

# L'insuffisance cardiaque: de l'algorithme à la pratique

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## ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012

The Task Force for the Diagnosis and Treatment of Acute and  
Chronic Heart Failure 2012 of the European Society of Cardiology.  
Developed in collaboration with the Heart Failure Association (HFA)  
of the ESC



## 2013 ACCF/AHA Guideline for the Management of Heart Failure : A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines

Clyde W. Yancy, Mariell Jessup, Blykhem Bozkurt, Javed Butler, Donald E. Casey, Jr, Mark H.  
Drazner, Gregg C. Fonarow, Stephen A. Geraei, Tamara Horwich, James L. Januzzi, Mary R.  
Johnson, Edward K. Kasper, Wayne C. Levy, Frederick A. Masoudi, Patrick E. McBride, John J.V.  
McMurray, Judith E. Mitchell, Pamela N. Peterson, Barbara Riegel, Flora Sam, Lynne W. Stevenson,  
W.H. Wilson Tang, Emily J. Tsai and Bruce L. Wilkoff

Circulation, published online June 5, 2013;

## Diagnose und Behandlung der chronischen Herzinsuffizienz

Revidierte Version 2013

Erstellt durch die Arbeitsgruppe «Herzinsuffizienz»  
der Schweizerischen Gesellschaft für Kardiologie

Basierend auf ESC Guidelines 2012

## Recommandations pratiques pour le diagnostic et la prise en charge de l'insuffisance cardiaque

Établies par le groupe de travail  
«insuffisance cardiaque» de la Société Suisse  
de Cardiologie sur la base des Guidelines ESC 2012

## Diagnosi e terapia dell'insufficienza cardiaca cronica

Versione revisionata 2013

Redatta dal Gruppo di Lavoro «Insufficienza cardiaca»  
della Società Svizzera di Cardiologia.

Sulla base delle nuove Guidelines ESC 2012

## Plan de la présentation

- 1) Diagnostic
- 2) Épidémiologie
- 3) Traitements

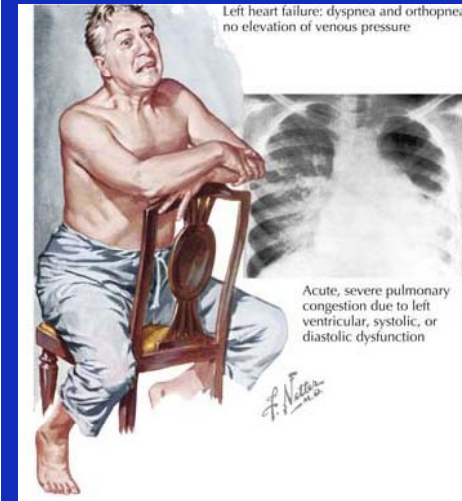


## Plan de la présentation

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## Définition de l'insuffisance cardiaque (IC)

Abnormality of cardiac structure or function

leading to

failure of the heart to deliver oxygen at a rate commensurate with the requirements of the metabolizing tissues (or only at the expense of increased filling pressures)

Fluid overload  
"Backward failure"

Compensatory  
mechanisms

Reduced oxygen delivery  
"Forward failure"



## Critères diagnostiques de l'IC

**Table 1** Diagnosis of heart failure

The diagnosis of HF-REF requires three conditions to be satisfied:

1. Symptoms typical of HF
2. Signs typical of HF
3. Reduced LVEF

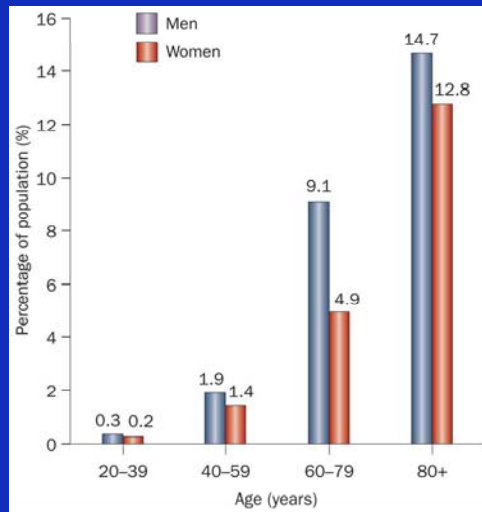
The diagnosis of HF-PEF requires four conditions to be satisfied:

