

**Present Position and Address**

- Professor of Cardiology, Karolinska Institutet
- Karolinska University Hospital,
- Stockholm, Sweden

**Training and Education**

- Specialist in Internal Medicine, Stockholm Sweden.
- Specialist in Cardiology, Thoracic Clinics, Karolinska Hospital
- PhD -thesis 1992. “Acute and long- term effects of atrioventricular synchronization in cardiac pacing”.

**Post Graduate Degrees**

- Associate Professor 1997
- Full Professor in Cardiology at Karolinska Institutet, 2007

**European Society of Cardiology Activities**

- Secretary ESC working group of cardiac pacing 1998-2020.
- EHRA Board member 2003-2005 in transition from WGs of pacing and arrhythmia to EHRA association
- Member of the EHRA accreditation committee 2011-2013
- Member of the EHRA committee for women 2013-2015
- EHRA representative in EU task force on Device Specific Vigilance Guidance for Cardiac Implantable Electronic Devices including pacemakers DSVG, 2016- 2018
- Member of Task Force for developing the MSc. in Clinical Trial programme 2017-2018
- Member of device committee of HFA 2016-2020
- Treasurer to EHRA 2018
- Councilor of the ESC Board 2016-2018 responsible for Women in ESC.
- Vice President of ESC 2018-2020 responsible for Working -groups, Councils, Membership, Women in ESC and the Young
- Secretary Treasurer ESC 2022-2024.

**Guidelines/Congress/Education**

### **ESC Guidelines**

2005 ESC Guidelines for the diagnosis and treatment of chronic heart failure: executive summary (update 2005): The Task Force for the Diagnosis and Treatment of Chronic Heart Failure of the European Society of Cardiology.

2007 ESC Guidelines for cardiac pacing and cardiac resynchronization therapy: The Task Force for Cardiac Pacing and Cardiac Resynchronization Therapy of the European Society of Cardiology in collaboration with the EHRA

2010 Focused Update of ESC Guidelines on device therapy in heart failure: an update of the 2008 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure and the 2007 ESC Guidelines for cardiac and resynchronization therapy. Developed with the special contribution of the Heart Failure Association and the European Heart Rhythm Association.

2013 ESC Guidelines on cardiac pacing and cardiac resynchronization therapy: the Task Force on cardiac pacing and resynchronization therapy of the European Society of Cardiology (ESC). Developed in collaboration with the European Heart Rhythm Association (EHRA)

2016 ESC Guidelines for the Diagnosis and Treatment of Acute and Chronic Heart Failure

2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD as document reviewer.

2021 ESC guidelines on cardiac pacing and cardiac resynchronization therapy. Reviewer coordinator.

### **Consensus documents and position papers**

2012 EHRA/HRS expert consensus statement on cardiac resynchronization therapy in heart failure: implantation and follow-up, recommendation, and management.’

2015. Chronic kidney disease in patients with cardiac rhythm disturbances or implantable electrical devices: Clinical significance and implications for decision making-a position paper of the European Heart Rhythm Association endorsed by the Heart Rhythm Society and the Asia Pacific Heart Rhythm Society

2016 European Heart Rhythm Association/Heart Failure Association joint consensus document on arrhythmia in heart failure, endorsed by the Heart Rhythm Society and the Asia Pacific Heart Rhythm Society

2018 Sex differences in cardiac arrhythmia: a consensus document of the European Heart Rhythm Association, endorsed by the Heart Rhythm Society and Asia Pacific Heart Rhythm Society

### **Congresses**

CPC member of the ESC Congress programme committee 2006- 2007, 2015 -2016.

CPC topic chair for arrhythmia of the ESC Congress programme committee 2018-2020

Highlight session presenter at ESC Congress for Arrhythmia 2007, 2008, 2015 and 2016

Scientific program committee chair for Europace /Cardiostim 2014, 2015

### **Education**

Director of the first EHRA exam in cardiac pacing. First exams were in Prague 2005, Barcelona in 2006 and Lisbon in 2007.

Member of the EHRA accreditation committee years 2011-2013.

## Research

### International Scientific Committee Participation

- Co PI of the MUSTIC trial the first international multicenter RCT on CRT in heart failure
- PI of the REVERSE study the first international multicenter on CRT in mild to moderate heart failure
- PI for the MIRACLE EF study on CRT in moderately low LVEF
- Steering committee of the EHRA/HFA initiated CRT Survey I 2008
- Co PI of the KaREN study on epidemiology of heart failure with preserved LVEF.
- PI of the Stockholm PREFERS study programs 2016- ongoing.
- Co PI of the EHRA /HFA initiated CRT Survey II 2018
- Member of Heart Rhythm Society (HRS) research committee 2016-2018
- Chair of DSMB of the BÍOPACE study
- Member of DSMB CHART study
- Member of the DSMB of the ABC trial 2018-ongoing
- Steering committee of ARTESiA study 2015-reported AHA 2023

### Editorial Boards

- Europace
- Executive Editor for heart failure for European Heart Journal 2020- ongoing

### **Fellowships / Honors**

- FESC 1996, FHFA 2022, FEHRA 2023.
- Doctor Honoris Causa University of Rennes, France 2017

### **Honorary Memberships**

- French Cardiac Society 2010
- Hungarian Society of Cardiology 2018

### **Major Publications**

Cazeau S, **Linde C** et al. Clinical effects of multisite biventricular stimulation in heart failure patients without conventional indication for cardiac pacing. *New Engl J Med* 2001;334: 873-880.

