

Senaste nytt inom medicin, teamarbete, RiksSvikt och forskning vid hjärtsvikt 2025

2021 ESC GUIDELINES I HJÄRTSVIKT

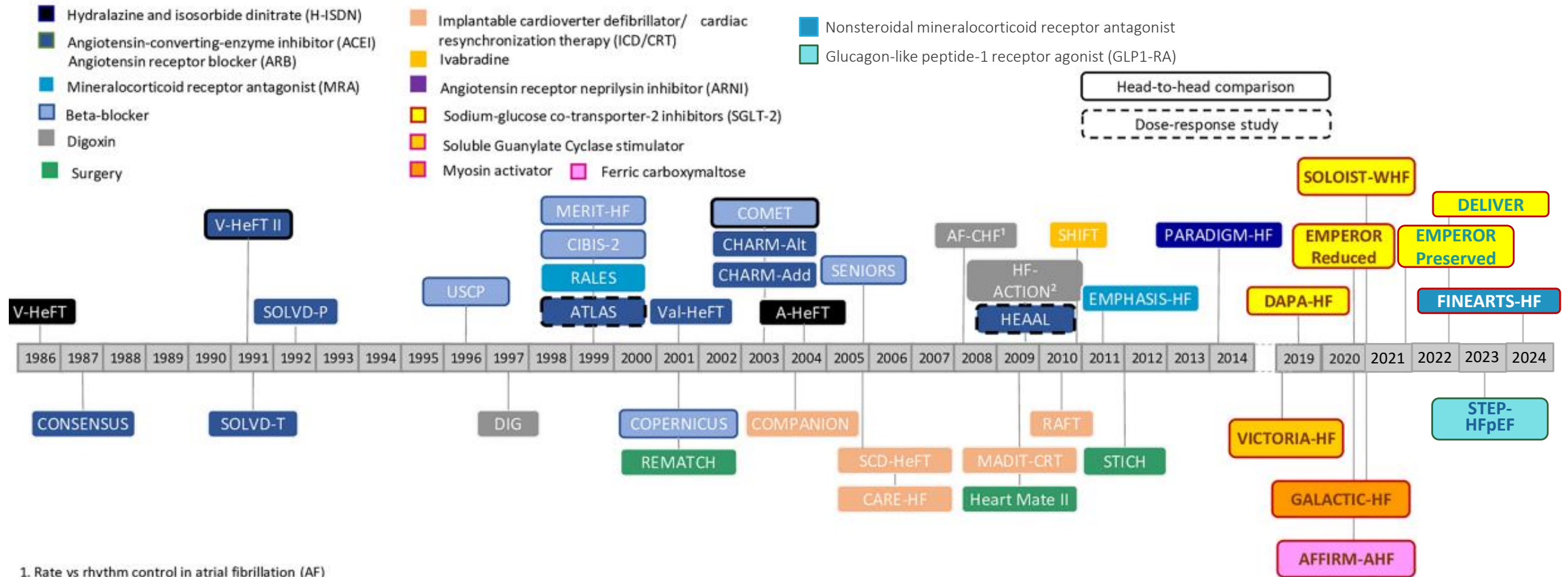
2023 UPDATE

*Camilla Hage
Universitetssjuksköterska, Docent
Karolinska Universitetssjukhuset*

Läkemedels- behandling vid hjärtsvikt



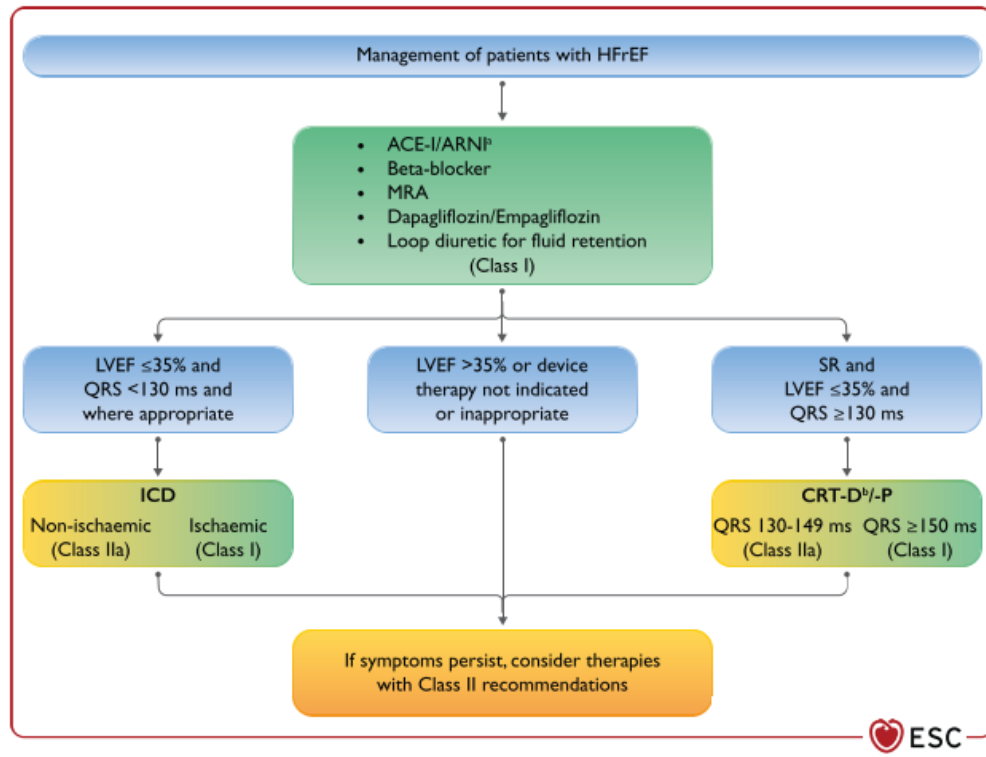
Behandlingsstudier i Hjärtsvikt



1. Rate vs rhythm control in atrial fibrillation (AF)

2. Exercise prescription

ESC Guidelines i hjärtsvikt 2021



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

Samtidig upptitrering



European Journal of Heart Failure (2021) 23, 882–894
doi:10.1002/ehf.2149

Rapid evidence-based sequencing of foundational drugs for heart failure and a reduced ejection fraction

Milton Packer^{1,2*} and John J.V. McMurray³

New concepts

A change of the term 'heart failure with mid-range ejection fraction' to 'heart failure with mildly reduced ejection fraction' (HFmrEF).

A new simplified treatment algorithm for HFrEF.

The addition of a treatment algorithm for HFmrEF according to phenotypes.

Modified classification for acute HF.

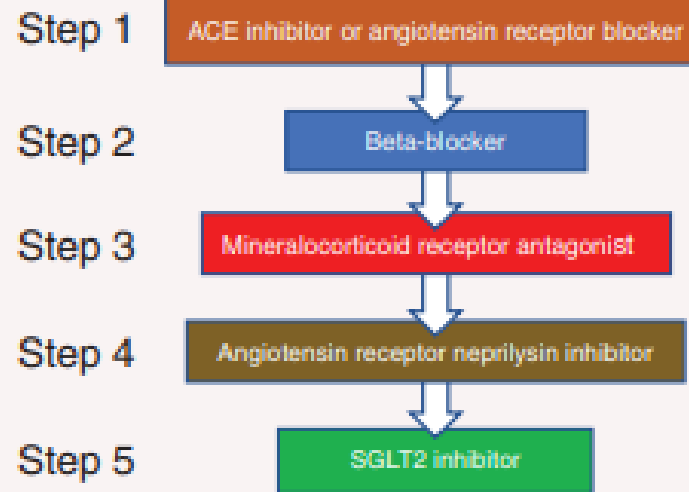
Updated treatments for most non-cardiovascular comorbidities including diabetes, hyperkalaemia, iron deficiency, and cancer.

Updates on cardiomyopathies including the role of genetic testing and new treatments.

The addition of key quality indicators.

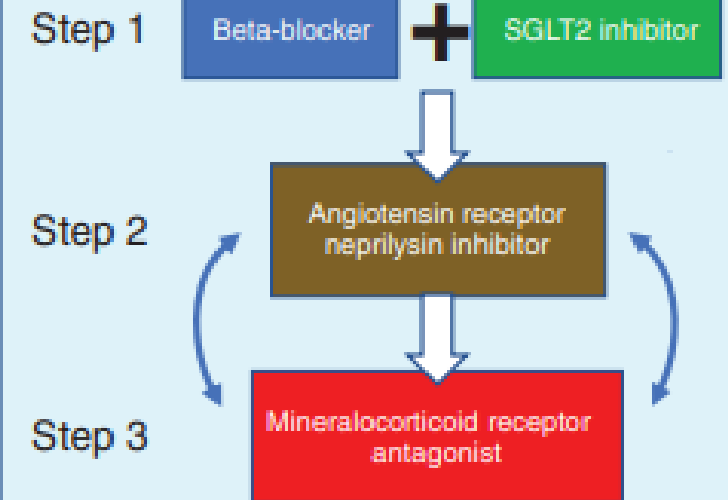
© ESC 2021

Conventional Sequencing



Uptitration to target doses at each step
Typically requires 6 months or more

Rapid Sequencing



All 3 steps achieved within 4 weeks
Uptitration to target doses thereafter

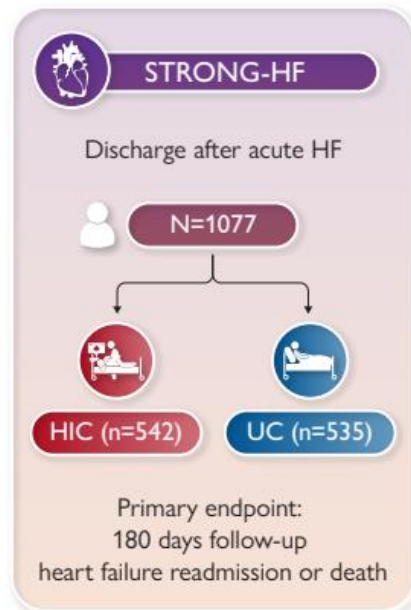
Samtidig och snabb upptitrering

The STRONG-HF trial The Safety, Tolerability, and Efficacy of Rapid Optimization, Helped by N-Terminal Pro-Brain Natriuretic Peptide Testing of Heart Failure Therapies

Aim jämföra

HIC=100% GDMT* inom 2 veckor efter utskrivning mot

US=usual care



*RASi, β blockerare, MRA

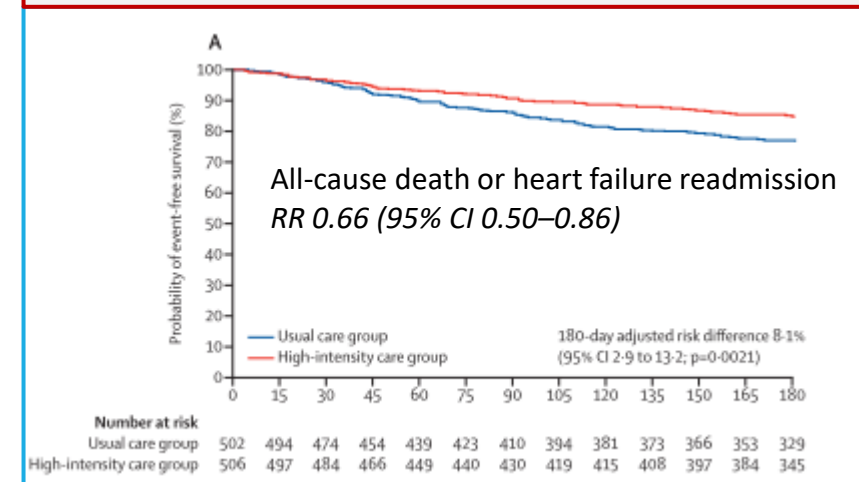
Dag 90, full dos i HIC vs. US

- ACEI/ARB/ARNi 55% vs 2%
- β -blockerare 49% vs 4%
- MRA 84% vs 46%

↓BP, HR, NYHA class, weight, NT-proBNP, HF symptoms
↑QoL

Utfall 180 dagar

Minskad risk för död och
HF hospitaliseringar



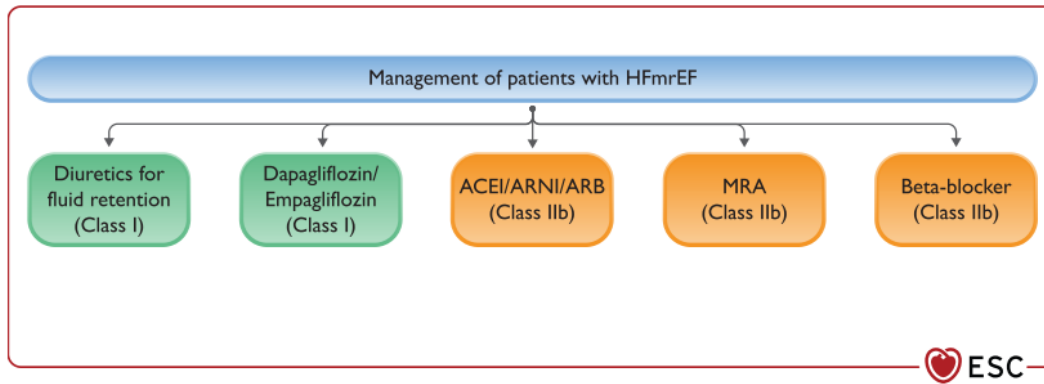
Samtidig och snabb upptitrering

Recommendation Table 3 — Recommendation for pre-discharge and early post-discharge follow-up of patients hospitalized for acute heart failure

Recommendation	Class ^a	Level ^b
An intensive strategy of initiation and rapid up-titration of evidence-based treatment before discharge and during frequent and careful follow-up visits in the first 6 weeks following a HF hospitalization is recommended to reduce the risk of HF rehospitalization or death. ^{c,d,e 16}	I	B

© ESC 2023

ESC Guidelines i hjärtsvikt 2021-update 2023



Recommendation Table 1 — Recommendation for the treatment of patients with symptomatic heart failure with mildly reduced ejection fraction

Recommendation	Class ^a	Level ^b
An SGLT2 inhibitor (dapagliflozin or empagliflozin) is recommended in patients with HFmrEF to reduce the risk of HF hospitalization or CV death. ^{c 6,8}	I	A

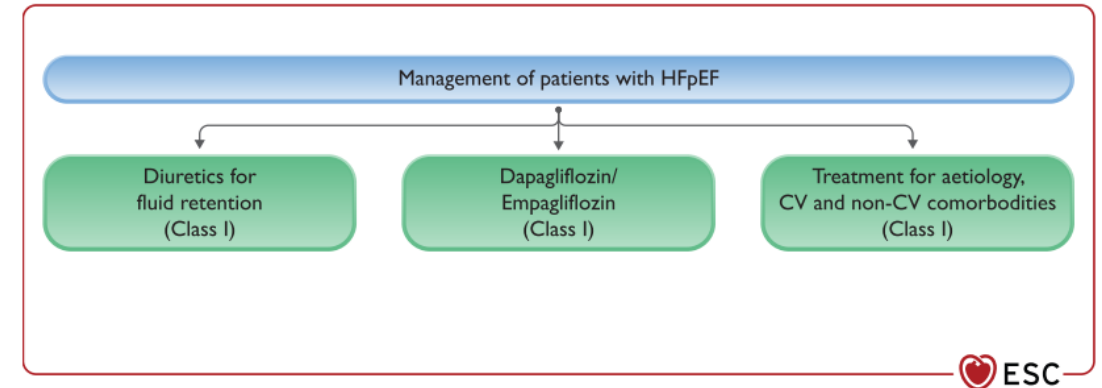
© ESC 2023

CV, cardiovascular; HF, heart failure; HFmrEF, heart failure with mildly reduced ejection fraction; SGLT2, sodium–glucose co-transporter 2.

^aClass of recommendation.

^bLevel of evidence.

^cThis recommendation is based on the reduction of the primary composite endpoint used in the EMPEROR-Preserved and DELIVER trials and in a meta-analysis. However, it should be noted that there was a significant reduction only in HF hospitalizations and no reduction in CV death.



Recommendation Table 2 — Recommendation for the treatment of patients with symptomatic heart failure with preserved ejection fraction

Recommendation	Class ^a	Level ^b
An SGLT2 inhibitor (dapagliflozin or empagliflozin) is recommended in patients with HFpEF to reduce the risk of HF hospitalization or CV death. ^{c 6,8}	I	A

© ESC 2023

CV, cardiovascular; HF, heart failure; HFpEF, heart failure with preserved ejection fraction; SGLT2, sodium–glucose co-transporter 2.

^aClass of recommendation.

^bLevel of evidence.

^cThis recommendation is based on the reduction of the primary composite endpoint used in the EMPEROR-Preserved and DELIVER trials and in a meta-analysis. However, it should be noted that there was a significant reduction only in HF hospitalizations and no reduction in CV death.

Guidelinerekommenderad läkemedelsbehandling ökar överlevnad!