1. Symptoms typical of HF
2. Signs typical of HF
3. Normal or only mildly reduced LVEF and LV not dilated
4. Relevant structural heart disease (LV hypertrophy/LA enlargement) and/or diastolic dysfunction (see Section 4.1.2)





## Prévalence de l'IC selon l'âge (USA)



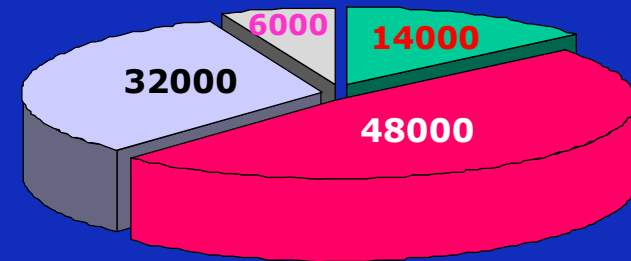
Lloyd-Jones D et al. Circulation 2010;121:e1-e170.



## En Suisse:

- 100'000 patients IC  
- 20'000 nouveaux cas/an

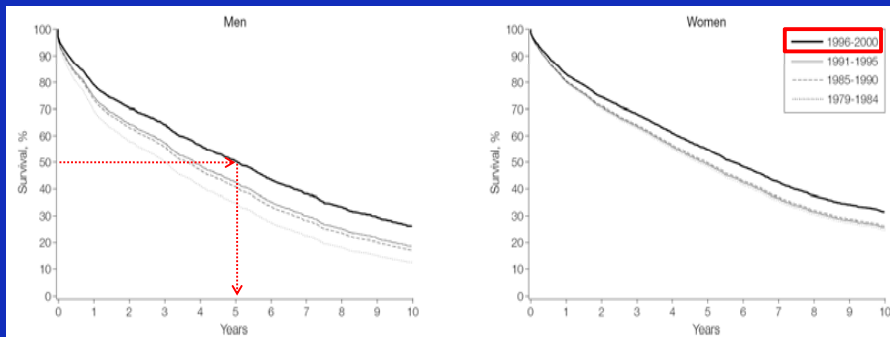
- NYHA I
- NYHA II
- NYHA III
- NYHA IV



Swiss Chronic Heart Failure Registry 2002



## Le pronostic global reste sombre...



Roger VL et al. JAMA 2004;292:344-50



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## 1<sup>ère</sup> étape: la «triade classique»

