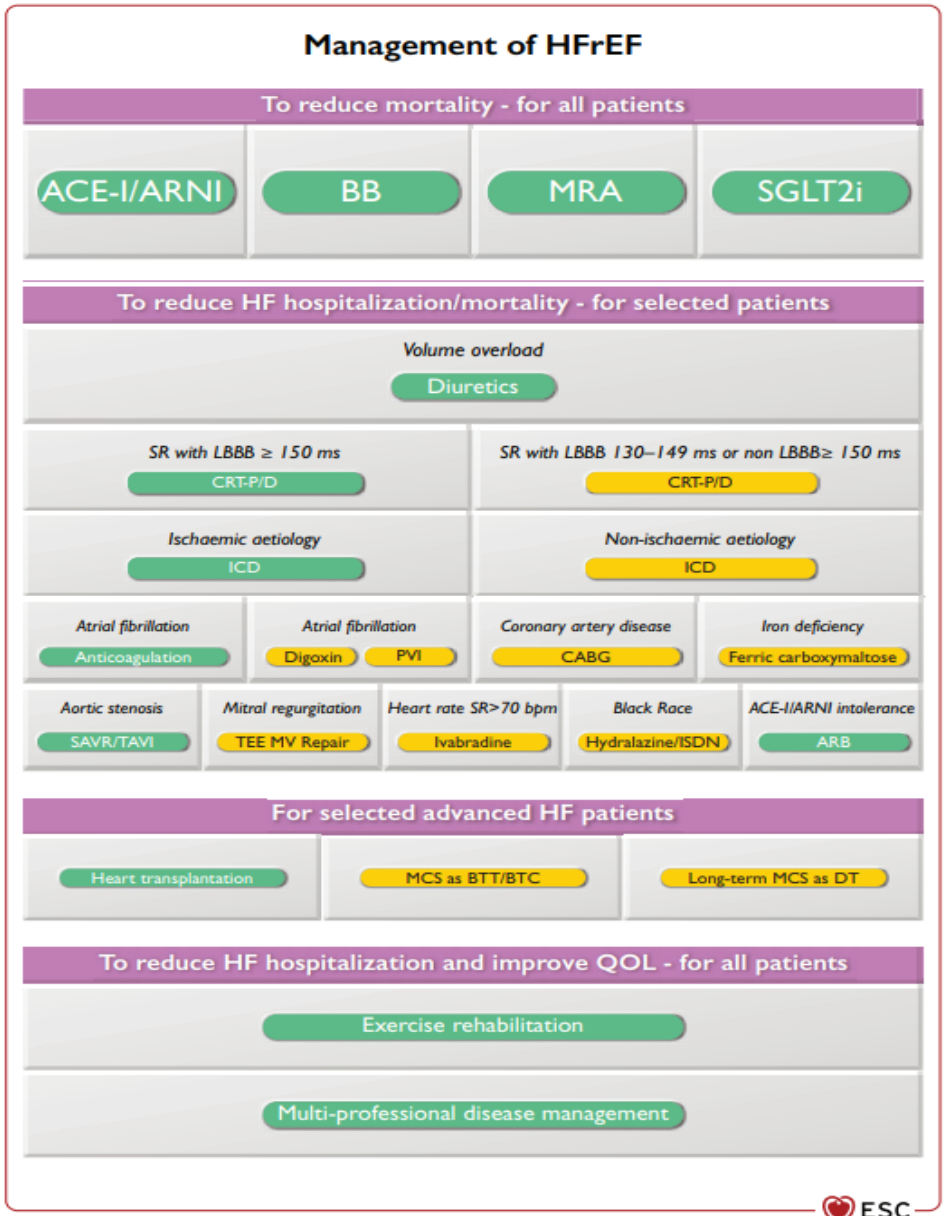


Volpe M et al 2020, IJC 2020

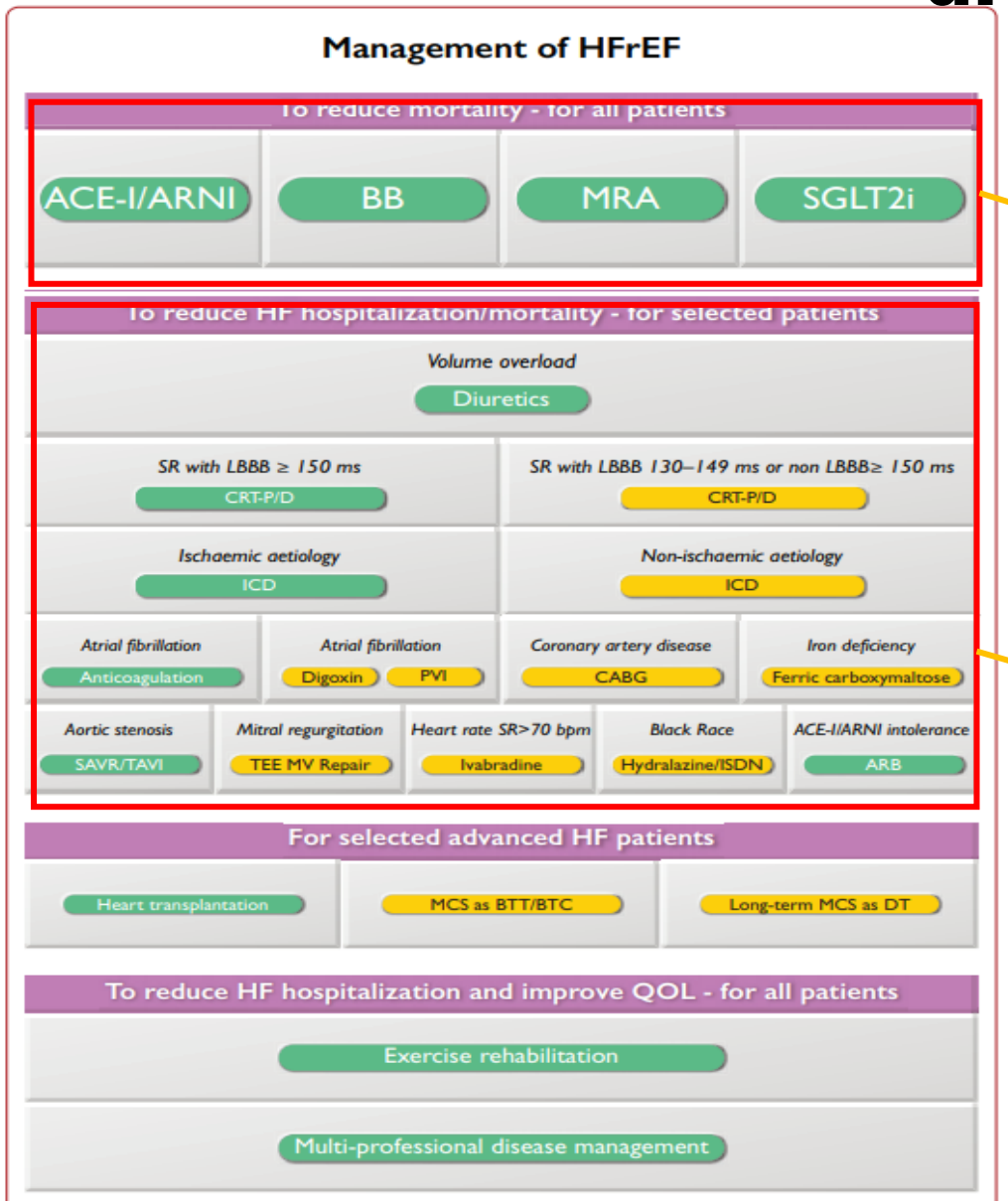
Scompenso cardiaco a frazione di eiezione ridotta

Cosa cambia nelle Linee guida dal 2016 al 2021





Linee guida ESC 2021: management/algoritmo centrale di trattamento



- **ALGORITMO CENTRALE DI TRATTAMENTO :**
  ACEi/**ARNI,** BB, MRA,

SGLT2-i in aggiunta alla triplice terapia di base

Fenotipizzazione dello Scompenso Cardiaco

- Congestione
- QRS
- Eziologia dello scompenso (ischemia/non ischemia
- Anemia Sideropenica
- Fibrillazione Atriale
- Valvulopatie
- Razza
- Intolleranza ACE/ARNI