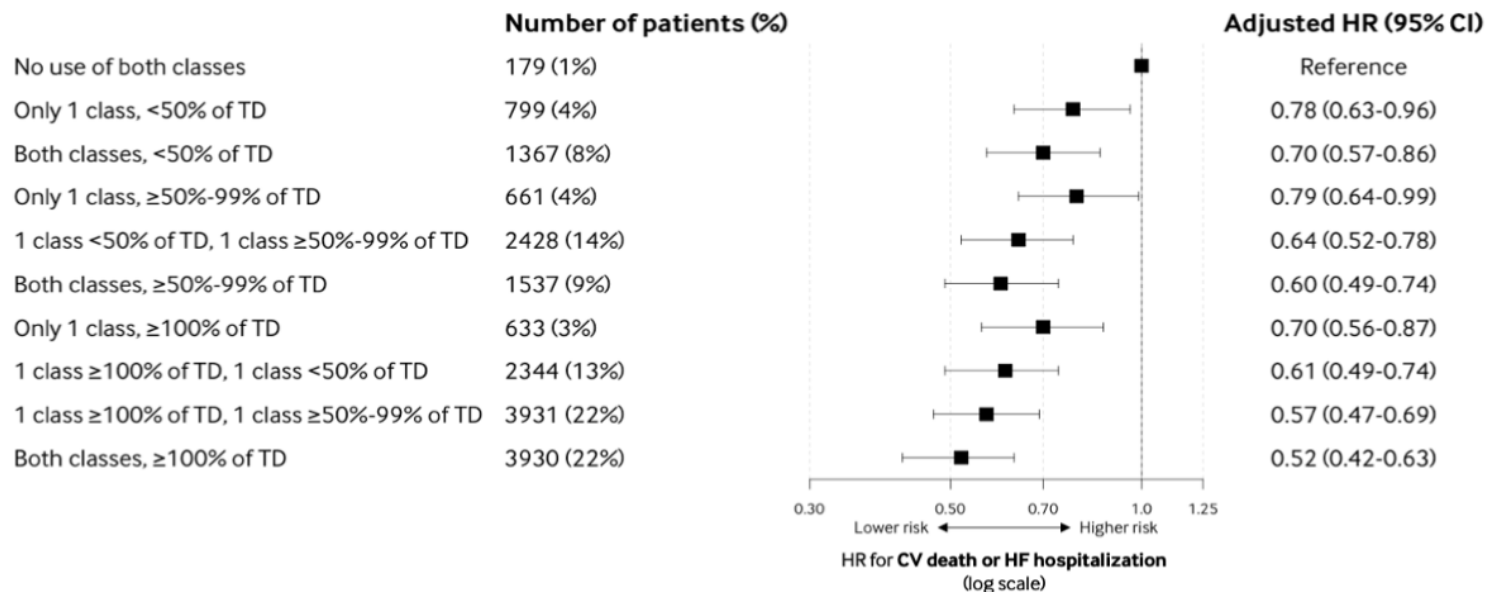
European Journal of Heart Failure (2022) 24, 871–884
doi:10.1002/ehf.2477

RESEARCH ARTICLE

Association between dosing and combination use of medications and outcomes in heart failure with reduced ejection fraction: data from the Swedish Heart Failure Registry

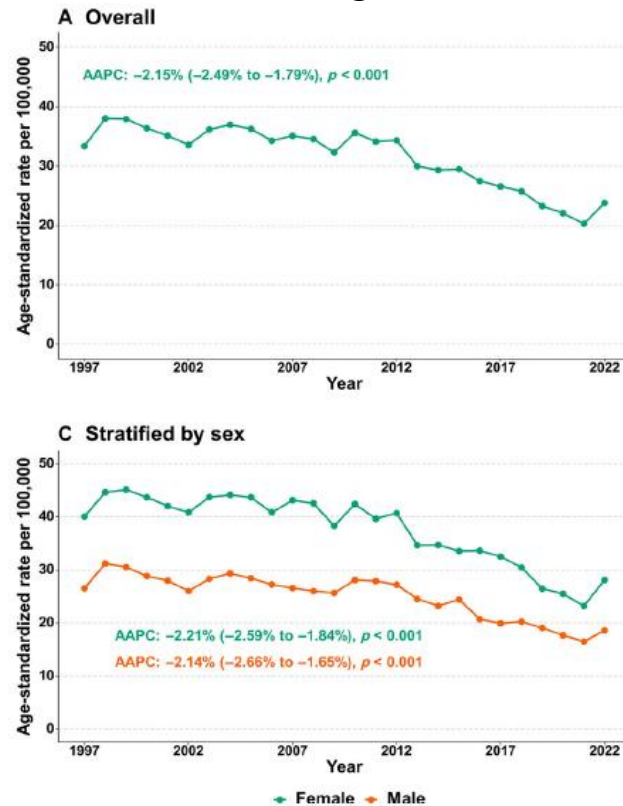
Domenico D'Amario^{1,2,3}, Daniele Rodolico^{1,3}, Giuseppe M.C. Rosano⁴, Ulf Dahlström⁵, Filippo Crea^{2,3}, Lars H. Lund^{1,6†}, and Gianluigi Savarese^{1,6**†}

Median follow-up 2.06 years (IQR 0.87-4.65)



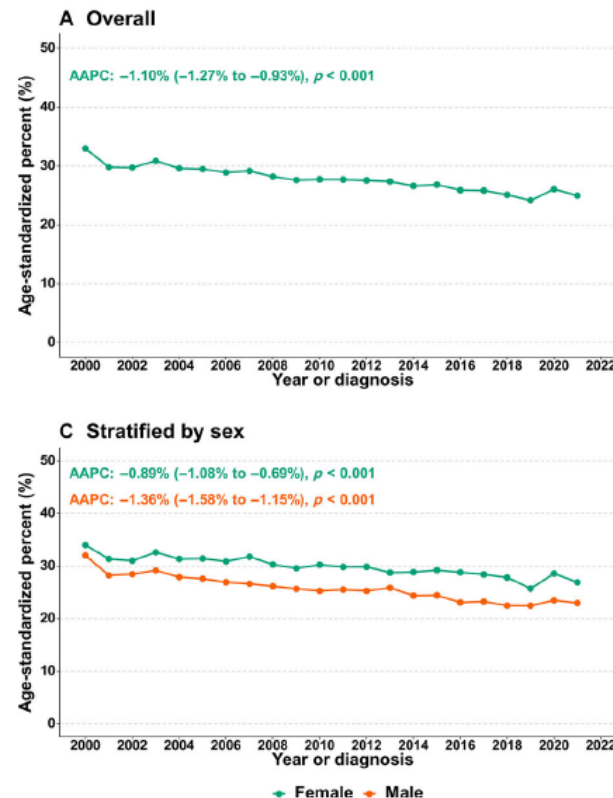
Dödligheten in hjärtsvikt minskar i Sverige

Hjärtsvikt-relaterad död i svenska befolkningen

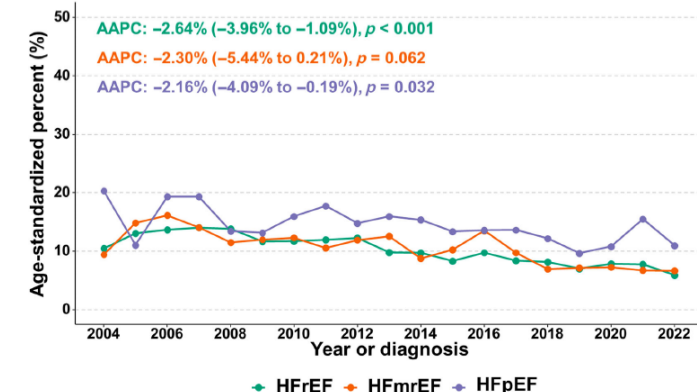


AAPC, average annual percent change

Död 1 år efter hjärtsviktsdiagnos (Patient registret n=423 092)



Död 1 år efter hjärtsviktsdiagnos (Rikssvikt n=63 753)



Mindre minskning i HFpEF jämfört med HFrefEF reflekterar begränsade behandlingsmöjligheter



European Journal of Heart Failure (2025) 27, 366–376
doi:10.1093/ehj/ehz3506

RESEARCH ARTICLE

Trends in heart failure mortality in Sweden between 1997 and 2022

Felix Lindberg¹, Lina Benson¹, Ulf Dahlström², Lars H. Lund^{1,3}, and Gianluigi Savarese^{1,2*}

¹Division of Cardiology, Department of Medicine, Karolinska Institutet, Stockholm, Sweden; ²Department of Cardiology and Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden; and ³Vascular and Neurology Theme, Karolinska University Hospital, Stockholm, Sweden

Received 23 June 2024; revised 16 September 2024; accepted 9 October 2024; online published ahead of print 28 October 2024

Guidelinerekommenderad läkemedelsbehandling över tid

ESC
European Society
of Cardiology

European Journal of Heart Failure (2025)
doi:10.1002/ejhf.3565

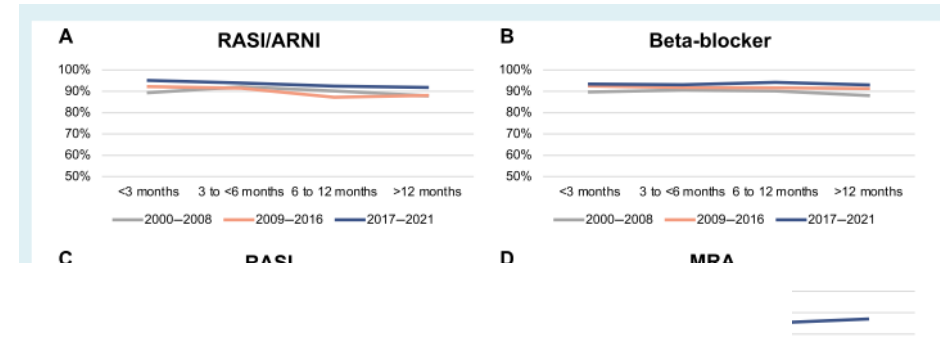
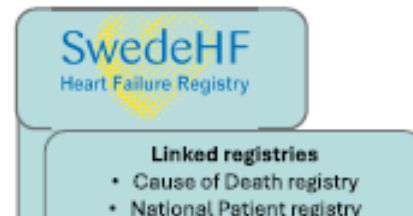
RESEARCH ARTICLE

Implementation of guideline-recommended therapies in heart failure with reduced ejection fraction according to heart failure duration: An analysis of 55 581 patients in the SwedeHF Heart Failure Registry

Angiza Shahim^{1,2*}, Cecilia Linde¹,
Lars H. Lund^{1,2}, and Camilla Hage¹

¹Division of Cardiology, Department of Medicine, Karolinska Institutet, Stockholm, Sweden; and ²Department of Cardiology and Department of Heart Failure, Department of Medicine, Karolinska Institutet, Stockholm, Sweden
Received 27 August 2024; revised 24 November 2024; accepted 5 December 2024

Check for updates



Det finns fortfarande rum för förbättring!

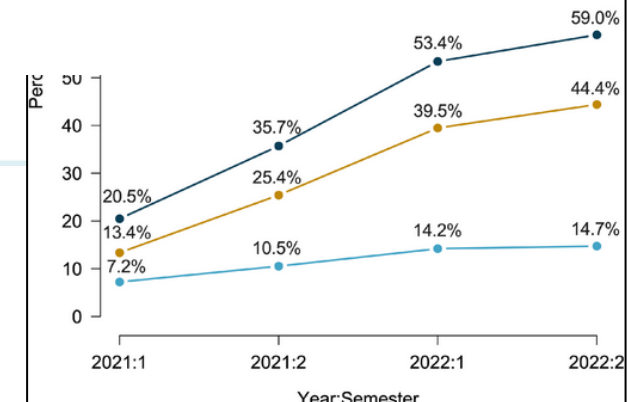
90% RASi/ARNi 3 månader efter HF diagnos

22% ARNi – Underanvändning!

46% MRA 12 months efter HF diagnos– Ökat över tid!

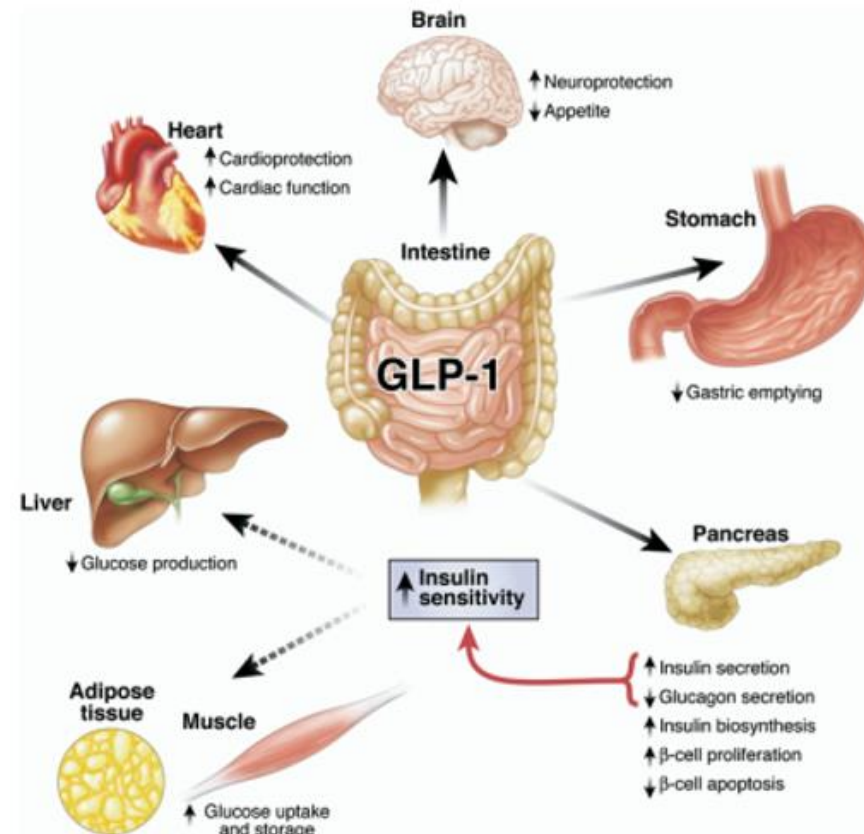
25% SGLT2i 2021 – snabb implementering!

SGLT2i
Tredubblad användning
under 2 years
(1/11 2020 – 5/8 2022)



GLP1 - glucagon-like peptide 1

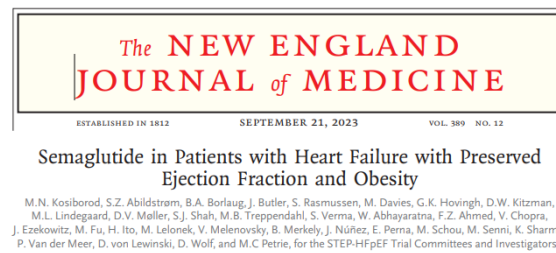
GLP-1 en peptid som påverkar glukos, insulin, vikt ...och mycket mer



GLP1-analoger i HFpEF?

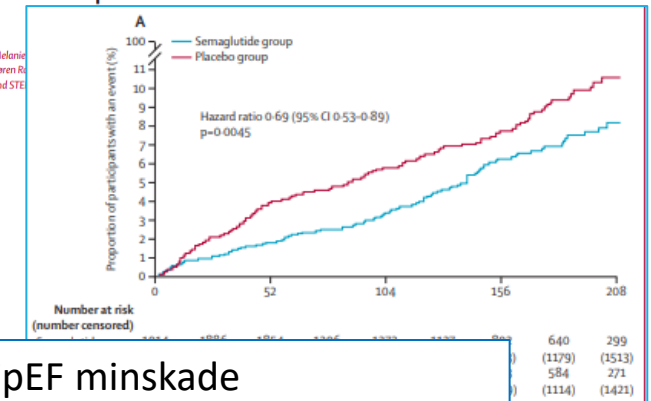


Research Study to Investigate How Well Semaglutide Works in People Living With Heart Failure and Obesity (STEP-HFpEF)

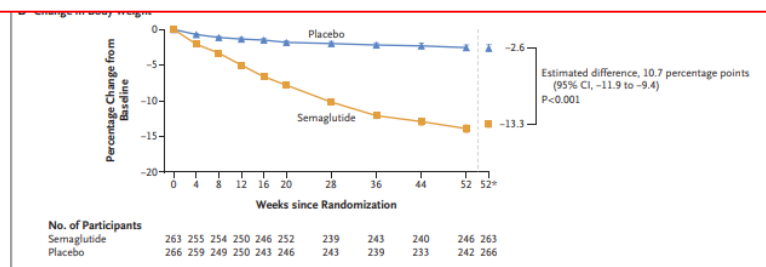


Semaglutide versus placebo in patients with heart failure and mildly reduced or preserved ejection fraction: a pooled analysis of the SELECT, FLOW, STEP-HFpEF, and STEP-HFpEF DM randomised trials

Mikhail N Kosiborod*, John Deanfield*, Richard Pratley, Barry A Borlaug, Javed Butler, Melanie Delane W Kitzman, Idiko Lingvay, Kenneth W Mahaffey, Mark C Petrie, Jorge Plutzky, Søren R Subodh Verma, Peter E Weekes, A Michael Lincoff, for the SELECT, FLOW, STEP-HFpEF, and STEP-HFpEF DM randomised trials



Hos patienter med HFpEF och övervikt minskade semaglutide (2.4 mg) jämfört mot placebo vikt och symptom och förbättrade fysisk prestationsförmåga



Hos patienter med HFpEF minskade semaglutide jämfört mot placebo HF händelser och kardiovaskulär död

Inte i guidelines – ännu?

GLP-1 receptor agonists in heart failure: how far to expand use? 

Obesity is common worldwide and continues to increase in prevalence. GLP-1 receptor agonists were developed for the treatment of diabetes, and have been shown to improve outcomes. Could GLP-1 receptor agonists be an effective treatment for HFpEF with concomitant obesity?

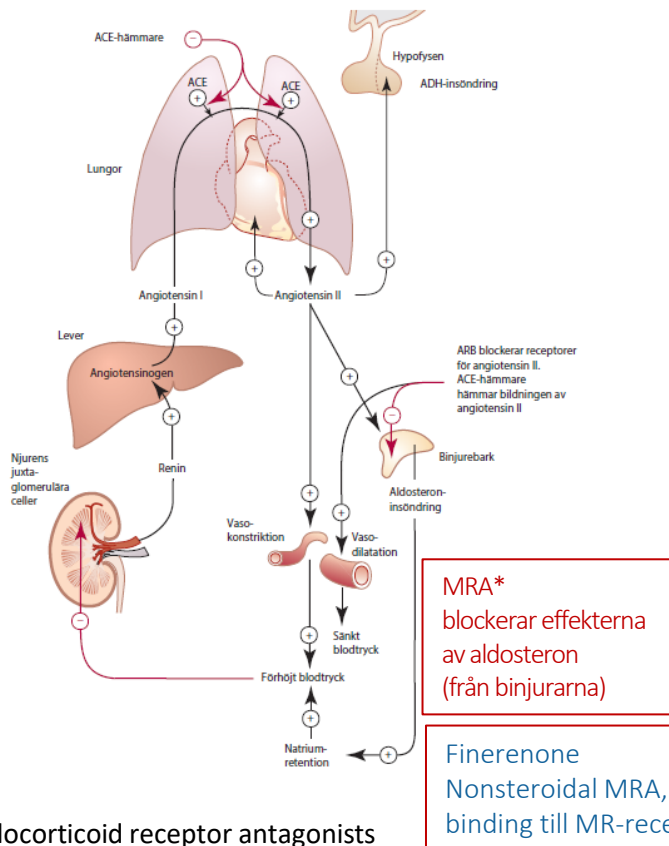
HFrEF?
Normal/undervikt?