Diuretics to relieve symptoms/signs of congestion<sup>a</sup>

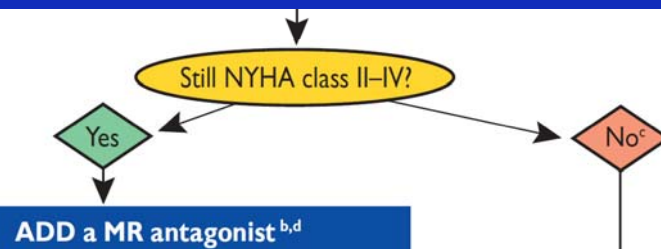
+

ACE inhibitor (or ARB if not tolerated)<sup>b</sup>

ADD a beta-blocker<sup>b</sup>



## 2<sup>ème</sup> étape: les antag. de l'aldostérone (ARM)



ESTABLISHED IN 1812

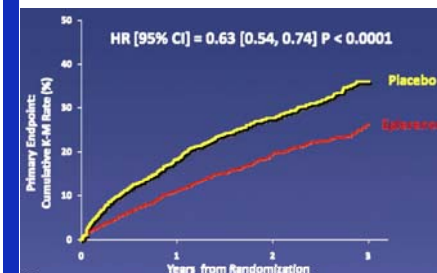
JANUARY 6, 2011

VOL. 364 NO. 1

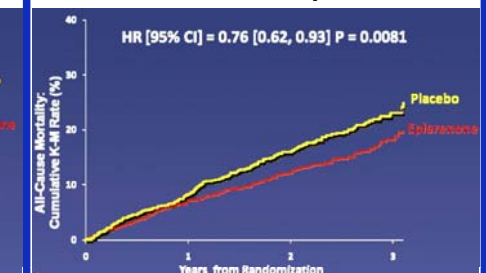
## Eplerenone in Patients with Systolic Heart Failure and Mild Symptoms

- 2737 patients
- NYHA II
- LVEF <30% or 30-35% and QRS >130 ms

CV death or HF hospitalization -37%



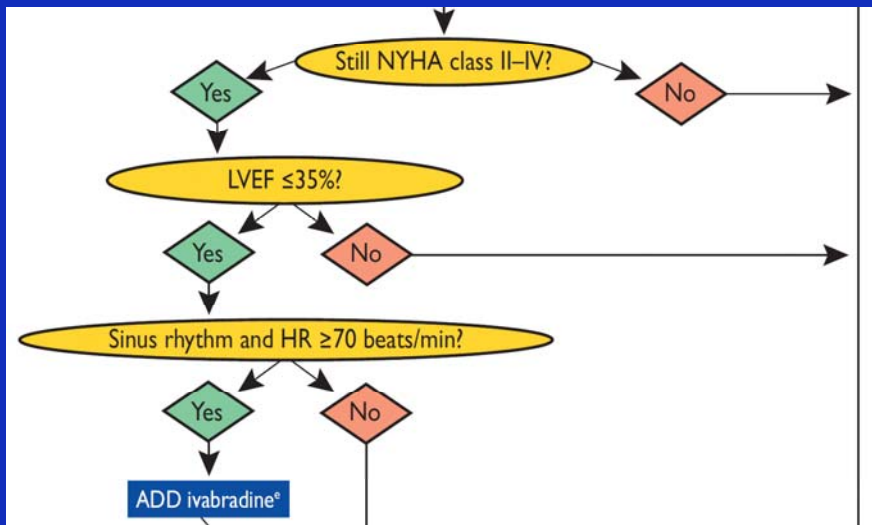
All cause mortality -24%



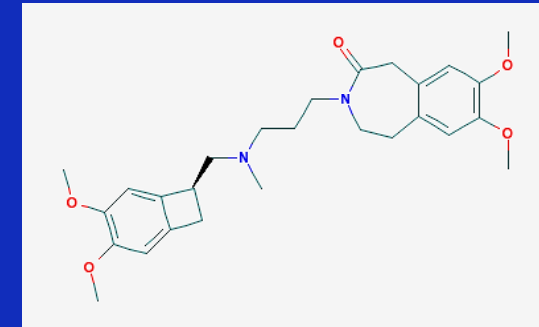
Zannad et al. N Engl J Med. 2011;364:11-21



### 3<sup>ème</sup> étape: ivabradine



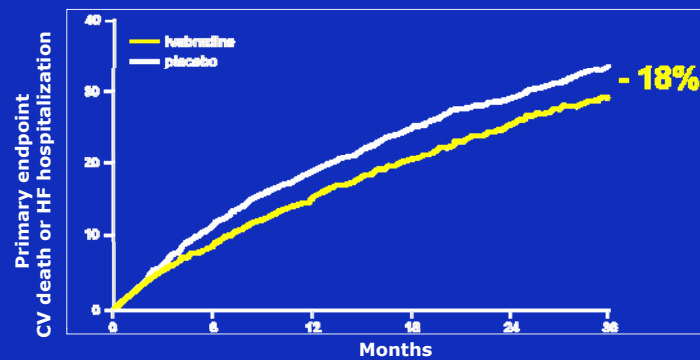
### Ivabradine (Procoralan®)