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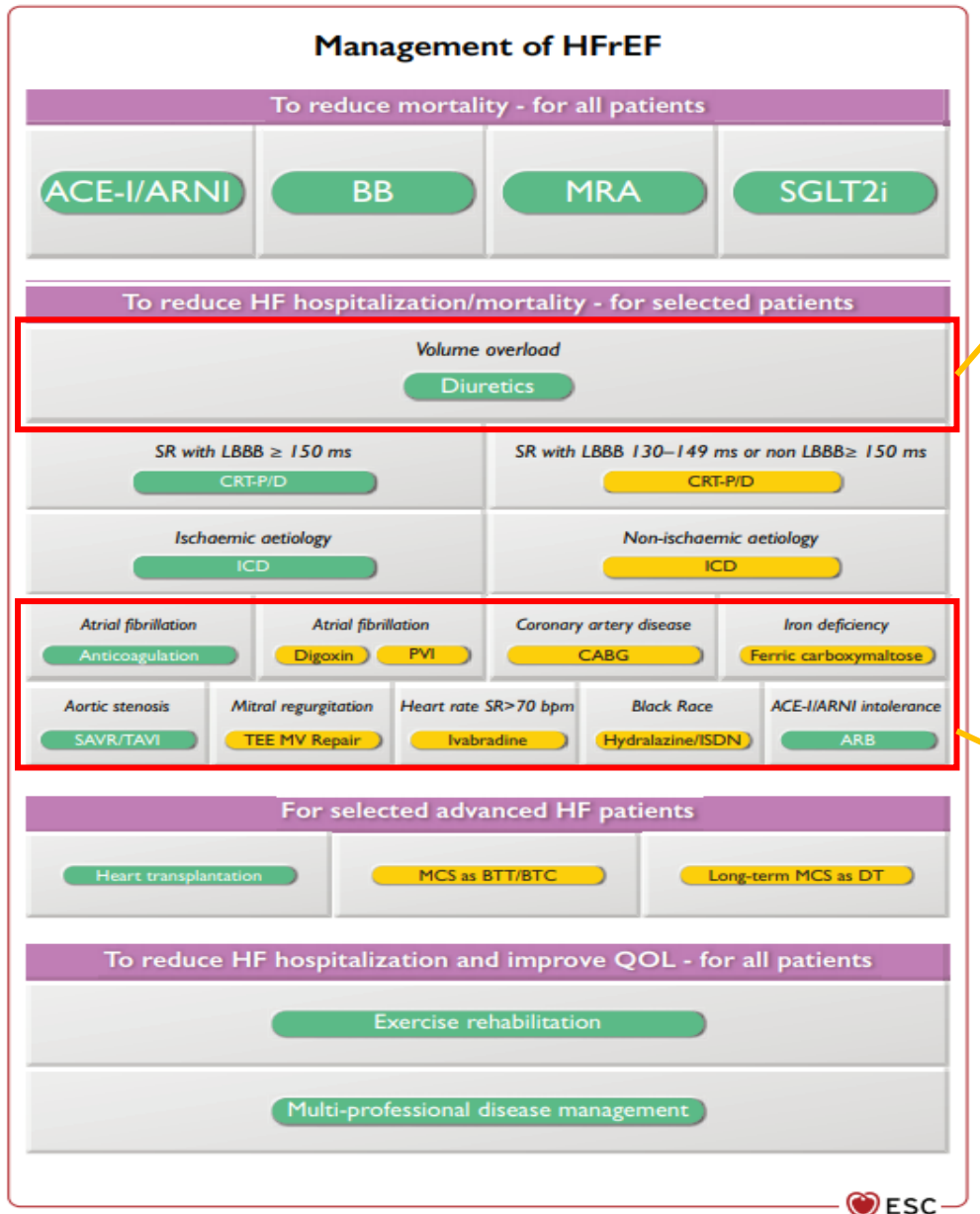
Linee guida ESC 2021: management/diuretici e ARBs



Loop diuretics		
Diuretics are recommended in patients with HFrEF with signs and/or symptoms of congestion to alleviate HF symptoms, improve exercise capacity, and reduce HF hospitalizations.[137]	I	C

should only be used with care. Of note, ARNI, MRAs, and SGLT2 inhibitors may also possess diuretic properties.[129,145]

The aim of diuretic therapy is to achieve and maintain euvolaemia with the lowest diuretic dose. In some euvolaemic/hypovolaemic