Published Online August 30, 2024
[https://doi.org/10.1016/S0140-6736\(24\)01763-X](https://doi.org/10.1016/S0140-6736(24)01763-X)
See Articles page 949

Finerenone – En ny MRA* i HFpEF?



Finerenone Trial to Investigate Efficacy and Safety Superior to Placebo in Patients with Heart Failure (FINEARTS-HF)



The NEW ENGLAND JOURNAL of MEDICINE

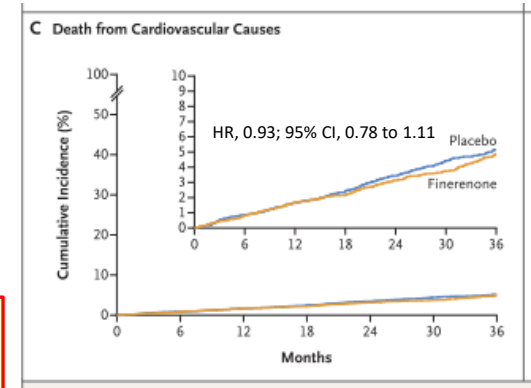
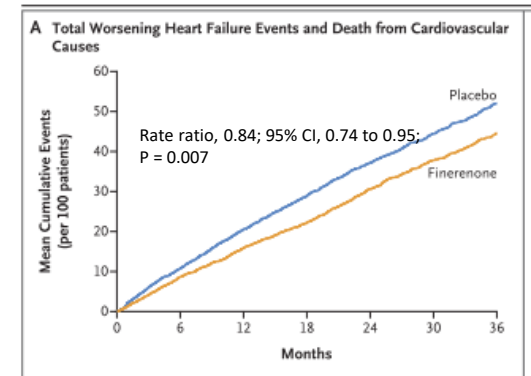
ESTABLISHED IN 1812 OCTOBER 24, 2024 VOL. 391 NO. 16

Finerenone in Heart Failure with Mildly Reduced or Preserved Ejection Fraction

S.D. Solomon, J.J.V. McMurray, M. Vaduganathan, B. Claggett, P.S. Jhund, A.S. Desai, A.D. Henderson, C.S.P. Lam, B. Pitt, M. Senni, S.J. Shah, A.A. Voors, F. Zannad, I.Z. Abidin, M.A. Alcocer-Gamba, J.J. Atherton, J. Bauersachs, M. Chang-Sheng, C.-E. Chiang, O. Chioncel, V. Chopra, J. Comin-Colet, G. Filippatos, C. Fonseca, G. Gajos, S. Golland, E. Goncalvesova, S. Kang, T. Katova, M.N. Kosiborod, G. Latkovskis, A.P.-W. Lee, G.C.M. Linssen, G. Llamas-Esperón, V. Mareev, F.A. Martinez, V. Melenovsky, B. Merkely, S. Nodari, M.C. Petrie, C.I. Saldarriaga, J.F.K. Saraiva, N. Sato, M. Schou, K. Sharma, R. Troughton, J.A. Udell, H. Ukkonen, O. Vardeny, S. Verma, D. von Lewinski, L. Voronkov, M.B. Yilmaz, S. Zieroth, J. Lay-Flurrie, I. van Gameren, F. Amarante, P. Kolkhof, and P. Viswanathan, for the FINEARTS-HF Committees and Investigators*

Hos patienter med HFpEF och HFmrEF minskade finerenone jämfört mot placebo HF händelser och kardiovaskulär död samt förbättrade hälso-relaterad livskvalitet

Inte i guidelines – ännu?

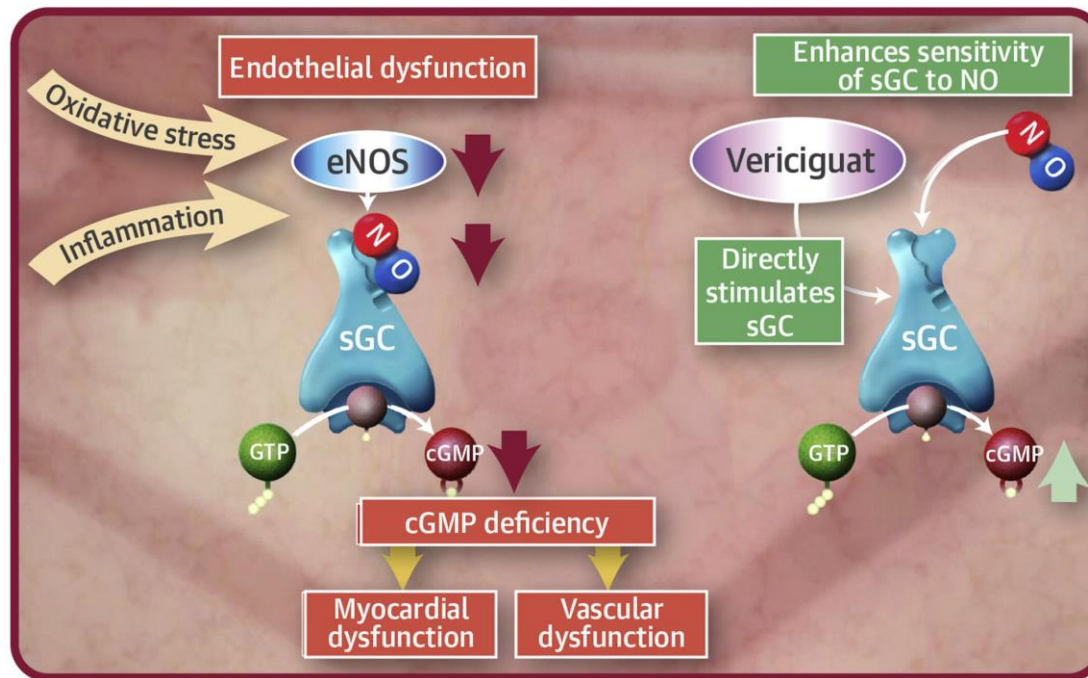


*Mineralocorticoid receptor antagonists



Vericiguat

Soluble guanylate cyclase (sGC) – vericiguat, en stimulator of sGC



sGC omvandlar NO till den viktiga sekundära signalmolekylen cGMP
-> reglering av blodtryck och vaskulär funktion (vasodilatation)

Hjärtsvikt

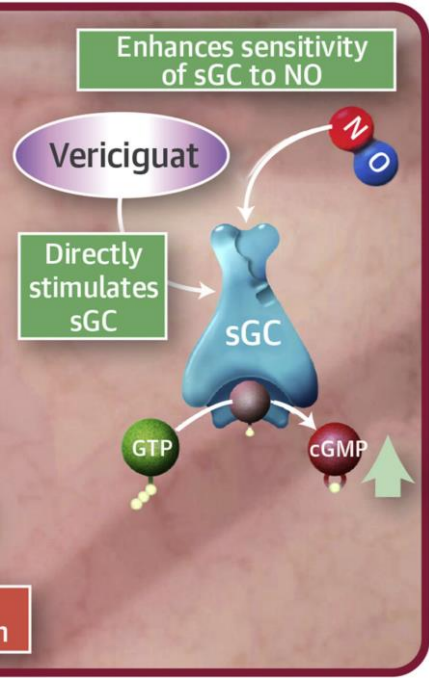
- ↓ Kväveoxid (NO)
- ↓ Lösligt guanylatcyklas "brist" + okänsligt (sGC)
- ↓ Cykliskt guanosinmonofosfat (cGMP)

Överväges hos patienter med försämrad hjärtsvikt trots behandling med betablockerare, RAASi och MRA



Vericiguat – minskar mortalitet...eller?

Vericiguat in Adults with Chronic Heart Failure and Reduced Ejection Fraction (VICTOR)



Vericiguat in patients with chronic heart failure and reduced ejection fraction (VICTOR): a double-blind, placebo-controlled, randomised, phase 3 trial

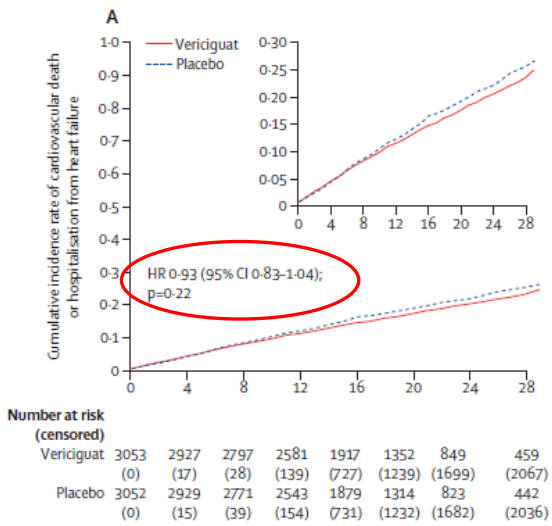
*Javed Butler, Gábor J McMullan, Kevin J Anstrom, Irina Barash, Marc P Bonaca, Maria Borenstein, Stefano Corda, Justin A Ezekowitz, G Michael Felker, Davis Gates, Carolyn S P Lam, Eldrin F Lewis, JoAnn Lindenfeld, Robert J Mentz, Christopher M O'Connor, Piotr Ponikowski, Yogesh NV Reddy, Giuseppe M C Rosano, Clara Salazar, Michele Senni, Lilin She, Pedro Pinto Teixeira, James Uddison, Alessio Urbanati, Vanja Vlagin, Adrian A Voors, Aiwun Xing, Mahesh J Patel, Faiez Zannad, for the VICTOR Study Group**

Summary
Background Vericiguat is indicated to reduce the risk of cardiovascular death and hospitalisation for heart failure in patients with heart failure and reduced ejection fraction (HFrEF) following a recent worsening event. The aim of the VICTOR trial was to assess the effect of vericiguat in patients with HFrEF without recent heart failure worsening.

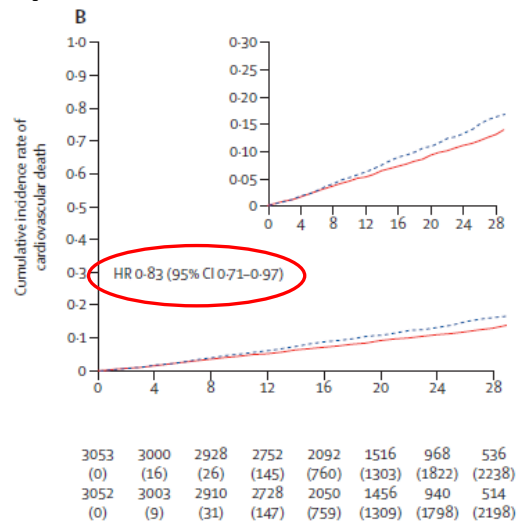
Published Online August 30, 2025
[https://doi.org/10.1016/S0140-6736\(25\)01665-4](https://doi.org/10.1016/S0140-6736(25)01665-4)

Hos patienter med stabil HFrEF minskade **INTE** vericiguat jämfört mot placebo HF hospitaliseringar och kardiovaskulär död. Färre antal kardiovaskulära dödsfall i vericiguatgruppen jämfört med placebo.

1. kardiovaskulär död /HF hosp



CV död



Överväges hos patienter med försämrad hjärtsvikt trots behandling med betablockerare, RAASi och MRA

Uppgraderas i kommande guidelines?



Digitoxin – hjärtglykosid i nytt ljus?

Digitoxin to Improve Outcomes in Patients with Advanced Chronic Heart Failure (DIGIT-HF)

DIGITALIS, DIGOXIN, AND DIGITOXIN



DIGITALIS

- General term for cardiac glycoside group
- Includes digoxin and digitoxin



DIGOXIN

- Source: Digitalis lanata
- Onset: Intermediate
- Half-life: ~36–48 h
- Route: Oral or IV
- Excretion: Mainly renal



DIGITOXIN

- Source: Digitalis purpurea
- Onset: Slower than digoxin
- Half-life: Very long (~5–7 days)
- Excretion: Mainly hepatic

Digitoxin, jämfört med digoxin, elimineras effektivt genom levern när njurfunktionen är nedsatt.

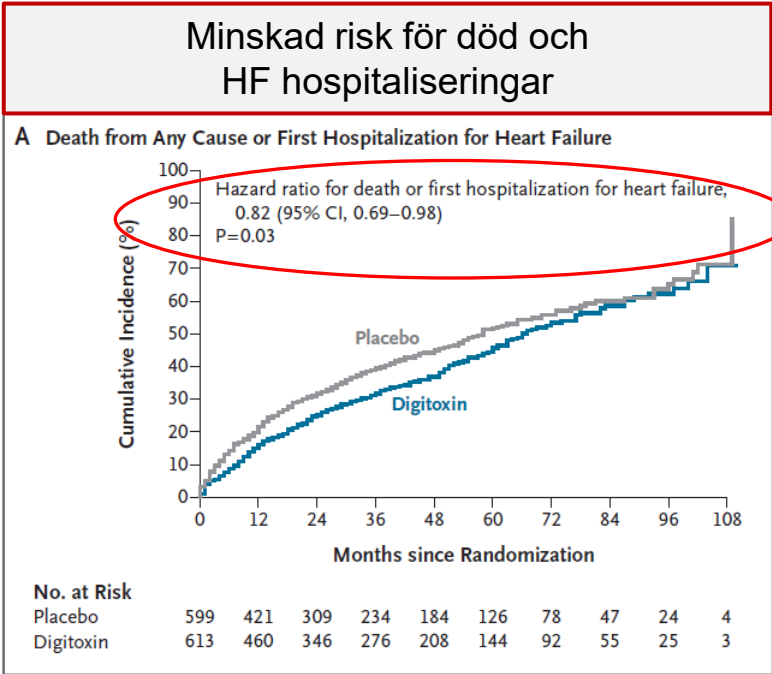
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Digitoxin in Patients with Heart Failure and Reduced Ejection Fraction

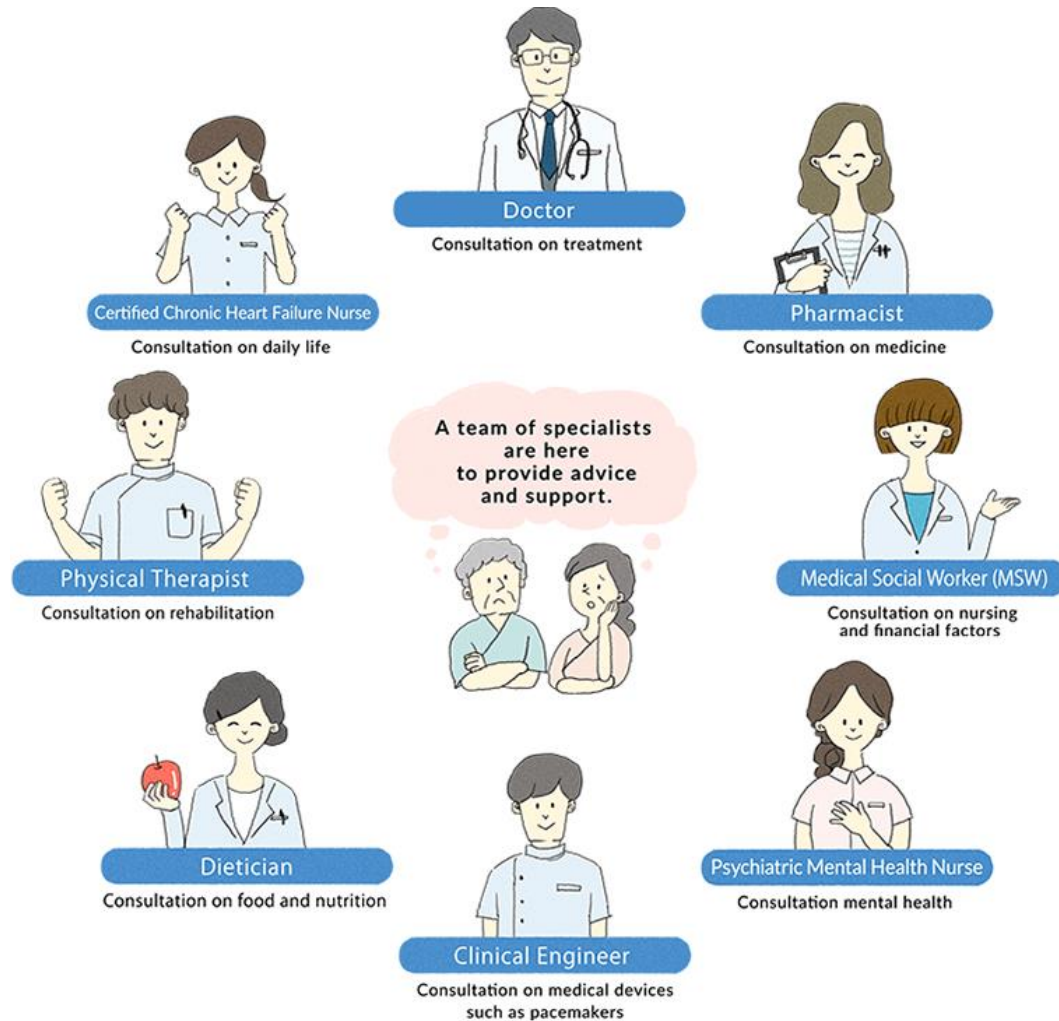
U. Bavendiek,¹ A. Großhennig,² J. Schwab,^{3,4} D. Berliner,¹ A. Rieth,⁵ L.S. Maier,⁶ T. Gaspar,^{7,8} N.H. Thomas,² X. Liu,² S. Schallhorn,¹ E. Angelini,¹ S. Soltani,¹ F. Rathje,¹ M.-A. Sandu,¹ W. Geller,¹ R. Hambrecht,⁹ M. Zdravkovic,¹⁰ S. Philipp,¹¹ D. Kosevic,¹² G. Nickenig,¹³ D. Scheiber,¹⁴ S. Winkler,¹⁵ P.M. Becher,^{16–18} P. Lurz,¹⁹ M. Hülsmann,²⁰ S. Wiesner,² C. Schröder,²¹ B. Neuhaus,²² A. Selmann,²² H. von der Leyen,^{23,24} C. Veltmann,^{1,25} S. Störk,^{26,27} M. Böhm,²⁸ A. Koch,² and J. Bauersachs,¹ for the DIGIT-HF Study Group*

Hos patienter med HFrEF minskade digitoxin jämfört med placebo död och hjärtsvikts hospitaliseringar



Kommer vi använda framöver?