- Inhibiteur spécifique du courant  $I_f$  dans le noeud sinusal
- ↓ fréquence cardiaque sans autre effet cardio-vasculaire

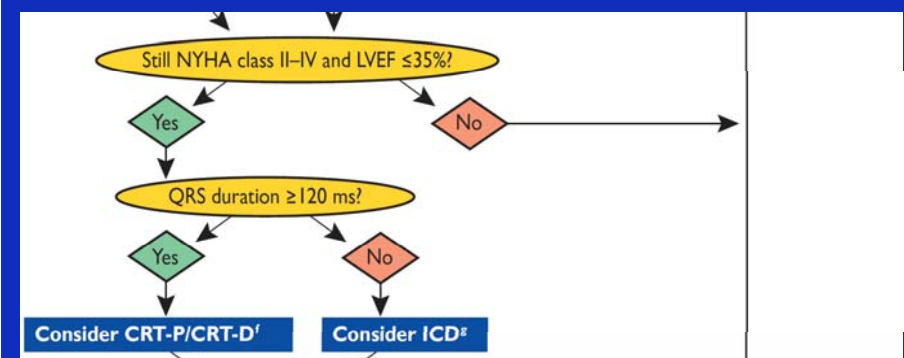
### Ivabradine and outcomes in chronic heart failure (SHIFT): a randomised placebo-controlled study

- 6558 patients
- NYHA II à IV, LVEF ≤ 35%
- SR > 70 bpm
- Optimal medical therapy with maximal tolerated betablocker therapy



Swedberg K et al. The Lancet 2010;376:875-885

### 4<sup>ème</sup> étape: «devices»



# Etude MADIT-CRT chez des patients NYHA I/II

JOURNAL of MEDICINE

ESTABLISHED IN 1919 OCTOBER 1, 2009 VOL. 361 NO. 14

## Cardiac-Resynchronization Therapy for the Prevention of Heart-Failure Events

Arthur J. Moss, M.D., W. Jackson Hall, Ph.D., David S. Cannom, M.D., Helmut Klein, M.D., Mary W. Brown, M.S., James P. Daubert, M.D., N.A. Mark Estes III, M.D., Elise Foster, M.D., Henry Greenberg, M.D., Steven L. Higgins, M.D., Marc A. Pfeffer, M.D., Ph.D., Scott D. Solomon, M.D., David Wilber, M.D., and Wojciech Zareba, M.D., Ph.D., for the MADIT-CRT Trial Investigators\*

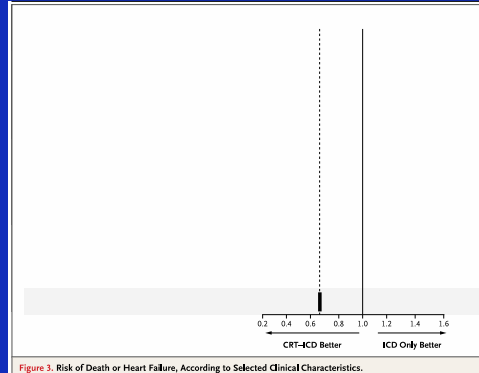


Figure 3. Risk of Death or Heart Failure, According to Selected Clinical Characteristics.

ICD only	731	621 (0.89)	379 (0.78)	173 (0.71)	43 (0.63)
CRT-ICD	1089	985 (0.92)	651 (0.86)	279 (0.80)	58 (0.73)

Moss AJ et al. N Engl J Med. 2009;361:1329-38.