ARB		
An ARB[c] is recommended to reduce the risk of HF hospitalization and CV death in symptomatic patients unable to tolerate an ACE-I or ARNI (patients should also receive a beta-blocker and an MRA).[138]	I	B

* Scheda di entresto

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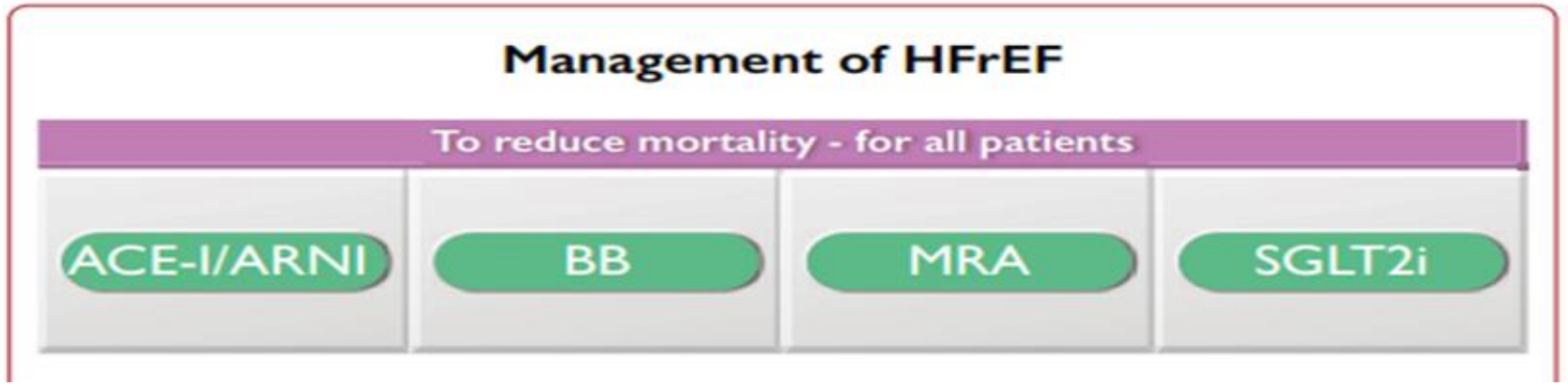
Linee guida ESC 2021: algoritmo centrale



Pharmacological treatments indicated in patients with (NYHA class II–IV) heart failure with reduced ejection fraction (LVEF ≤40%)

Recommendations	Class[a]	Level[b]
An ACE-I is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.[110–113]	I	A
A beta-blocker is recommended for patients with stable HFrEF to reduce the risk of HF hospitalization and death.[114–120]	I	A
An MRA is recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.[121,122]	I	A
Dapagliflozin or empagliflozin are recommended for patients with HFrEF to reduce the risk of HF hospitalization and death.[108,109]	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.[105]	I	B