Det multidisciplinära teamet



Det multidisciplinära teamet

- egenvård och fysisk träning

Multidisciplinary interventions recommended for the management of chronic heart failure

Recommendations	Class ^a	Level ^b
It is recommended that HF patients are enrolled in a multidisciplinary HF management programme to reduce the risk of HF hospitalization and mortality. ^{309,314,315,316}	I	A
Self-management strategies are recommended to reduce the risk of HF hospitalization and mortality. ³⁰⁹	I	A
Either home-based and/or clinic-based programmes improve outcomes and are recommended to reduce the risk of HF hospitalization and mortality. ^{310,317}	I	A
Influenza and pneumococcal vaccinations should be considered in order to prevent HF hospitalizations. ^{315,316}	IIa	B

© ESC 2021

Recommendations for exercise rehabilitation in patients with chronic heart failure

Recommendations	Class ^a	Level ^b
Exercise is recommended for all patients who are able in order to improve exercise capacity, QOL, and reduce HF hospitalization. ^{c 324–328,335–337}	I	A
A supervised, exercise-based, cardiac rehabilitation programme should be considered in patients with more severe disease, frailty, or with comorbidities. ^{95,324–327,338}	IIa	C

© ESC 2021



Det multidisciplinära teamet

- strukturerad multidisciplinär uppföljning rekommenderad i guidelines

Multidisciplinary interventions recommended for the management of chronic heart failure

Recommendations	Class ^a	Level ^b
It is recommended that HF patients should be managed in a multidisciplinary HF management programme to reduce the risk of HF hospitalizations and mortality. ^{309,314,315,316}	I	B
Self-management strategies are recommended to reduce the risk of HF hospitalizations and mortality. ³⁰⁹	I	B
Either home-based and/or clinic-based programmes improve outcomes and are recommended to reduce the risk of HF hospitalizations and mortality. ^{310,317}	I	B
Influenza and pneumococcal vaccinations should be considered in order to prevent HF hospitalizations. ^{315,316}	IIa	B

Table 11 Important characteristics and components in a heart failure management programme

Characteristics
1. Patient/person-centred ³¹⁸
2. Multidisciplinary
3. Comprehensive
4. Tailored to the patient's needs
5. Regular follow-up
6. Patient education and self-management
7. Access to advanced treatment options; supportive and palliative care

- Anpassa till patientens behov och möjligheter
- Information ska vara enhetlig & uppdaterad
- Varje kontakt är en möjlighet!

Kvalitetsindikator i Guidelines:

Center ska ha ett multidisciplinärt team för omhändertagande av hjärtsviktspatienter

Patientutbildning

- Europeiska riktlinjerna för patienter med hjärtsvikt



ESC Clinical Practice Guidelines on
**The Management of
Chronic and Acute
Heart Failure:
What Patients
Need to Know**



 ESC:s riktlinjer för hjärtsvikt – vad patienter behöver veta [Läs mer](#) Svenska ▼

ESC:S RIKTLINJER FÖR HJÄRTSVIKT

Vad patienter behöver veta

Denna handledning för patienter från European Society of Cardiology (ESC) syftar till att ge en översikt över de senaste evidensbaserade rekommendationerna för diagnos och behandling av hjärtsvikt.

Den bör i synnerhet hjälpa patienterna att förstå:

- de vanligaste formerna av hjärtsvikt
- läkemedel som används för att behandla hjärtsvikt
- apparater som kan vara lämpliga
- vikten av rehabilitering
- behandling av ett tvärvetenskapligt team
- vikten av egenvård i hanteringen av ditt tillstånd

[Läs mer](#)


[Ladda ner riktlinjerna](#)

[Living with heart failure Archives - Heart Failure Matters](#)

Re-organisatation - ökad GDMT - ökad överlevnad

4D-projektet hjärtsvikt i Stockholm

SCANDINAVIAN CARDIOVASCULAR JOURNAL
https://doi.org/10.1080/14017431.2020.1820075



ORIGINAL ARTICLE

OPEN ACCESS

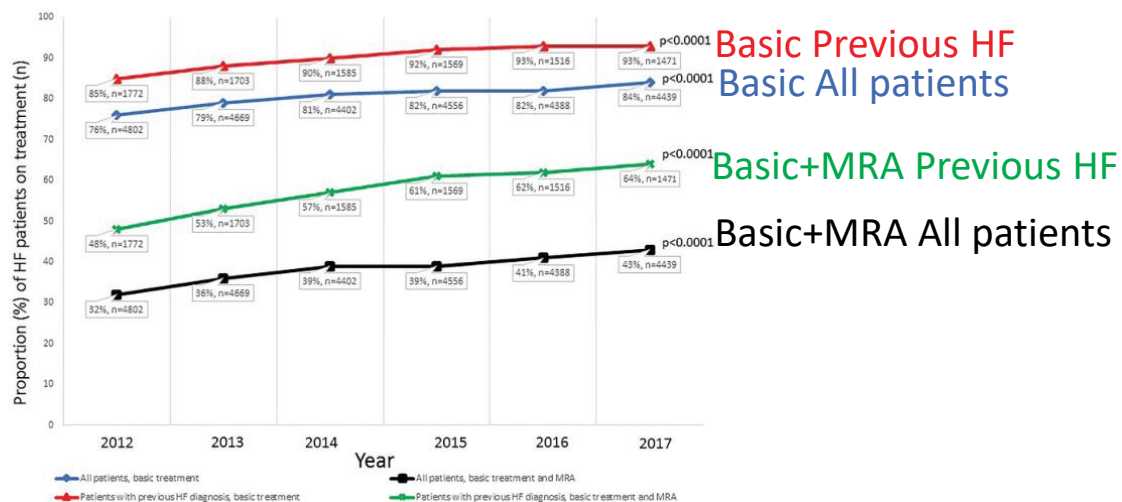
Reorganization of heart failure management and improved outcome – the 4D HF Project

Dmitri Matan^{a,b}, Ulrika Löfström^{c,d}, Carin Corovic Cabrera^{e,f,g}, Björn Eriksson^{h,i}, Mattias Ekström^{a,j}, Camilla Hage^{b,c}, Gunnar Ljunggren^{h,k}, Patrik Lyngå^{e,g}, Håkan Wallén^{a,j}, Karin Knudsen Malmqvist^{a,j}, Cecilia Linde^{b,c} and Hans Persson^{a,j}; on behalf of the 4D HF Project Group (Appendix)

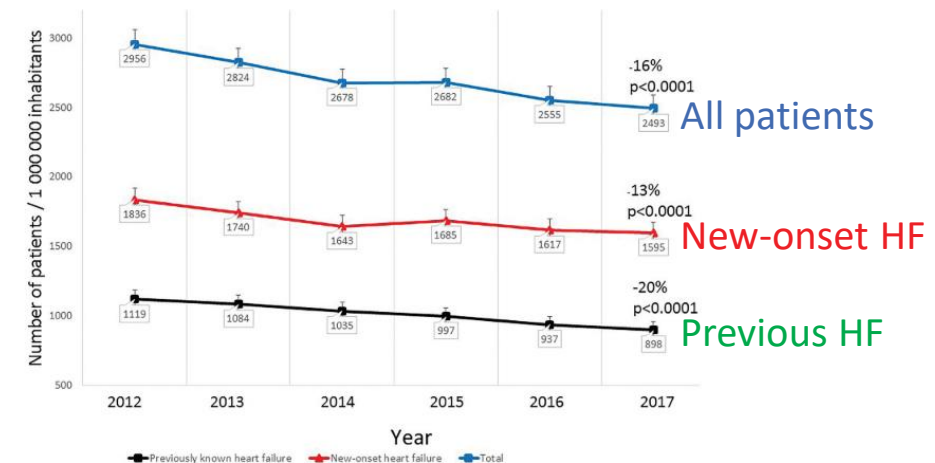
^aDepartment of Clinical Sciences, Karolinska Institutet, Danderyd Hospital, Stockholm, Sweden; ^bHeart and Vascular Theme, Karolinska University Hospital, Stockholm, Sweden; ^cDepartment of Medicine, Karolinska Institutet, Stockholm, Sweden; ^dDepartment of Medicine, Capio St. Görans Hospital, Stockholm, Sweden; ^eDepartment of Clinical Science and Education, Karolinska Institutet, Södersjukhuset, Stockholm, Sweden; ^fDepartment of Cardiology, Södersjukhuset, Stockholm, Sweden; ^gDepartment of Cardiology, South General Hospital, Stockholm, Sweden; ^hDepartment of Neurobiology, Care Sciences and Society (NVS), Karolinska Institutet, Stockholm, Sweden; ⁱGustavsberg Academic Health Care Center, Stockholm, Sweden; ^jDepartment of Cardiology, Danderyd University Hospital, Stockholm, Sweden; ^kPublic Health Care Services Committee Administration, Stockholm County Council, Stockholm, Sweden

- 5 Hjärtsviktsmottagningar i Stockholm
- 1 hjärtsviktspecialist och 1 hjärtsviktsjuksköterska
- Remisser från primärvårdsmottagningar (n=250)
- Standardiserat HF program

GDMT

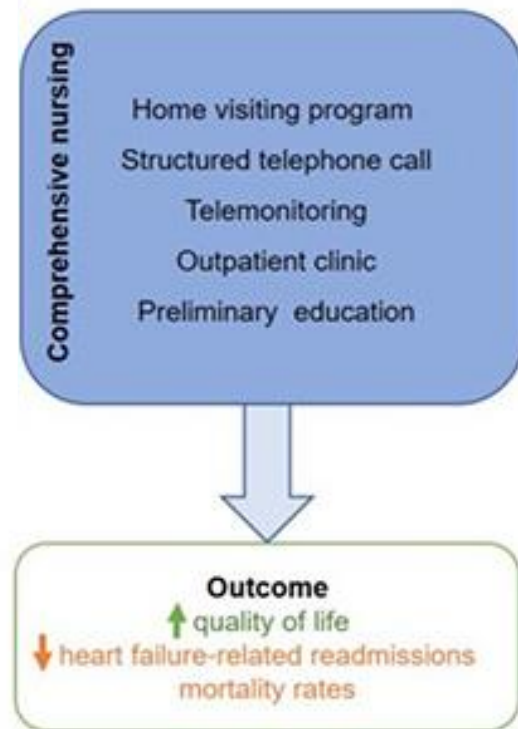


HF hospitalizations/1000 000 inhabitants

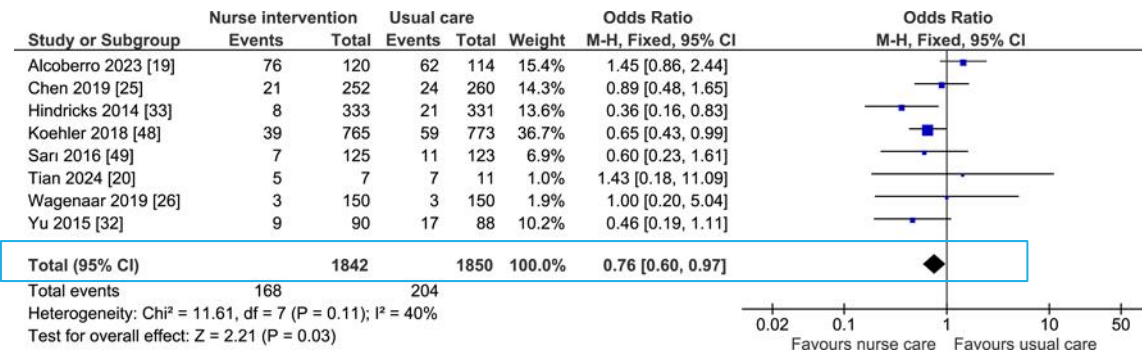


Hjärtsviktsprogram ledda av sjuksköterskor

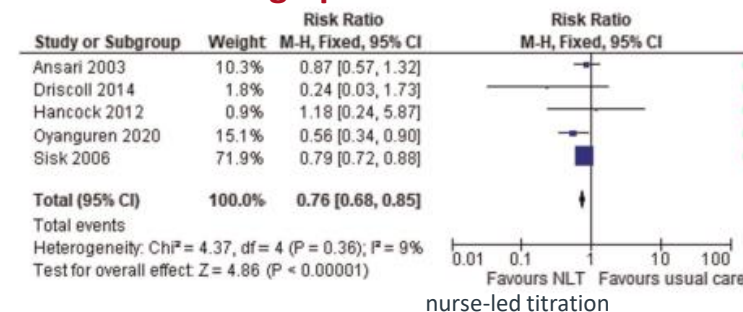
- minskar hjärtviktsinläggningar och mortalitet



Reduction in HF mortality rates



Patients reaching optimal dose



Nya ESC Guidelines i hjärtsvikt 2026



Rikssvikt

*- vårt nationella
kvalitetsregister
i Sverige*



Hur följer vi behandlingsrekommendationerna i Sverige?

Rikssvikt

-Registreringar 2018 - 2024

2024

140 000 unika patienter

175 registrerande enheter

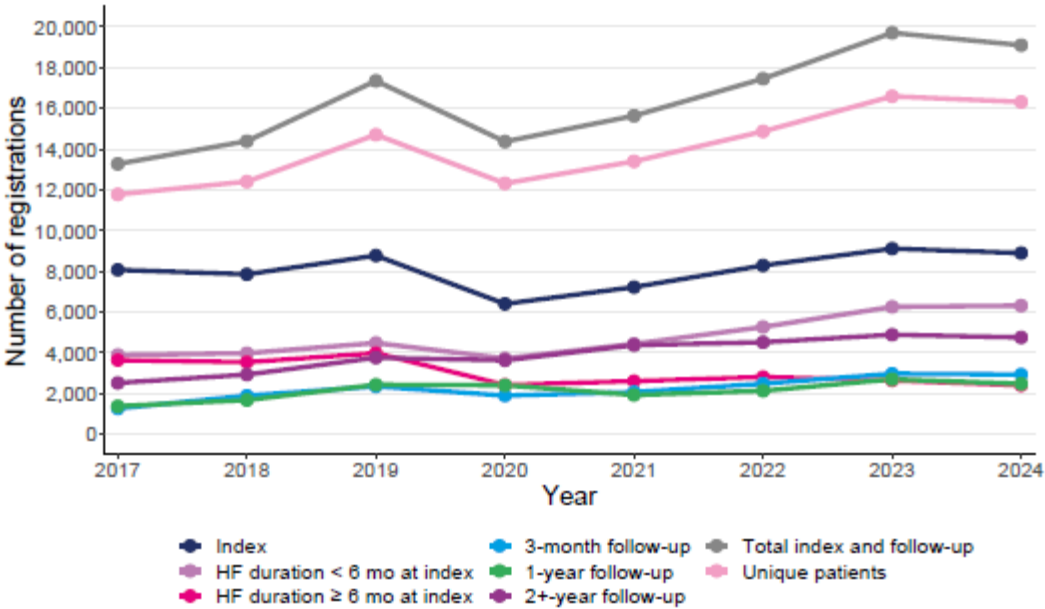
- 80 sjukhus
- 95 vårdcentraler

Table 1: Registration over time, 2017-2024

	2017	2018	2019	2020	2021	2022	2023	2024
Index	8,075	7,855	8,774	6,405	7,226	8,289	9,114	8,897
HF duration < 6 mo at index	3,900	3,985	4,488	3,728	4,442	5,271	6,260	6,319
HF duration ≥ 6 mo at index	3,648	3,544	3,991	2,429	2,618	2,820	2,652	2,411
3-month follow-up	1,276	1,903	2,359	1,908	2,081	2,491	2,982	2,944
1-year follow-up	1,388	1,688	2,441	2,414	1,937	2,141	2,708	2,488
2+-year follow-up	2,530	2,937	3,767	3,636	4,383	4,524	4,891	4,760
Total index and follow-up	13,269	14,383	17,341	14,363	15,627	17,445	19,695	19,089
Unique patients	11,774	12,401	14,699	12,314	13,391	14,862	16,582	16,307