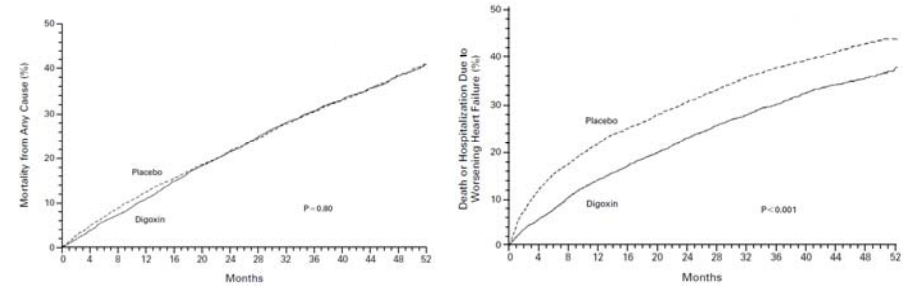
# La digoxine n'a pas d'effet sur la mortalité totale mais réduit les hospitalisations pour IC

VOLUME 336 FEBRUARY 20, 1997 NUMBER 8



## THE EFFECT OF DIGOXIN ON MORTALITY AND MORBIDITY IN PATIENTS WITH HEART FAILURE

THE DIGITALIS INVESTIGATION GROUP\*



100% en RS  
FEVG moy. 25-30%  
80% CF NYHA 2-3  
Pas de BB

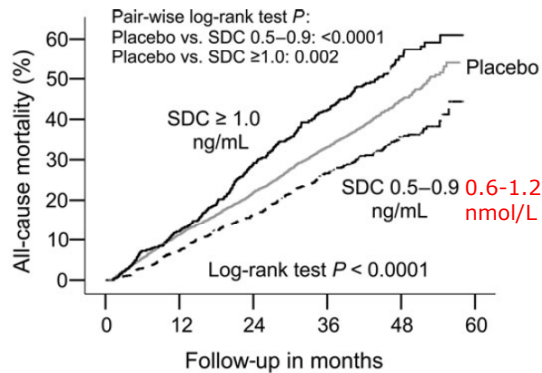
The Digitalis Investigation Group. N Engl J Med 1997;336:525-33.



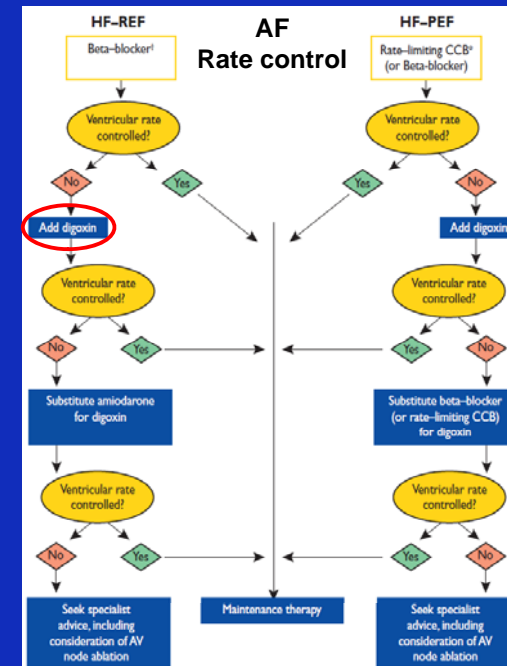
# A une digoxinémie basse, la mortalité semble diminuée selon une analyse post-hoc

Digoxin and reduction in mortality and hospitalization in heart failure: a comprehensive *post hoc* analysis of the DIG trial

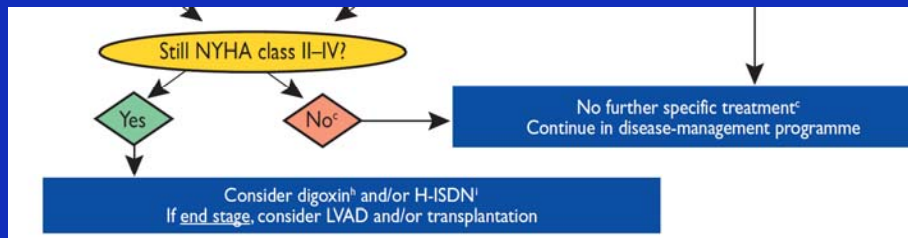
Alli Ahmed<sup>1\*</sup>, Michael W. Rich<sup>2</sup>, Thomas E. L. Wilson S. Colucci<sup>3</sup>, Kirkwood F. Adams<sup>7</sup>, and