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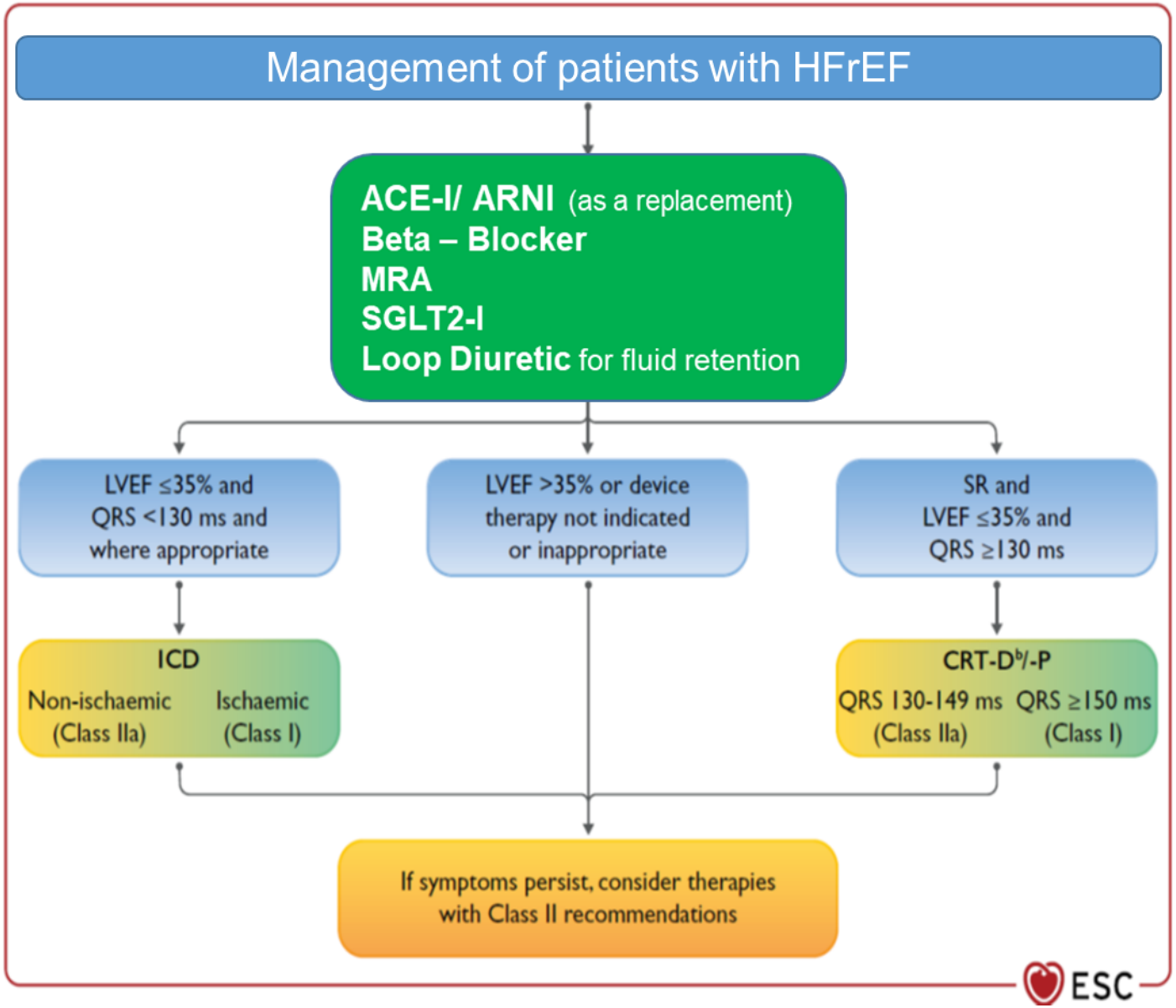
Flow chart di management