59% täckningsgrad 2023

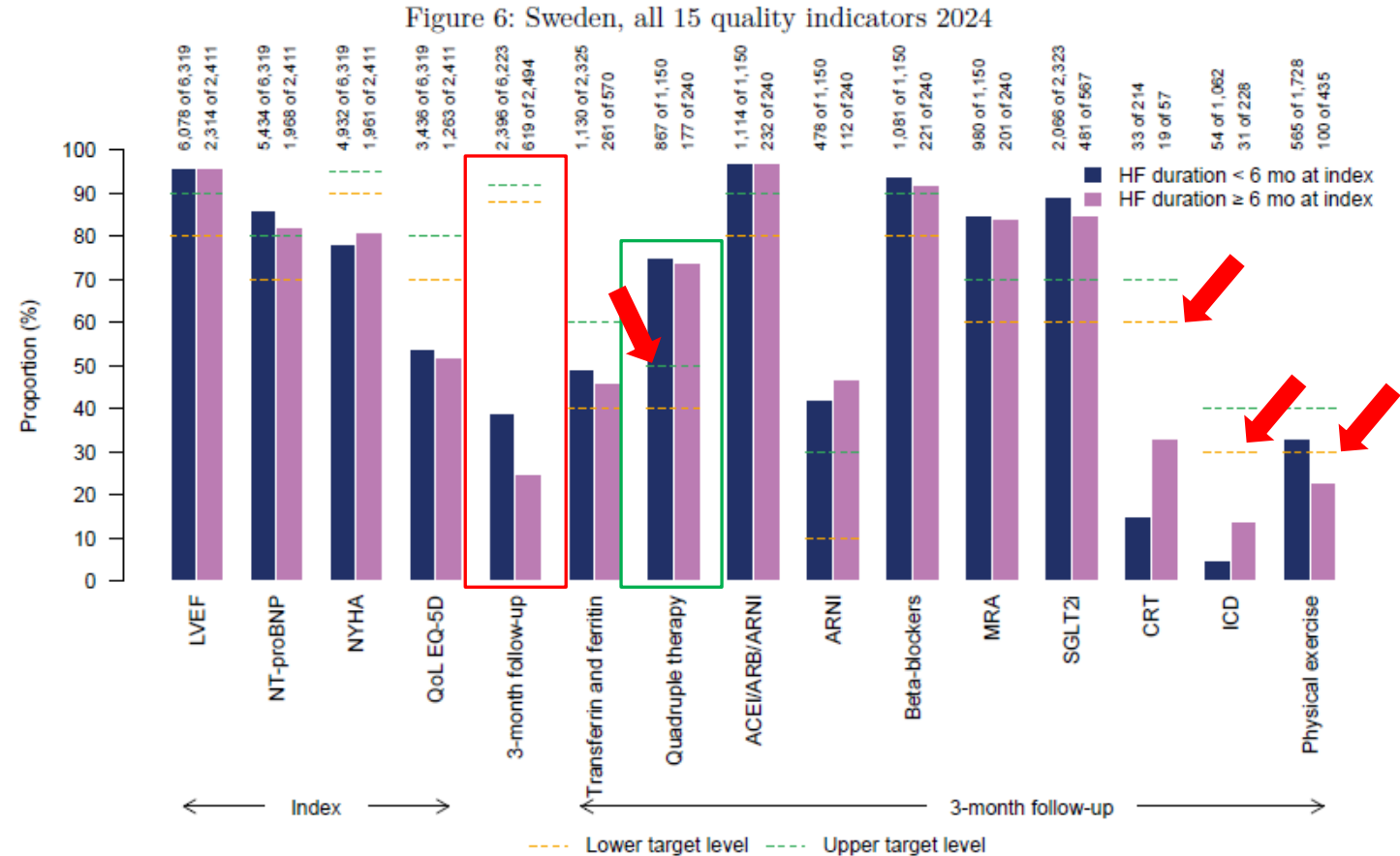
Figure 1: Registration over time, 2017-2024



Rikssvikts kvalitetsindikatorer

RiksSvikt 15 kvalitetsindikatorer

- 4 från *Index*
- 1 processindikator
- 10 behandlingsindikatorer från *Uppföljning 3 månader*



Varje indikator har en *undre* och *övre* målnivå

Rikssvikts uppdateringar

2025 års variabelförändringar i Rikssvikt – DENNA VECKAN

Ändringarna är:

1. Utöka till två variabler för LVEF vid index:
 - Lägsta kända LVEF
 - Senaste LVEF
1. Ta bort Covid-variablerna
2. Nya Intervall för LVEF Semikvantitativt för att harmonisera med Guidelines
 - HFrEF $\leq 40\%$ HFmrEF 41-49% HFpEF ≥ 50

Forskning inom Rikssvikt >150 publikationer

UPSALA JOURNAL OF MEDICAL SCIENCES
2019, VOL. 124, NO. 1, 65–69
<https://doi.org/10.1080/03009734.2018.1490831>



ARTICLE

The Swedish Heart Failure Registry: a living, ongoing quality assurance and research in heart failure

Gianluigi Savarese^a, Peter Vasko^b, Åsa Jonsson^c, Magnus Edner^a, Ulf Dahlström^d and Lars H. Lund^a

^aCardiology Unit, Department of Medicine, Karolinska Institutet, Stockholm, Sweden; ^bDepartment of Medicine, Växjö Hospital, Växjö, Sweden; ^cDepartment of Medicine, Ryhov County Hospital, Jönköping, Sweden; ^dDepartment of Cardiology and Department of Medical Health Sciences, Linköping University, Linköping, Sweden



International Journal of Cardiology 362 (2022) 97–103



Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard



Sex-related differences among young adults with heart failure in Sweden

C. Basic^{a,*}, A. Rosengren^a, U. Dahlström^b, M. Edner^c, M. Fu^a, T. Zverkova-Sandström^a, M. Schaufelberger^a



European Journal of Heart Failure (2023)
doi:10.1002/ehf.3049

RESEARCH ARTICLE

Safety of continuing mineralocorticoid receptor antagonist treatment in patients with heart failure with reduced ejection fraction and severe kidney disease: data from Swedish Heart Failure Registry

Federica Guidetti¹, Lars H. Lund^{1,2}, Lina Benson¹, Camilla Hage¹, Francesca Musella^{1,3}, Davide Stolfo^{1,4}, Peter G.M. Mol⁵, Andreas J. Flammer⁶, Frank Ruschitzka⁴, Ulf Dahlström⁷, Giuseppe M.C. Rosano⁸, Oscar Ö. Braun⁹, and Gianluigi Savarese^{1,2,*}



European Journal of Heart Failure (2023)
doi:10.1002/ehf.3545

RESEARCH ARTICLE

Implementation of guideline-recommended therapies in heart failure with reduced ejection fraction according to heart failure duration: An analysis of 55 581 patients from the Swedish Heart Failure (SwedeHF) Registry

Angiza Shahim^{1,2,*}, Cecilia Linde^{1,2}, Gianluigi Savarese^{1,2}, Ulf Dahlström³, Lars H. Lund^{1,2}, and Camilla Hage^{1,2}

¹Division of Cardiology, Department of Medicine, Karolinska Institutet, Stockholm, Sweden; ²Heart and Vascular and Neurology Theme, Karolinska University Hospital, Stockholm, Sweden; and ³Department of Cardiology and Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden

Received 27 August 2024; revised 24 November 2024; accepted 5 December 2024



European Journal of Heart Failure (2017) 19, 1107–1116
doi:10.1002/ehf.762

RESEARCH ARTICLE

Association between enrolment in a heart failure quality registry and subsequent mortality—a nationwide cohort study

Lars H. Lund^{1,2*}, Juan-Jesus Carrero³, Bahman Farahmand⁴, Karin M. Henriksson^{5,6}, Åsa Jonsson⁷, Tomas Jernberg^{2,8}, and Ulf Dahlström⁹

¹Department of Medicine, Karolinska Institute, Stockholm, Sweden; ²Department of Cardiology, Karolinska University Hospital, Stockholm, Sweden; ³Department of Clinical Science, Intervention and Technology, Karolinska Institute, Stockholm, Sweden; ⁴Unit-Consultant, Stockholm, Sweden; ⁵Department of Medical Sciences, Umeå University, Umeå, Sweden; ⁶Department of Medicine, Karolinska Institute, Stockholm, Sweden; ⁷Department of Cardiology, Karolinska University Hospital, Stockholm, Sweden; ⁸Department of Cardiology, Karolinska University Hospital, Stockholm, Sweden; ⁹Department of Cardiology, Karolinska University Hospital, Stockholm, Sweden



European Journal of Heart Failure (2023) 25, 1132–1144
doi:10.1002/ehf.2938

RESEARCH ARTICLE

Association between a hospitalization for heart failure and the initiation/discontinuation of guideline-recommended treatments: An analysis from the Swedish Heart Failure Registry

Benedikt Schrage^{1,2}, Lars H. Lund^{1,3}, Lina Benson¹, Frieder Braunschweig^{1,3}, João Pedro Ferreira⁴, Ulf Dahlström⁵, Marco Metra⁶, Giuseppe M.C. Rosano⁷, and Gianluigi Savarese^{1,3,*}



European Journal of Heart Failure (2023) 25, 1270–1280
doi:10.1002/ehf.2879

RESEARCH ARTICLE

Iron deficiency in heart failure: Screening, prevalence, incidence and outcome data from the Swedish Heart Failure Registry and the Stockholm CREATinine Measurements collaborative project

Felix Lindberg¹, Lars H. Lund^{1,2}, Lina Benson¹, Cecilia Linde¹, Nicola Orsini³, Juan Jesus Carrero^{4,5}, and Gianluigi Savarese^{1,2,*}

¹Division of Cardiology, Department of Medicine, Karolinska Institutet, Stockholm, Sweden; ²Heart and Vascular and Neurology Theme, Karolinska University Hospital, Stockholm, Sweden; ³Department of Global Public Health, Karolinska Institutet, Stockholm, Sweden; ⁴Department of Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden; and ⁵Division of Nephrology, Department of Clinical Sciences, Danderyd Hospital, Karolinska Institutet, Stockholm, Sweden

Received 27 December 2022; revised 23 April 2023; accepted 24 April 2023; online publication date: 10 May 2023

Journal of the American Heart Association

ORIGINAL RESEARCH

Persistent High Burden of Heart Failure Across the Ejection Fraction Spectrum in a Nationwide Setting

Davide Stolfo¹, MD, PhD; Lars H. Lund², MD, PhD; Lina Benson³, MSc; Camilla Hage⁴, RN, PhD; Gianfranco Sinagra⁵, MD; Ulf Dahlström, MD, PhD; Gianluigi Savarese⁶, MD, PhD

BACKGROUND: Heart failure (HF) has a dramatic impact on worldwide health care systems that is determined by the growing prevalence and the high exposure to cardiovascular and noncardiovascular events. Prognosis remains poor. We sought to compare a large population with HF across the ejection fraction (EF) spectrum with a population without HF for patient characteristics, and HF, cardiovascular, and noncardiovascular outcomes.

METHODS AND RESULTS: Patients with HF registered in the Swedish HF registry in 2005 to 2018 were compared 1:3 with a population without HF for patient characteristics, and HF, cardiovascular, and noncardiovascular outcomes.

ESC HEART FAILURE
ESC Heart Failure (2025)
Published online in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/ehf2.15206

ORIGINAL ARTICLE

Health-related quality of life across heart failure categories: associations with clinical characteristics and outcomes

Camilla Settergren^{1,2}, Lina Benson^{1,3}, Ulf Dahlström^{4,5}, Tonje Thorvaldsen^{1,2}, Gianluigi Savarese⁶, Lars H. Lund^{1,2} and Bahira Shahim^{1,2,*}

¹Division of Cardiology, Department of Medicine, Karolinska Institutet, Stockholm, Sweden; ²Heart and Vascular Theme, Karolinska University Hospital, Stockholm, Sweden; ³Department of Clinical Science and Education, Södersjukhuset, Karolinska Institutet, Stockholm, Sweden; ⁴Department of Cardiology, Linköping University, Linköping, Sweden; and ⁵Department of Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden

Contents lists available at ScienceDirect

International Journal of Cardiology

journal homepage: www.elsevier.com/locate/ijcard



Phenotyping patients with chronic obstructive pulmonary disease and heart failure

Peter Moritz Becher^{1,2,3}, Felix Lindberg³, Lina Benson³, Camilla Hage³, Ulf Dahlström⁴, Stephan Francesco Cosentino⁵, Giuseppe M.C. Rosano⁶, Stefan Blankenberg^{1,2,8}, Paulus Kirchhof^{1,2,9}, Frieder Braunschweig^{3,6}, Lars H. Lund^{3,6} and Gianluigi Savarese^{3,6,*}

¹Department of Cardiology, University Heart and Vascular Center Hamburg, Hamburg, Germany; ²German Center of Cardiovascular Research (DZHK), Potsdam, Germany; ³Division of Cardiology, Department of Medicine, Karolinska Institutet, Stockholm, Sweden; ⁴Department of Cardiology, Health, Medicine and Caring Sciences, Linköping University, Linköping, Sweden; ⁵Department of Cardiology (Clinic B) for Internal Medicine and Cardiology Research Center (ESC), Heart Center of the University of Cologne, Cologne, Germany; ⁶Heart and Vascular and Neurology Theme, Karolinska University Hospital, Stockholm, Sweden; ⁷Cardiovascular, St George's University Hospitals, London, UK; ⁸San Raffaele Cassino Hospital, Cassino, Italy; ⁹Center for Population Health Research, University Heart and Vascular Center Hamburg, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; and ¹⁰Institute of Cardiology, University of Cologne, Cologne, Germany

Prevalence of, associations with, and prognostic role of anemia in heart failure across the ejection fraction spectrum

Gianluigi Savarese^{a,1}, Åsa Jonsson^{b,1}, Ann-Charlotte Hallberg^c, Ulf Dahlström^d, Magnus Edner^a, Lars H. Lund^{a,c,e}

^a Cardiology Unit, Department of Medicine, Karolinska Institutet, Stockholm, Sweden

^b Department of Medicine, Division of Cardiology, County Hospital Ryhov, Jönköping, Sweden

^c Department of Computer and Information Science, Linköping University, Linköping, Sweden

^d Department of Cardiology and Department of Health Sciences, Linköping University, Linköping, Sweden

^e Heart and Vascular Theme, Karolinska University Hospital, Stockholm, Sweden

ARTICLE INFO

ABSTRACT



European Journal of Heart Failure (2021)
doi:10.1002/ehf.2338

RESEARCH ARTICLE

Phenotyping heart failure patients for iron deficiency and use of intravenous iron therapy: data from the Swedish Heart Failure Registry

Peter Moritz Becher^{1,2,3}, Benedikt Schrage^{1,2,3}, Lina Benson¹, Marat Fudim^{4,5}, Carin Corovic Cabrera^{6,7}, Ulf Dahlström⁸, Giuseppe M.C. Rosano^{9,10}, Ewa A. Jankowska¹¹, Stefan D. Anker¹², Lars H. Lund^{1,13}, and Gianluigi Savarese^{1,13,*}

Ökad överlevnad med registrering i Rikssvikt

Association between enrolment in a heart failure quality registry and subsequent mortality—a nationwide cohort study

Lars H. Lund^{1,2*}, Juan-Jesus Carrero³, Bahman Farahmand⁴, Karin M. Henriksson^{5,6}, Åsa Jonsson⁷, Tomas Jernberg^{2,8}, and Ulf Dahlström⁹

¹Department of Medicine, Karolinska Institute, Stockholm, Sweden; ²Department of Cardiology, Karolinska University Hospital, Stockholm, Sweden; ³Department of Clinical Science, Intervention and Technology, Karolinska Institute, Stockholm, Sweden; ⁴Epi-Consultant, Stockholm, Sweden; ⁵Department of Medical Sciences, Uppsala University, Uppsala, Sweden; ⁶AstraZeneca RD, Mölndal, Sweden; ⁷Department of Medicine, Division of Cardiology, County Hospital Ryhov, Jönköping, Sweden; ⁸Department of Medical Epidemiology and Biostatistics, Karolinska Institute, Stockholm, Sweden; and ⁹Department of Cardiology and Department of Medical and Health Sciences, Linköping University, Linköping, Sweden

Received 19 December 2016; accepted 28 December 2016; online publish-ahead-of-print 23 February 2017

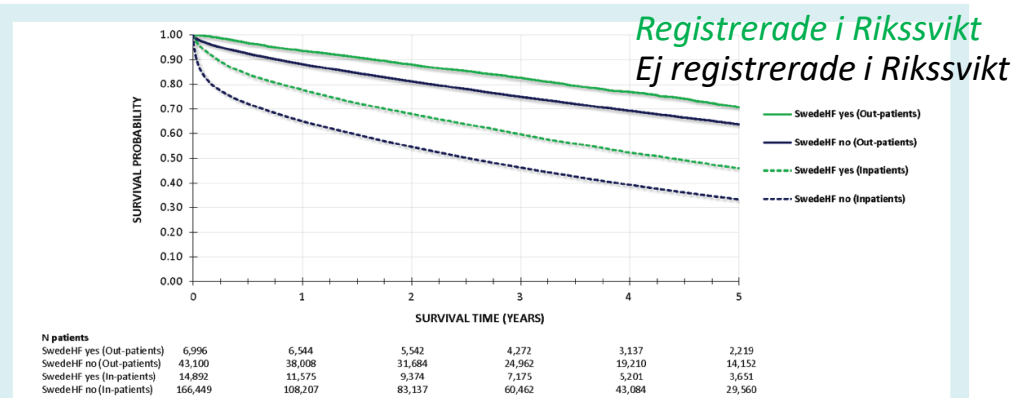


Figure 3 Kaplan–Meier survival curves according to enrolment in the Swedish Heart Failure Registry (SwedeHF) yes vs. no, for patients with incident heart failure (HF) seen as inpatients and as outpatients. NPR, National Patient Registry.