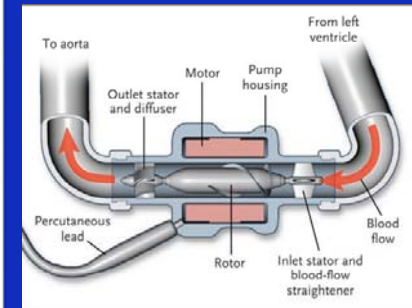
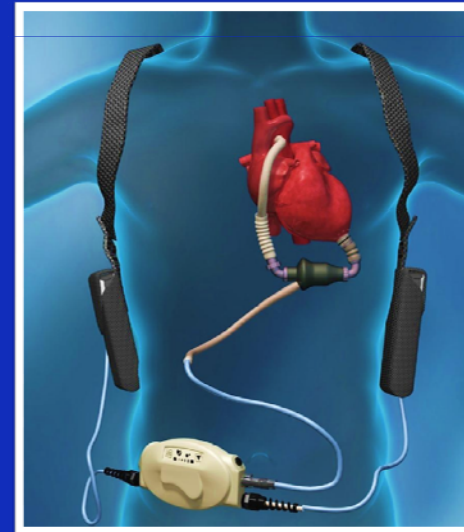
Ahmed A et al. Eur Heart J 2006;27:178-86.



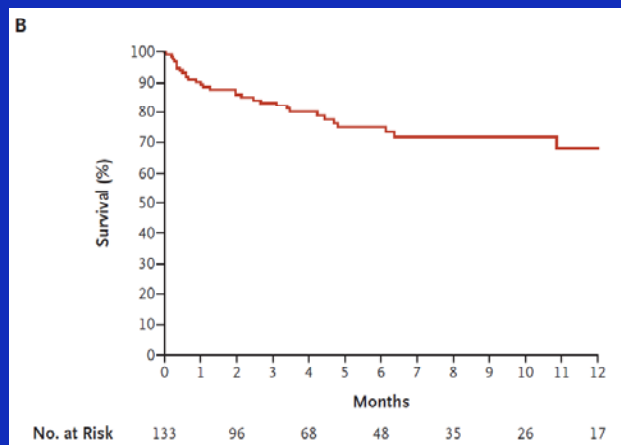
## Assistances ventriculaires gauches



## HeartMate II



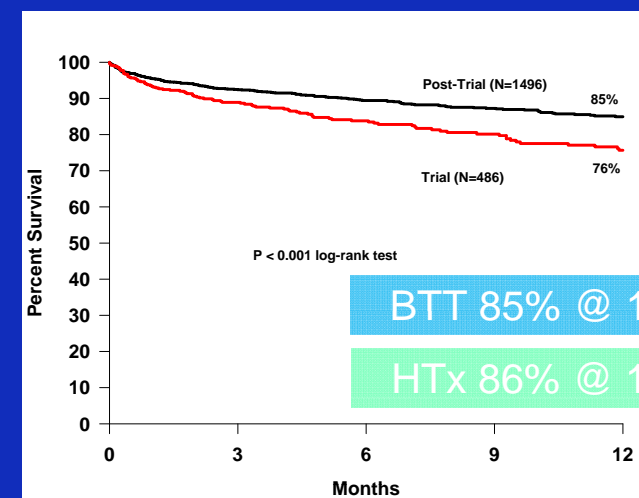
## Use of a Continuous-Flow Device in Patients Awaiting Heart Transplantation



Miller LW et al. N Engl J Med 2007;357:885-96.