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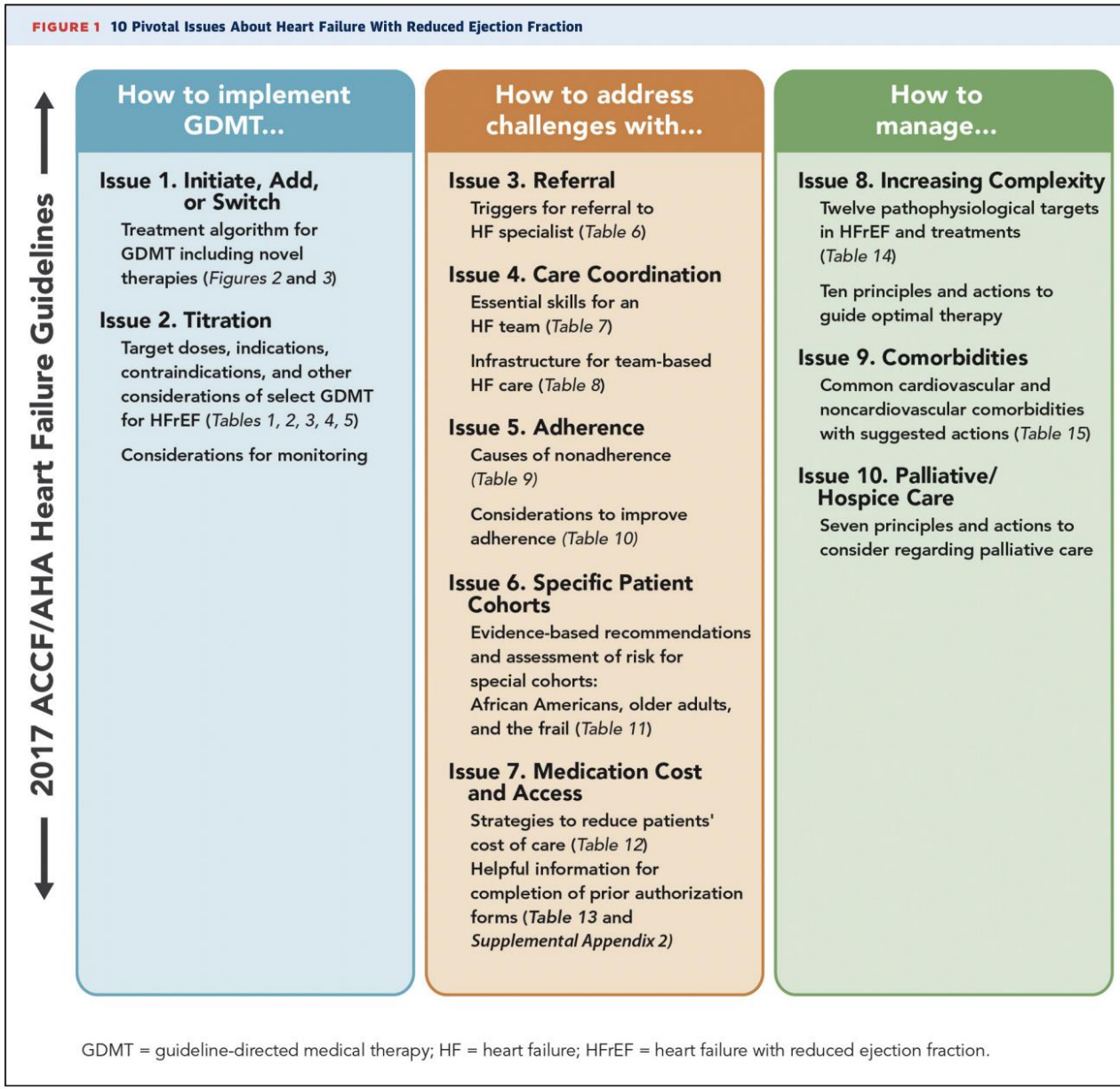
EXPERT CONSENSUS DECISION PATHWAY

2021 Update to the 2017 ACC Expert Consensus Decision Pathway for Optimization of Heart Failure Treatment: Answers to 10 Pivotal Issues About Heart Failure With Reduced Ejection Fraction

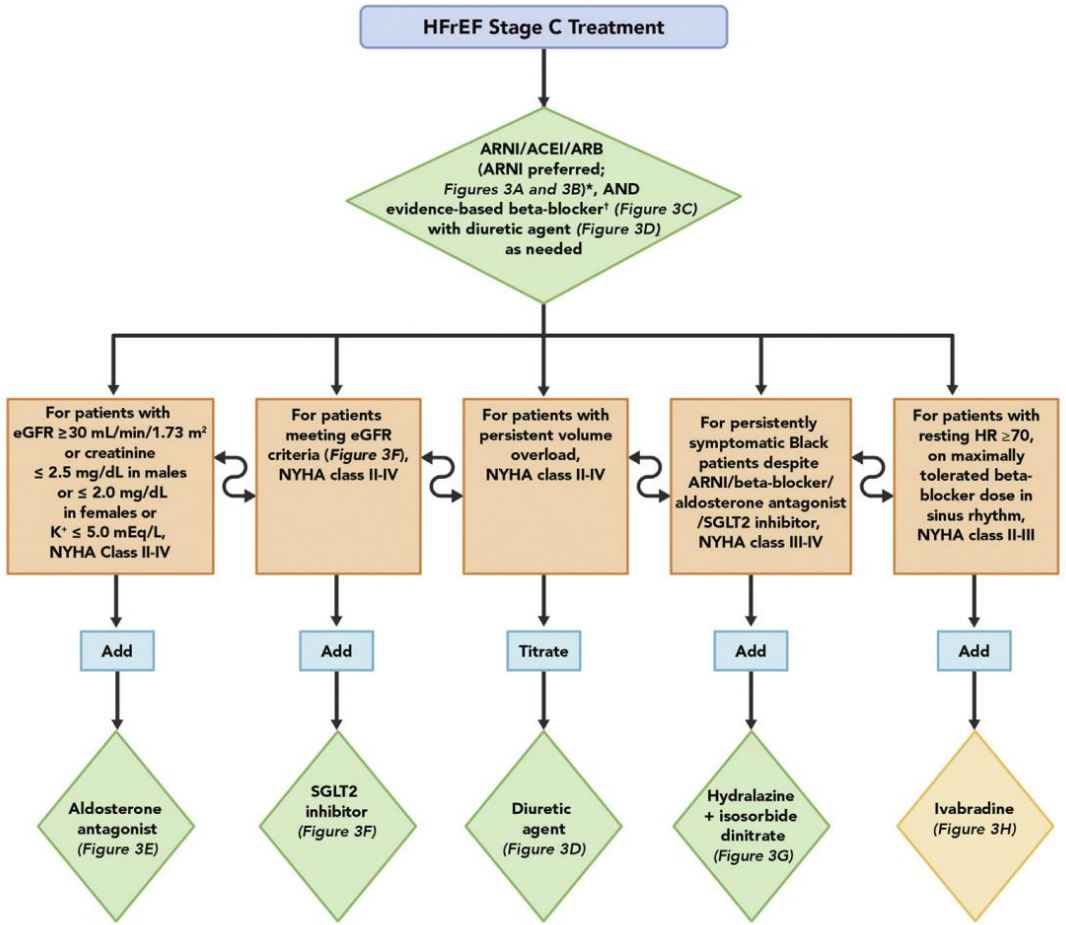
A Report of the American College of Cardiology Solution Set Oversight Committee