Förklaras av demografi och hjärtsviktsbehandling

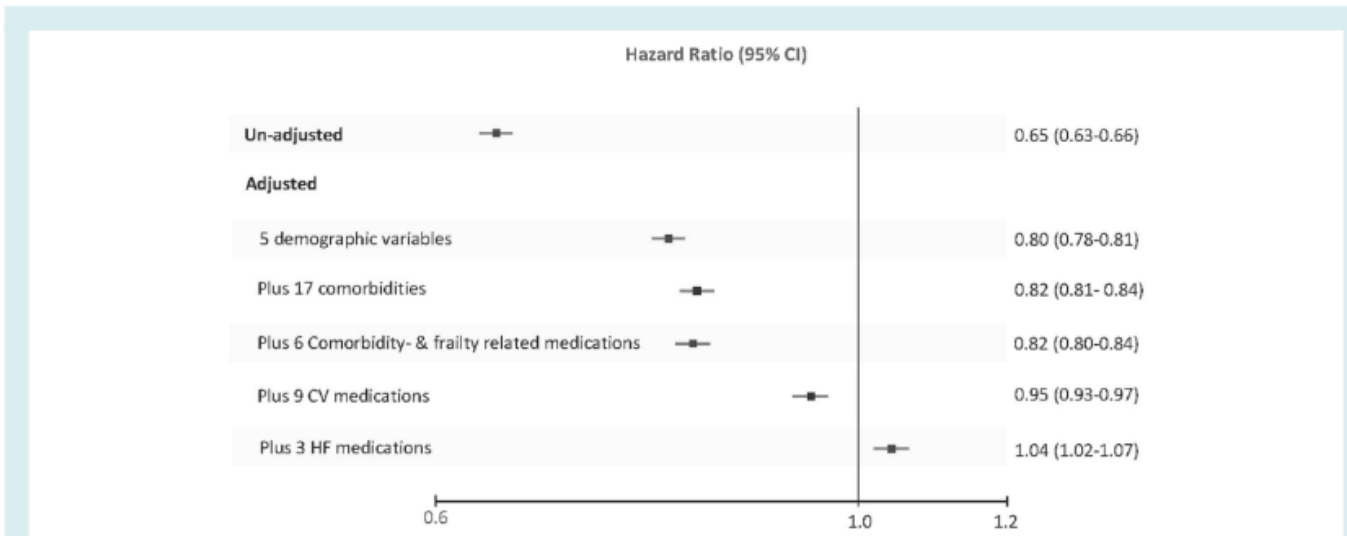
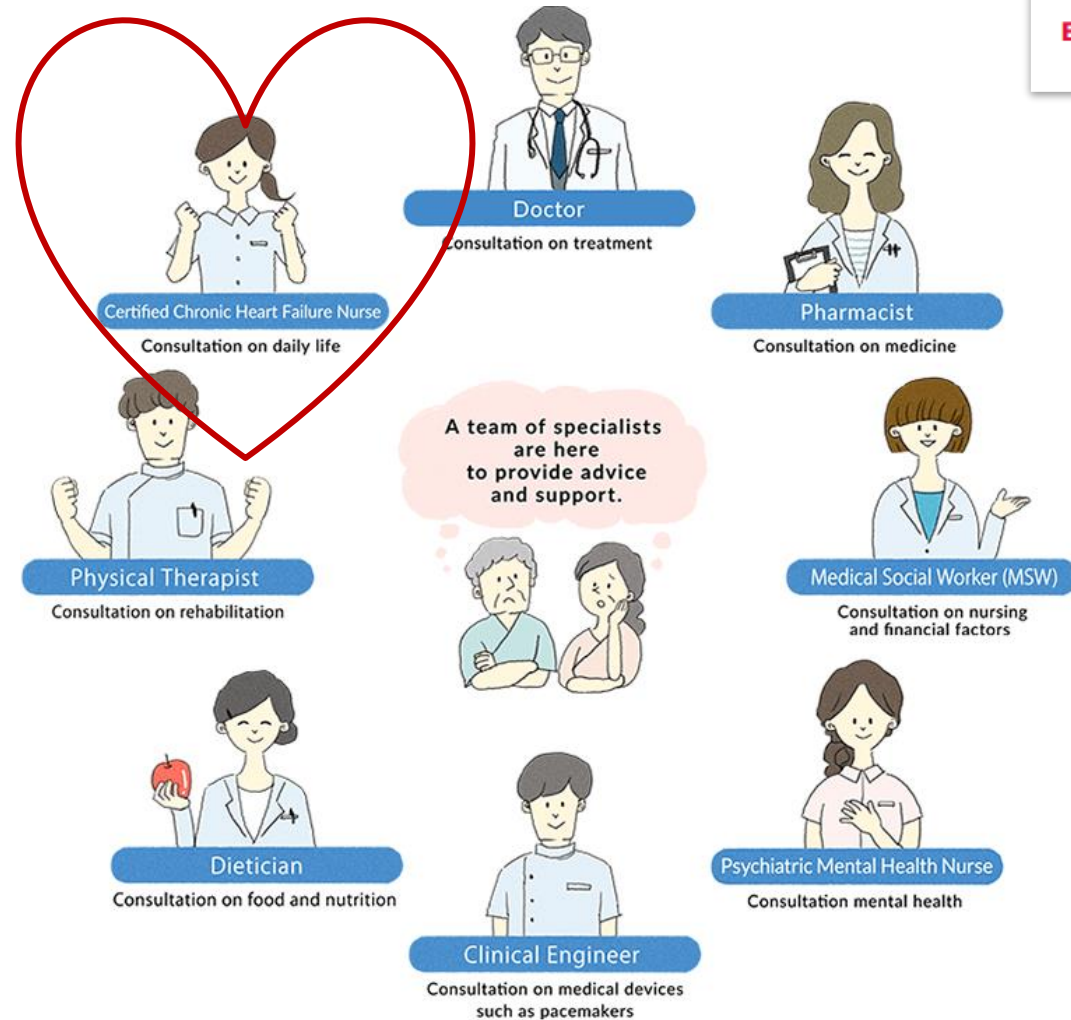


Figure 4 Adjusted hazard ratios and 95% confidence intervals for all-cause mortality for enrolment in the Swedish Heart Failure Registry (SwedeHF) yes vs. no. The five demographic, 17 co-morbidity, and 18 medication variables are the same as shown in Figure 2 plus year of enrolment. CI, confidence interval; HF, heart failure.

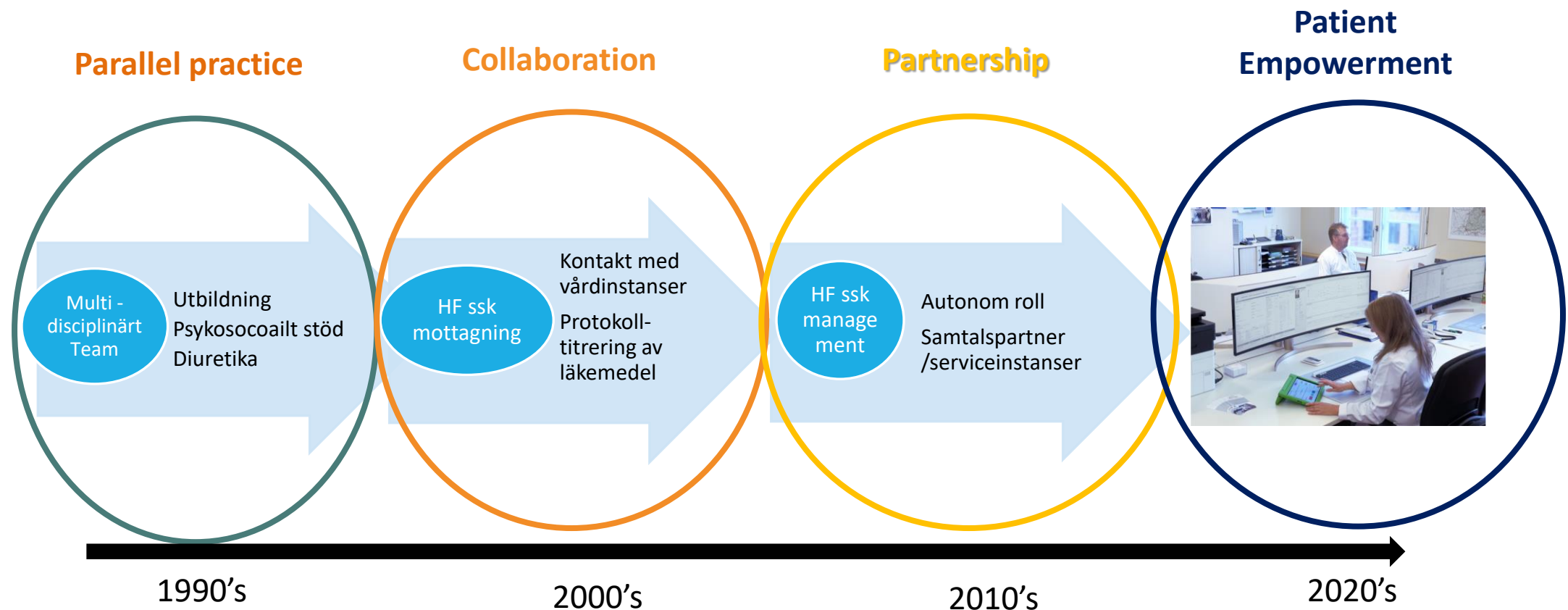
Hjärtsvikts sjuksköterskan



"It has also underscored the need for specialist HF cardiologists and specialist HF nurses to help provide care. Detailed curricula, to aid training of these, are available to be adapted for national implementation."

Hjärtsviktssjuksköterskans roll

- i förändring



Hjärtsviktssjuksköterskan i Europa

- vilka uppgifter, ansvar och utbildning har hjärtsviktssjuksköterskor i Europa?



European Journal of Heart Failure (2024)
doi:10.1002/ehf.3519

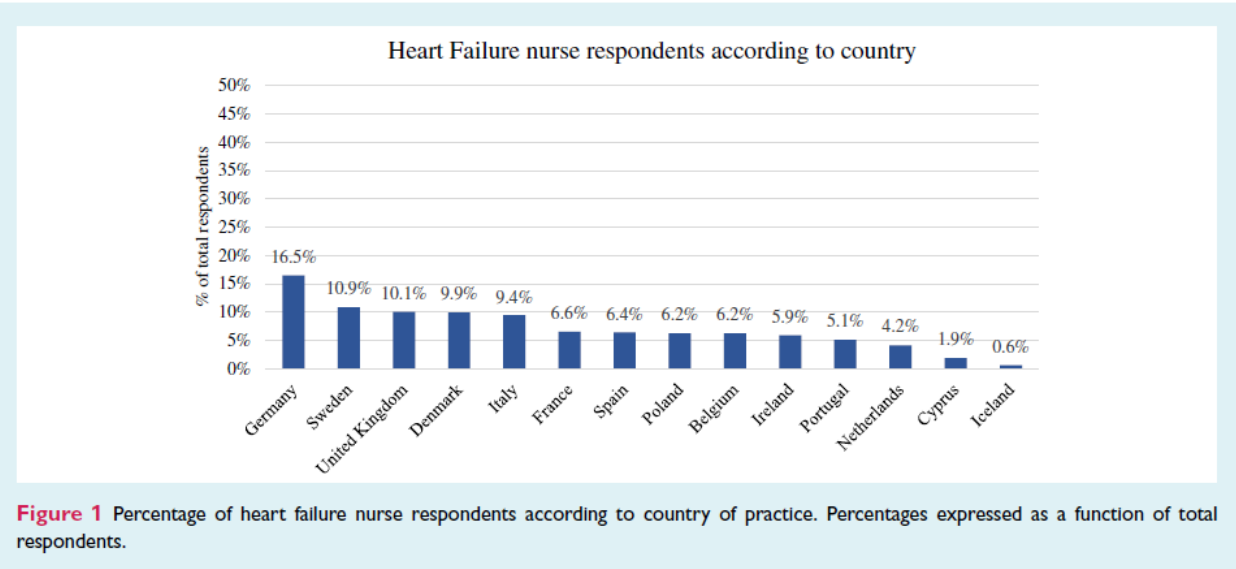
RESEARCH ARTICLE

Examining the clinical role and educational preparation of heart failure nurses across Europe. A survey of the Heart Failure Association (HFA) of the European Society of Cardiology (ESC) and the Association of Cardiovascular Nursing and Allied Professions (ACNAP) of the ESC

Loreena Hill^{1,2*}, Nicolas Girerd³, Teresa Castiello⁴, Tiny Jaarsma⁵, Marco Metra⁶, Giuseppe Rosano⁷, Patrick Savage⁸, Mark J. Schuurings^{9,10}, Maggie Simpson¹¹, Izabella Uchmanowicz¹², Maurizio Volterrani^{13,14}, Rhys Williams¹⁵, Ekaterini Lambrinou¹⁶, and Camilla Hage^{17,18}

- 837 hjärtsviktssjuksköterskor från 15 länder i Europa
- 35 frågor
- 2022-2023

- Majoriteten >35 år (n=562, 75%), och kvinnor (n= 643, 85%)
- En tredjedel >5 års erfarenhet av hjärtsjukvård (n=282, 34%) innan de blev hjärtsviktssjuksköterska
- 52% (n=431) hade tillgång till ett HF Multidisciplinärt Team
- 78% (n=395) arbetade på sjukhus



Hjärtsviktssjuksköterskan i Europa

- behov av strukturerad och standardiserad utbildning

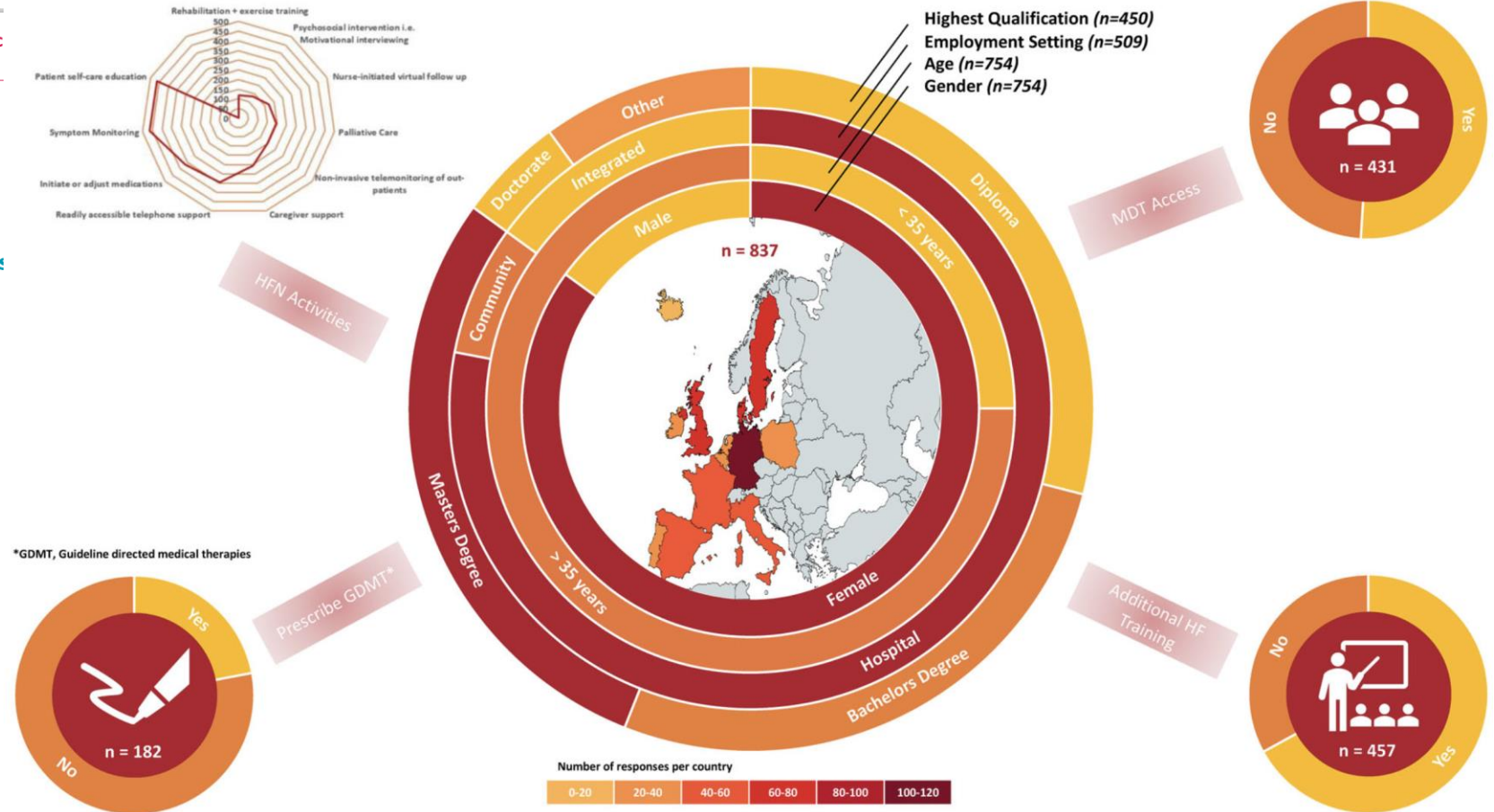


European Journal of Heart Failure (2024)
doi:10.1002/ehf.3519

RESEARCH ARTICLE

Examining the clinical role and educational preparation of heart failure nurses across Europe. A survey of the Heart Failure Association (HFA) of the European Society of Cardiology (ESC) and the Association of Cardiovascular Nursing and Allied Professions (ACNAP) of the ESC

Loreena Hill^{1,2*}, Nicolas Girerd³, Teresa Castiello⁴, Tiny Jaarsma⁵, Marco Metra⁶, Giuseppe Rosano⁷, Patrick Savage⁸, Mark J. Schuurings^{9,10}, Maggie Simpson¹¹, Izabella Uchmanowicz¹², Maurizio Volterrani^{13,14}, Rhys Williams¹⁵, Ekaterini Lambrinou¹⁶, and Camilla Hage^{17,18}