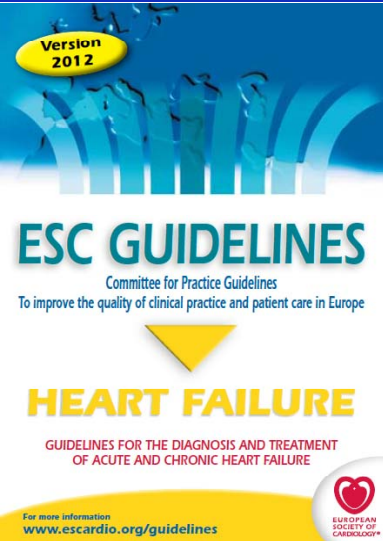
## Les résultats en pratique clinique courante (post-trial)



John R et al. Ann Thorac Surg 2011;92:1406-13



## Le traitement non-pharmacologique: 2 recommandations

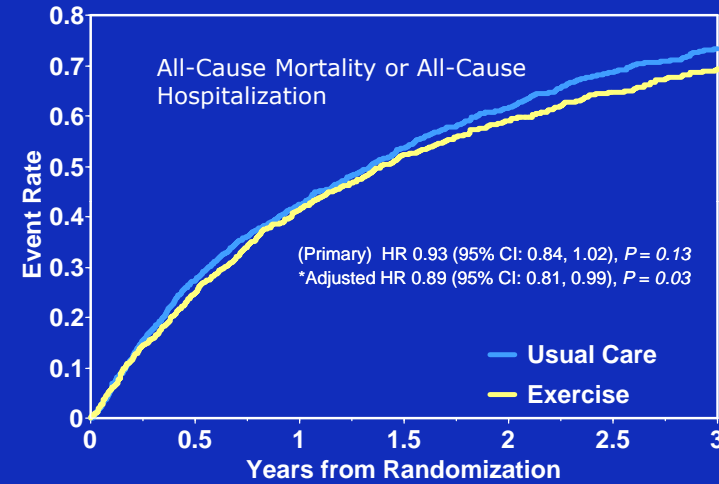
Recommandation	Version 2012	Level <sup>b</sup>
It is recommended that aerobic exercise be prescribed in patients with heart failure to improve functional capacity and reduce symptoms.	 <p><b>ESC GUIDELINES</b> Committee for Practice Guidelines To improve the quality of clinical practice and patient care in Europe</p> <p><b>HEART FAILURE</b></p> <p>GUIDELINES FOR THE DIAGNOSIS AND TREATMENT OF ACUTE AND CHRONIC HEART FAILURE</p> <p>For more information <a href="http://www.escardio.org/guidelines">www.escardio.org/guidelines</a></p>	A
It is recommended that patients with heart failure be managed in a multidisciplinary approach to reduce the need for hospitalization.		A

**JAMA**<sup>®</sup>

## Efficacy and Safety of Exercise Training in Patients With Chronic Heart Failure: HF-ACTION Randomized Controlled Trial

Online article and related content current as of August 6, 2009.

Christopher M. O'Connor; David J. Whellan; Kerry L. Lee; et al.



\* Adjusted for pre-specified key prognostic factors

O'Connor CM et al. JAMA 2009;301:1439-50.

## Disease-management programmes = ?

<b>Characteristics</b>	Should employ a multidisciplinary approach (cardiologists, primary care physicians, nurses, pharmacists, etc.)
	Should target high-risk symptomatic patients
	Should include competent and professionally educated staff
<b>Components</b>	Optimized medical and device management
	Adequate patient education, with special emphasis on adherence and self-care
	Patient involvement in symptom monitoring and flexible diuretic use
	Follow-up after discharge (regular clinic and home-based visits; possibly telephone support or remote monitoring)
	Increased access to healthcare (through in-person follow-up and by telephone contact; possibly through remote monitoring)
	Facilitated access to care during episodes of decompensation
	Assessment of (and appropriate intervention in response to) an unexplained increase in weight, nutritional status, functional status, quality of life, and laboratory findings
	Access to advanced treatment options
	Provision of psychosocial support to patients and family and/or caregivers

Adequate patient education, with special emphasis on adherence and self-care





## Take home messages

1. Toujours rechercher la cause d'une IC
2. Antagonistes de l'aldostérone déjà en NYHA II
3. Ivabradine si FC  $\geq 70$  bpm en RS sous TMO
4. Ne pas oublier l'entraînement physique et l'éducation des patients



**Merci pour votre attention !**

**PD Dr Philippe Meyer**

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