**Linde CM** et al. Long-term effects of Cardiac resynchronization reverses remodeling in asymptomatic and mildly symptomatic heart failure patients. 5-year results from the REsynchronization reverses Remodeling in Systolic left vEntricular dysfunction (REVERSE) study. *Eur Heart J* 2013; 33:2592-2599

**Linde CM** et al. Impact of cardiac resynchronization therapy in mild left ventricular systolic dysfunction. Results from the REVERSE study. *Circulation Heart Failure* 2013; 6:1180 -1189.

Cleland JG, Abraham WT, **Linde C**, et al. An individual patient meta-analysis of five randomized trials assessing the effects of cardiac resynchronization therapy on morbidity and mortality in patients with symptomatic heart failure. *Eur Heart J* 2013; 46:3547-56.

**Linde CM**, et al. Long-term effects of Cardiac resynchronization reverses remodeling in asymptomatic and mildly symptomatic heart failure patients. 5-year results from the REsynchronization reverses Remodeling in Systolic left vEntricular dysfunction (REVERSE) study. *Eur Heart J* 2013; 33:2592-2599

St John Sutton M, **Linde C**, et al. Left Ventricular Architecture, Long-term Reverse Remodeling, and Clinical Outcome in Mild Heart Failure with Cardiac Resynchronization: Results from the REVERSE trial. *J Am Coll Cardiol Heart Fail*. 2017 Mar; 5(3):169-178.

**Linde C**, et al. Gender and utilization of cardiac resynchronization therapy, and prognostic impact of QRS prolongation and left bundle branch block in heart failure. *Europace* 2015; 17:424-431.

**Linde C**, et al The design of the PREFERS Stockholm heart failure study (Preserved and Reduced Ejection Fraction Epidemiological Regional Study) in Stockholm count if 2.1 mill inhabitants. *Eur J Heart Fail J* 2016 Oct;18(10):1287-1297.

**Linde C**, et al. Short-term predictors of clinical response to cardiac resynchronization therapy: Results from an individual patient meta-analysis of five randomized trials. *Eur J Heart Fail*. 2017 Aug;19(8):1056-1063.

Lund LH, **Linde C**. Demographic and organizational but not clinical factors are associated with underutilization of cardiac resynchronization therapy *Eur J Heart Fail*. 2017 Oct;19(10):1270-1279

**Linde C**, et al: The Interaction of Sex, Height, and QRS duration on the Effects of Cardiac Resynchronization Therapy on Morbidity and Mortality: An Individual-Patient Data Meta-analysis. Results from a case based meta-analysis. *Eur J Heart Fail* 2018; 20, 780–791

**Linde C**, et al. Gender and utilization of cardiac resynchronization therapy, and prognostic impact of QRS prolongation and left bundle branch block in heart failure. *Europace* 2015; 17:424-31

**Linde C**, et al. Sex differences in cardiac arrhythmia- a Consensus document of the European Heart Rhythm Association, Heart Rhythm Society, and Asia Pacific Heart Rhythm Society. *Europace*. 2018 Oct 1;20(10):1565-1565.

**Linde C** et al. Serum potassium and clinical outcomes in heart failure patients: results of risk calculations in 21 334 patients in the UK. *ESC Heart Fail*. 2019 Apr;6(2):280-290.

**Linde C** et al. Real-world associations between RAASi dose, hyperkalaemia, and adverse clinical outcomes in a cohort of patients with new-onset chronic kidney disease or heart failure in the UK, *J Am Heart Assoc*. 2019 Dec 3;8(23):e014500.

Gold MR... **Linde C**. Redefining the classifications of response to Cardiac Resynchronization Therapy: Results From the REVERSE Study, *JACC Clin Electrophysiol*. 2021 Jul;7(7):871-880.

Lewinter C... **Linde C** et al. A meta-analysis of the value of betablockers and angiotensin converting enzyme inhibitors or angiotensin receptor blockers on the preservation of left ventricular function in breast cancer patients treated with anthracyclines or trastuzumab without prior heart failure. *Eur Heart J*: 2022 Jul 14;43(27): 2562 - 2569.

Sidhar AE... **Linde CM** et al. Identifying risk of adverse outcome in COVID-19 patients with artificial intelligence-powered analysis of 12 – lead Intake electrocardiogram. *Cardiovascular Digital Health Journal* 2022 Apr;3(2):62-74

Gatti P, **Linde C**, .... What determines who gets cardiac resynchronization therapy in Europe? A comparison between the ESC-HF-LT registry, SwedeHF registry and ESC-CRT Survey II. *Eur Heart J Qual Care Clin Outcomes*. 2023 Apr 19:qcad024. doi: 10.1093/ehjqcco/qcad024. Online ahead of print.

**Healey JS**, .. **Linde C**, ...Connolly SJ on behalf of the ARTESIA Investigators. Apixaban for Stroke Prevention in Subclinical Atrial Fibrillation. *New Engl J Med* 2023 Nov 12. doi: 10.1056/NEJMoa2310234

### **Major Research Interest**

- Epidemiology of heart failure
- Quality control in HF and arrhythmia management
- Heart failure with preserved ejection fraction
- HF Therapy implementation
- Cardiac Resynchronization and device therapy in heart failure
- Gender aspects in clinical trials
- Hypertensive heart disease
- Cardio-oncology
- Cardiorenal syndrome