Hjärtsviktssjuksköterskan i Europa

- tillgång till ett HF Multidisciplinärt Team varierar i Europa

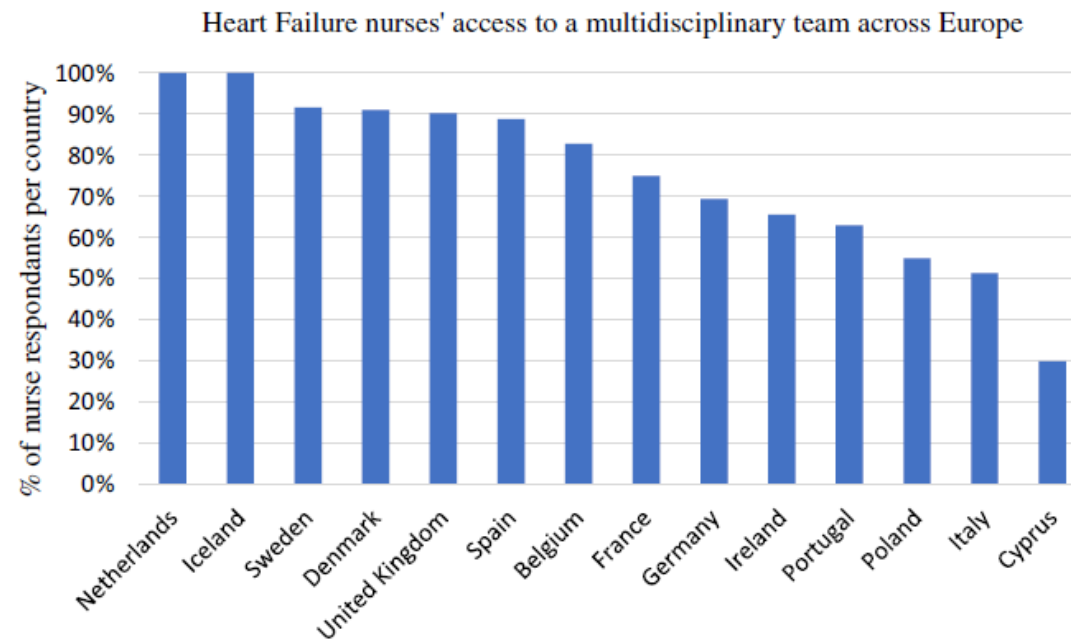
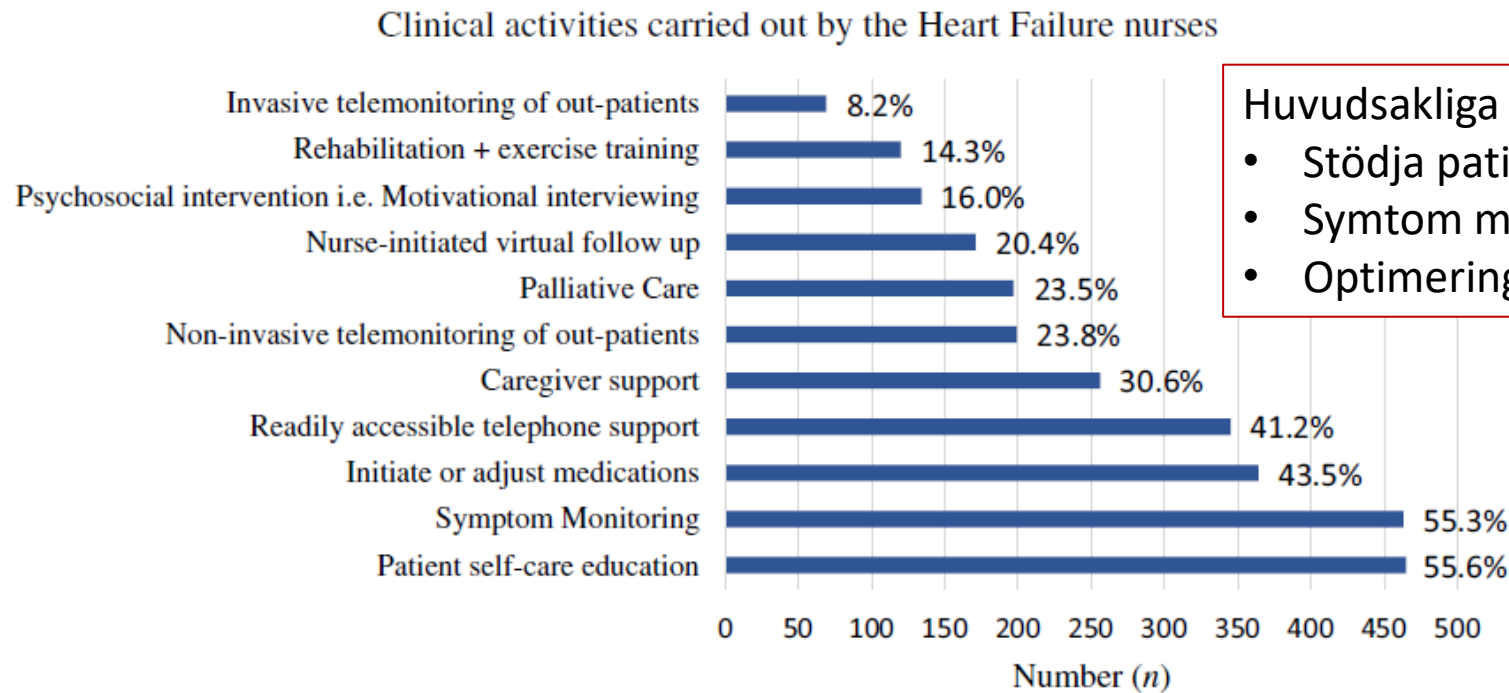


Figure 3 Heart failure nurses' access to members of a heart failure multidisciplinary team according to their country of practice. Data were available for 473 respondents. This graph shows yes/no responses by country with percentages expressed as a function of the total respondents from each country.

Hjärtsviktssjuksköterskan i Europa

- kliniska aktiviteter och uppgifter



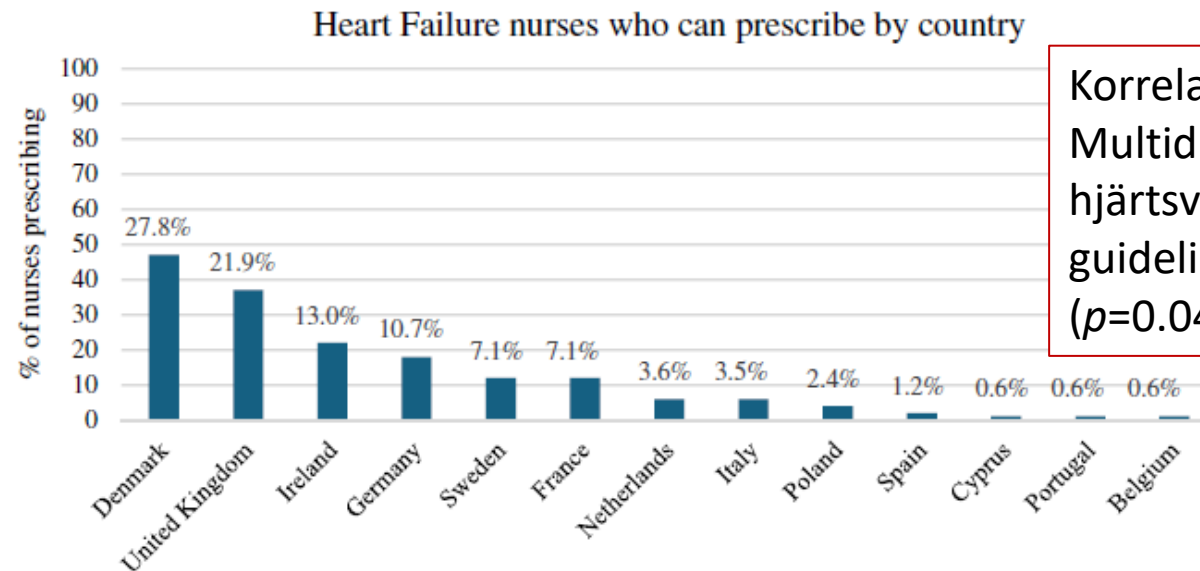
Huvudsakliga uppgifter består av

- Stödja patienter i egenvårdstrategier
- Symtom monitorering
- Optimering av HF behandling

Figure 6 Clinical activities carried out by heart failure nurses. Percentages are expressed as a function of total respondents.

Hjärtsviktssjuksköterskan i Europa

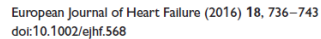
- förskrivning av HF läkemedel av hjärtsviktssjuksköterskan i olika länder



Korrelation mellan tillgång till Multidisciplinärt Team och att hjärtviktsjuksköterskan förskriver guidelinerekommenderad HF behandling ($p=0.04$)

Figure 2 Percentage of heart failure nurses who prescribe guideline-directed medical therapy according to country of practice. Percentages expressed as a function of total respondents.

- the Heart Failure Nurse Core Curriculum 2016



Heart Failure Association of the European Society of Cardiology heart failure nurse curriculum

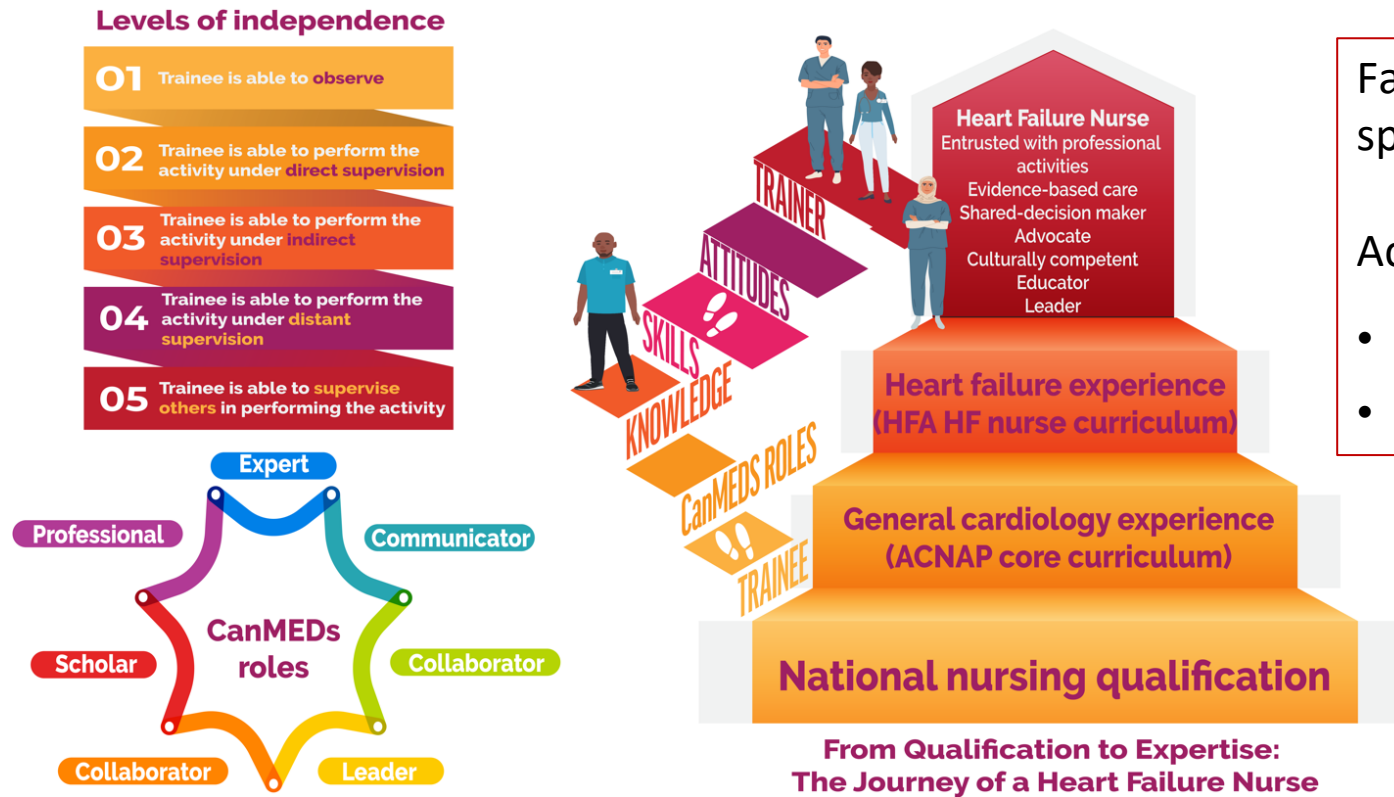
Table 1 Specific learning objectives of the heart failure (HF) nurse curriculum

Objective
1. Recognize patients with suspected HF and have a critical awareness of triggers for clinical deterioration
2. Assess and monitor common symptoms and signs
3. Apply educational theory to develop, implement and evaluate effective patient and family HF education
4. Provide self-care and lifestyle advice (including diet, exercise and travel)
5. Manage the effective use of pharmacological and device therapies
6. Competently and rapidly assess need and deliver care to the patient with acute HF

- Samarbete och utbyte mellan (inter)nationella kardiiovaskulära utbildningsprogram kan bidra till bättre utbildning för hjärtsviktssjuksköterskor

Hjärtsviktssjuksköterskan i framtiden

- the Heart Failure Nurse Core Curriculum 2025



Facilitate for accredited programme for nurses specialising in HF

Accreditation in different forms:

- endorse existing higher education HF courses
- development of HFA HF nurse certification

Forskning i Rikssvikt



SPIRRIT-HFpEF-studien

Spironolactone Initiation Registry Randomized Interventional Trial in Heart Failure with Preserved Ejection Fraction



European Journal of Heart Failure (2024)
doi:10.1002/ehf.3453

STUDY DESIGN

The Spironolactone Initiation Registry Randomized Interventional Trial in Heart Failure with Preserved Ejection Fraction (SPIRRIT-HFpEF): Rationale and design

Lars H. Lund^{1,2*}, Stefan James³, Adam D. DeVore⁴, Kevin J. Anstrom⁵, Marat Fudim⁴, Keith D. Aaronson⁶, Ulf Dahlström^{7,8}, Patrice Desvigne-Nickens⁹, Jerome L. Fleg⁹, Song Yang¹⁰, Michael Fu¹¹, Camilla Hage^{1,2}, Claes Held³, Patric Karlström^{7,8}, Magnus Nygren^{1,2}, Eric D. Peterson¹², Tymon Pol³, Shelly Sapp⁴, Johan Sundström^{13,14}, Ollie Östlund³, Jonas Oldgren³, and Bertram Pitt⁴

Syfte:

Undersöka om behandling med spironolakton minskar kardiovaskulär död och sjukhusinläggningar hos patienter med HFpEF och HFmrEF

Enrollering avslutad 2025-12-31 – uppföljning ca 12 månader

I Sverige har 42 kliniker deltagit

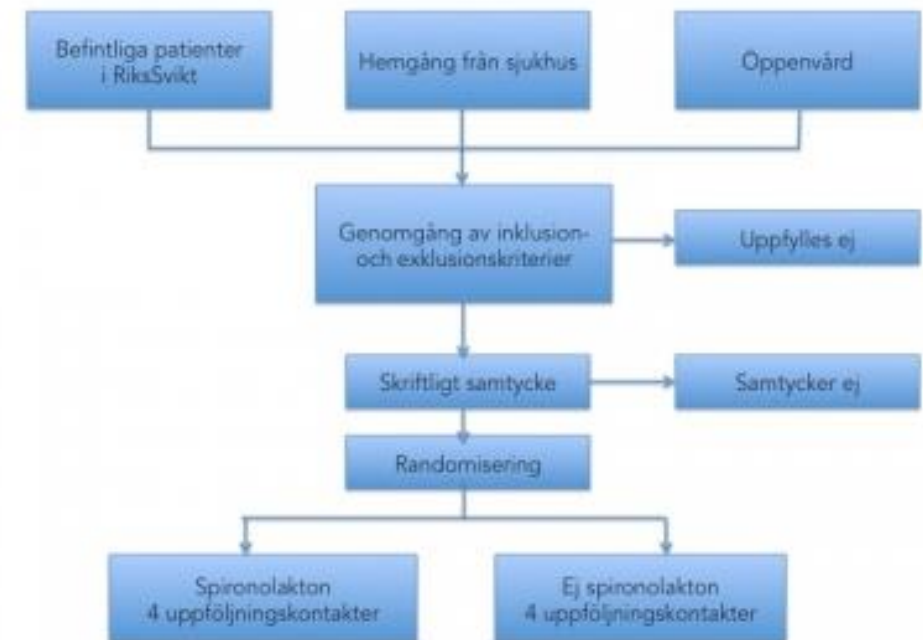
Första patient randomiserades 2017-11-23 av Kardiologen i Uppsala

Sista patient randomiserades 2025-12-30 av Kardiologen på Karolinska

I USA har 45 kliniker deltagit

Avslutade enrollering 5 januari 2024

SPIRRIT-HFpEF flödesschema



SPIRRIT-HFpEF-studien

*Spironolactone Initiation Registry Randomized Interventional Trial
in Heart Failure with Preserved Ejection Fraction*

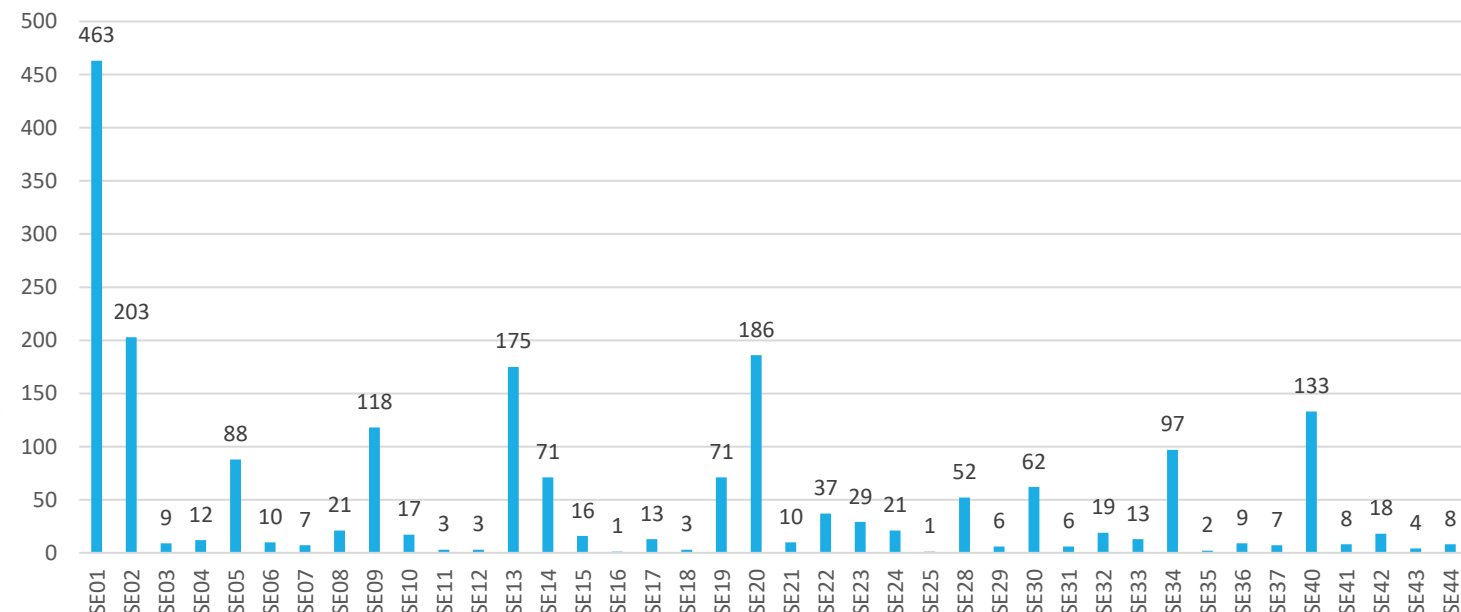
SE01 - KS Kard (Lund)	SE21 - Norrköping (Ftakas)
SE02 - Uppsala (Pol)	SE22 - Lidköping (Peterson)
SE03 - Köping (Fodor)	SE23 - Hemse (Hovland-Tänneryd)
SE04 - Mariefred (Reitberger)	SE24 - Sahlgrenska (Ljungman)
SE05 - Mölndal (Parén)	SE25 - Falun (Sulaiman)
SE06 - Sundsvall VC (Saha)	SE28 - Västerås (Lönnberg)
SE07 - Finspång (Stenhammar)	SE29 - Södertälje (Söderholm)
SE08 - St Göran (Mourak)	SE30 - Stockholm Heart (Al-Khalili)
SE09 - Örebro (Szabó)	SE31 - SUS (Gjesdal)
SE10 - Kristianstad (Wiklund)	SE32 - Sundsvall (Kavianipour)
SE11 - VC Centrum Flen (Possler)	SE33 - Angered (Selimovic)
SE12 - Capio Lund (Lindholm)	SE34 - Östra (Fu)
SE13 - Jönköping (Karlström)	SE35 - Ängelholm (Barbulovic)
SE14 - Linköping (van der Wal)	SE36 - Skellefteå (Andersson)
SE15 - SUS KFE (Svensson)	SE37 - Landskrona (Kymle)
SE16 - SUS Hjärtavd (Tasevska)	SE40 - Intmed Akademiska (Dimberg)
SE17 - SUS Akut (Gerward)	SE41 - Oskarshamn (Dolatabadi)
SE18 - Varberg (Tutuianu)	SE42 - Danderyd Spaak)
SE19 - Karlstad (Floderer)	SE43 - Blekingesjukhuset (Thorsén)
SE20 - SÖS (Corovic Cabrera)	SE44 - Västervik (Stenström)