FIGURE 1 10 Pivotal Issues About Heart Failure With Reduced Ejection Fraction



GDMT = guideline-directed medical therapy; HF = heart failure; HFrEF = heart failure with reduced ejection fraction.

FIGURE 2 Treatment Algorithm for Guideline-Directed Medical Therapy Including Novel Therapies



*ACEI/ARB should only be considered in patients with contraindications, intolerance or inaccessibility to ARNI. In those instances, please consult Figure 3 and text for guidance on initiation.

†Carvedilol, metoprolol succinate, or bisoprolol.

ACEI = angiotensin-converting enzyme inhibitors; ARNI = angiotensin receptor-neprilysin inhibitors; ARB = angiotensin receptor blocker; eGFR = estimated glomerular filtration rate; HFrEF = heart failure with reduced ejection fraction; HR = heart rate; K^+ = potassium; NYHA = New York Heart Association; SGLT2 = sodium-glucose cotransporter-2.

Green color identifies a Class I therapy from clinical practice guidelines, whereas yellow color indicates a Class II therapy.

Scompenso cardiaco a frazione d’eiezione midly reduced

ARNI nell'algoritmo terapeutico della HFmrEF

Recommendations	Class[a]	Level[b]
Diuretics are recommended in patients with congestion and HFmrEF in order to alleviate symptoms and signs.[137]	I	C
An ACE-I may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.[11]	IIb	C
An ARB may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.[245]	IIb	C
A beta-blocker may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.[12,119]	IIb	C
An MRA may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.[246]	IIb	C
Sacubitril/valsartan may be considered for patients with HFmrEF to reduce the risk of HF hospitalization and death.[13,247]	IIb	C

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7.3.5 Angiotensin receptor-neprilysin inhibitor

There is no specific trial of ARNI in HFmrEF. In the PARAGON-HF trial, which included patients with EF ≥45%, although the trial missed its primary endpoint overall, a significant EF-by-treatment interaction was observed. Sacubitril/valsartan, compared with valsartan, reduced the likelihood of the primary composite outcome of CV death and total HF hospitalizations by 22% in those with an EF below or equal to the median of 57%.[13] Further data are available from a combined analysis of the PARADIGM-HF and PARAGON-HF trials showing that sacubitril/valsartan, compared to other forms of RAAS blockade, has a beneficial effect, especially on hospitalizations for HF in those with HFmrEF.[247]

Lo studio PARAGON includeva pz scompensati con una FE al di sopra del 45% , pur mancando la significatività statistica rispetto al Valsartan ha dimostrando una riduzione dell'Endpoint primario del 22% nei pz con **FE < 57%.**

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Scompenso cardiaco a frazione di eiezione preservata

Indicazioni per il trattamento della HFpEF

Recommendations for the 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.[137]	I	C

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HFpEF = heart failure with preserved ejection fraction.
[a]Class of recommendation.
[b]Level of evidence.

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