Antal patienter randomiserade: 2 419

Sverige: 2032

USA: 387

- per klinik i Sverige



REBOOT-HFrEF-studien

Registry BAsed Optimization Of Therapy in Heart Failure

1. Screening

Need of treatment in
SwedeHF

2. Telephone

Informed consent

3. Validation

Confirmation
screening find
in EHR

Patients enrolled in study n=500

①

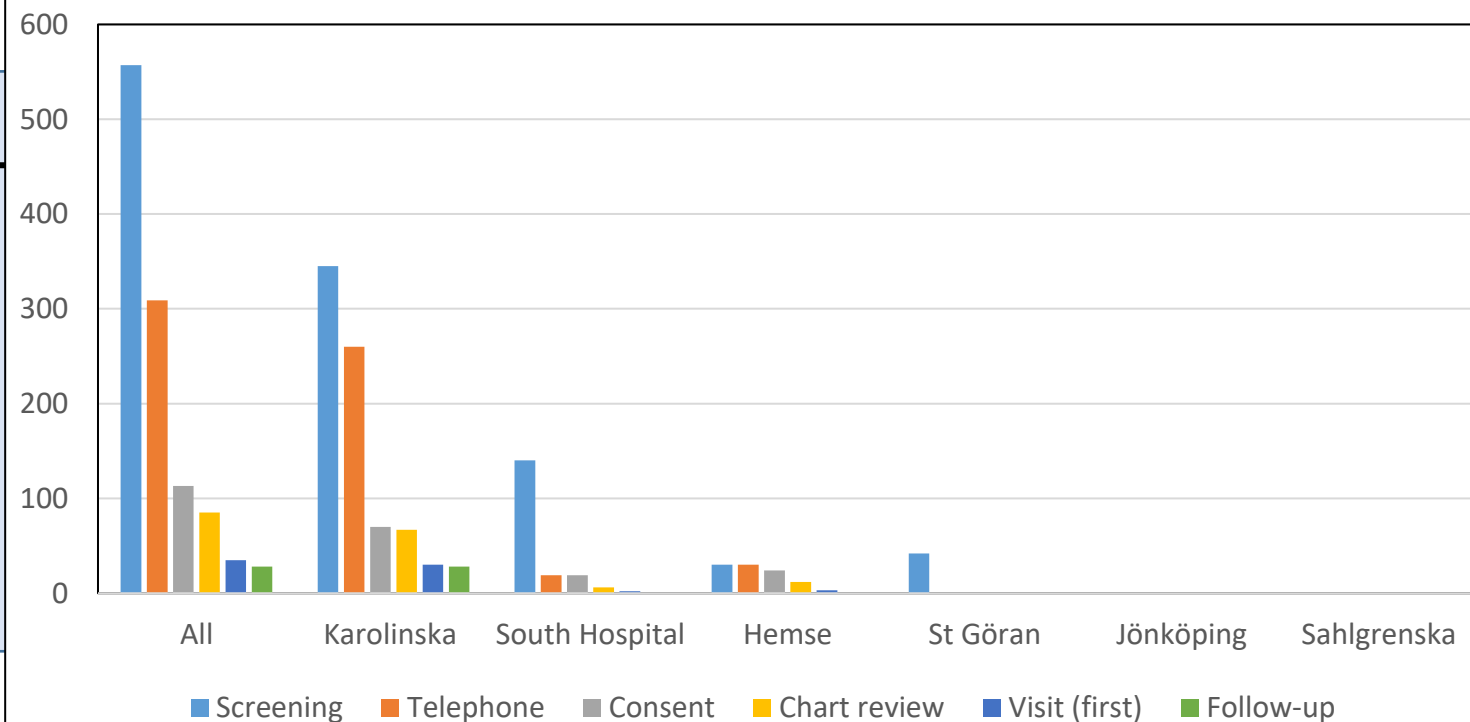
②

③

Need of HF treatments

- initiation/up titration
(Not on/on target dose of betablocker, SGLT2i,
MRA, RASi, sacubitril/valsartan,
received CRT/ICD or
ferric carboxymaltose/derisomaltos if indication)
- screening for ID
- treatment for ID
- physiotherapy referral

REBOOT-HFrEF
Antal patienter inkluderade



Control cohort not in SwedeHF at Karolinska University Hospital/South Hospital n=250

Rikssvikts Biobank

*- Responders and non-responders in the management of heart failure
significance of genetic influence and identification of novel informative biomarkers*

Syfte

Att genom blod och urinprover samlade i en nationell biobank utforska patofysiologi vid hjärtsvikt, vilka patienter som svarar på befintlig behandling samt finna nya behandlingsmål.

Inklusionskriterier

- Registrering i Rikssvikt
- Informed consent

Exklusionskriterier

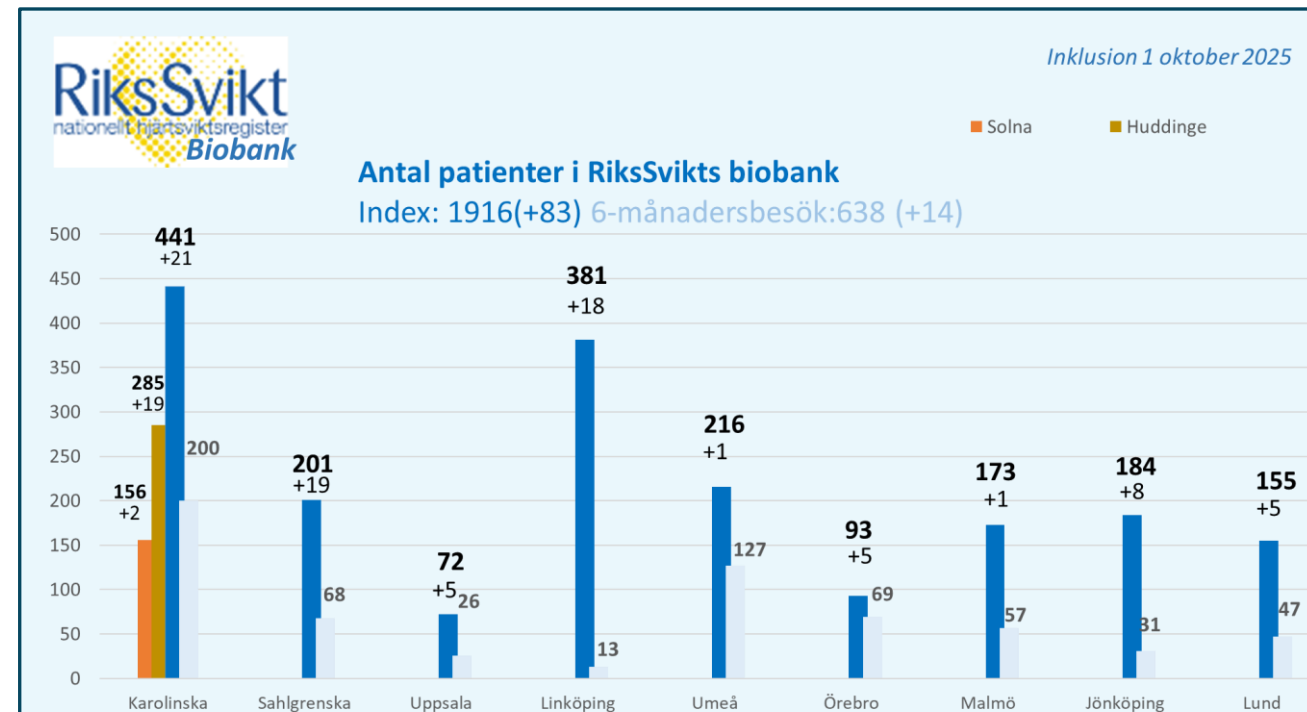
- Oförmåga att följa studieprotokollet
- Plasmadonation senaste mån /blödning >500 mL 3 månaderna
- Benmärgstransplantation

Kliniker

- Karolinska
- Sahlgrenska
- Uppsala
- Linköping
- Umeå
- Örebro
- Malmö
- Jönköping
- Lund

Antal patienter enrollerade:2025-10-01

Första patient 2021-02-17

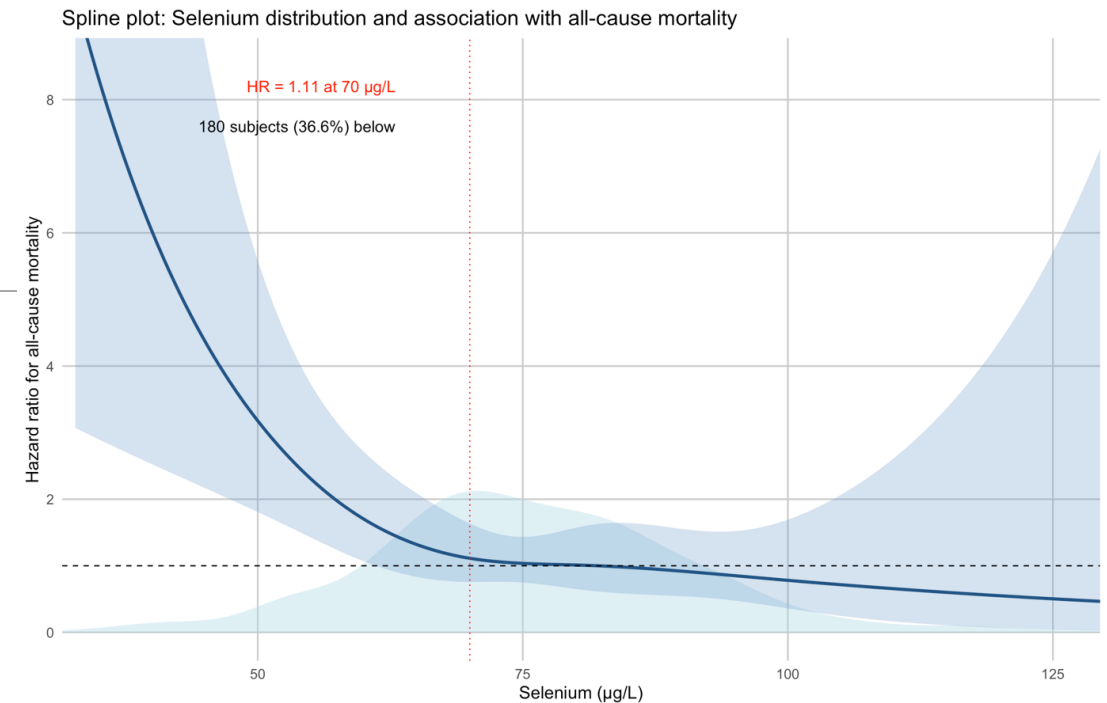
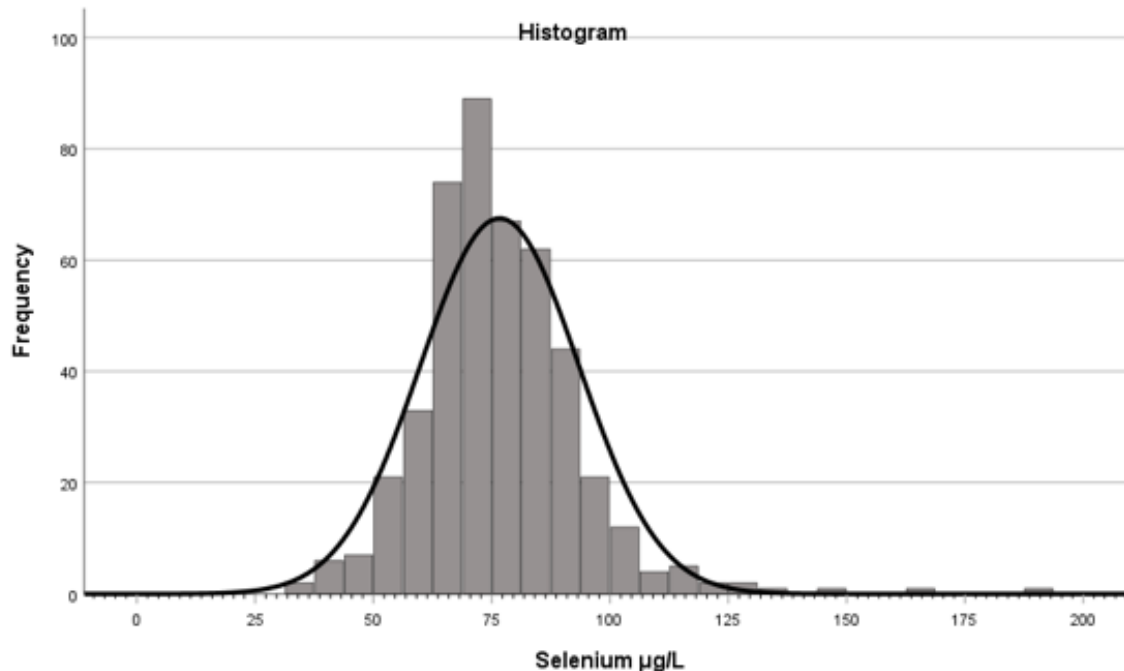


Rikssvikts Biobank

Selen hos patienter med hjärtsvikt

Selen mätningar (n=491)
Median 75 (67-85) $\mu\text{g/L}$
Selenbrist <70 $\mu\text{g/L}$; 36% av patienterna

Selenbrist är associerad med ökad mortalitet hos patienter med hjärtsvikt i Sverige



Selenbehandling vid hjärtsvikt

SIRI-HF - Selenium Intervention placebo-controlled Registry randomized Trial In Heart Failure

n= 4 326



Main protocol

Local clinic

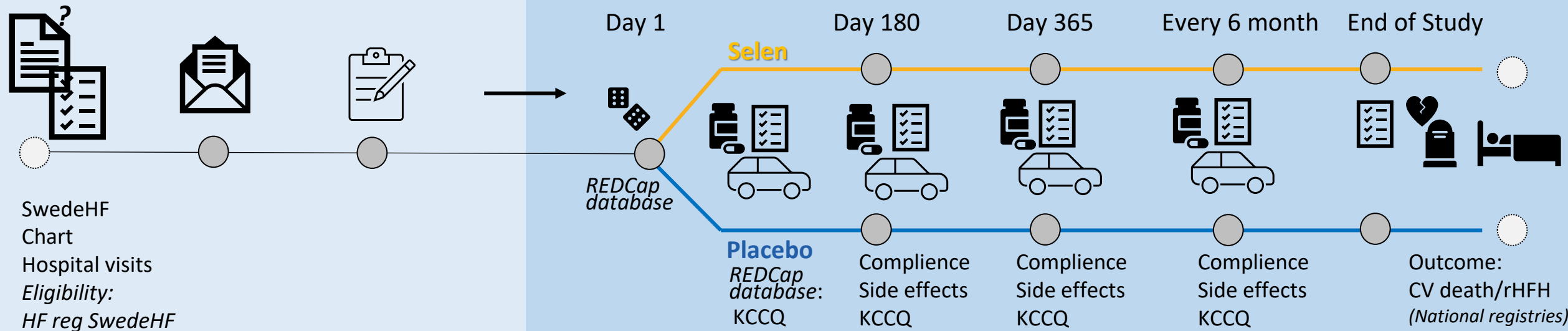
Screening

Letter invitation

Informed consent

Remote/central

Randomization



Sub study protocol

Visit 1, on site
Hospital integrated biobank
6MWT, ECHO, MoCA

Visit 2, on site
Hospital integrated biobank
6MWT, ECHO, MoCA

Outcome:
Compliance (Se conc)
Functional capacity, Remodeling
Cognitive function

Avsluta betablockad vid HFpEF

REDUCE-HFpEF Beta-blockerare vid hjärtsvikt med bevarad ejektionsfraktion, en register-randomiserad Interventionell studie

Protocol

n= 2 200

Screening

Eligibility

Informed consent

Randomization



Day 1

Beta-blocker withdrawal

Eventdriven

SwedeHF
Chart
Hospital

Eligibility

- HFpEF (EF $\geq 50\%$) - any past EF $< 50\%$ is excluded
- NYHA class II-IV
- NT-proBNP > 300 pg/ml in SR or > 900 pg/ml for patients in AF
- Age ≥ 50 years

SwedeHF

Beta-blocker continuation

Outcome:
All deaths/HFH
(National registries &
Clinical Event Committee)

Järnbehandling vid HFpEF

Utvärdera effektivitet/säkerhet av iv järn till patienter med HFpEF och järnbrist

Protocol

n= 2 000

Screening

Eligibility

Informed consent

Randomization



Day 1

Day 365

Iv iron (open label)



Usual care



SwedeHF
Chart
Hospital

Eligibility

- HFpEF (EF $\geq$ 50%)
- Iron deficiency defined as TSAT $\leq$ 20%
- HF hospitalization in prior 1 year or NT-proBNP >300 pg/ml in SR or >900 pg/ml for patients in AF
- NYHA class II-III
- Use of loop diuretics

SwedeHF

Outcome:
All death/(r)HFH
(National registries)

Tack – för att ni lyssnade!

