

Myocardial and ventricular work symposium

Time: Monday, 15th September, 2025

Place: Rikshospitalet, Building A: Seminarrom A3.3067, Oslo University Hospital

After the commercial release of the myocardial work method, there has been an exponential increase in the number of publications with 3686 PubMed publications in 2024 alone. The method is being further refined and tested in new cases. There are interests and activities of developing the method also for the right ventricle. Furthermore, a similar method is now also being developed for pressure-volume analysis which includes ventricular stroke work and associated parameters such as efficiency estimation. This meeting will present some of the latest research on these myocardial and ventricular work topics and stimulate further innovation and commercialization of new products.

Each presentation will be a total of 20 minutes (~15 minutes presentation + ~5 minutes discussion).

Program:

09:00 Espen Remme: Welcome, introduction

Session 1: Chair Otto Smiseth

09:10 Otto Smiseth: Historical perspective of the method/Retrospective on myocardial work - how did we get to where we are and where should we go from here

09:30 Espen Remme: Stress estimation based on simplified geometric approximations

09:50 Henrik Finsberg: Validation of stress and work estimation in finite element models

10:10 Lars-Egil Hammersbøen: Efficiency estimation by pressure-volume analysis – a superior method to predict response following cardiac resynchronization therapy

Coffee break (10:30-11.00)

Session 2: Chair Kristoffer Russell

11:00 Helge Skulstad: Myocardial work during changes in afterload

11:20 Debbie Zhao: Automated myocardial work assessment with AI and 3D echocardiography: application to hypertension for improved patient stratification

11:40 Darijan Ribic: Non-invasive pressure-volume analyses in mitral regurgitation

12:00 John Aalen: Future perspectives: Myocardial work in valvular heart disease

Lunch (12:20-1320) -----

Session 3: Chair Espen Remme

- 13:20 Olivier Villemain: The relationship between myocardial stiffness, work, and contractility
- 13:40 Emil Espe: Regional myocardial work from magnetic resonance imaging
- 14:00 Benjamin Fermann: RV pressure reference curve
- 14:20 Simone Diab: RV myocardial work in children with pulmonary hypertension

Coffee break (14:40-15:10)

Session 4: Chair Mark Friedberg

- 15:10 Mark Friedberg: Main pulmonary artery stiffening and its relation to RV stiffness, function and work in pulmonary arterial hypertension
- 15:30 Olivier Villemain: Assessment of RV myocardial work in children using ultrafast ultrasound: Recent work and Future directions
- 15:50 Mark Friedberg: RV myocardial work in animal models of pulmonary hypertension and pulmonary insufficiency
- 16:10 Simone Diab: Myocardial work in children with a Fontan circulation
- 16:30 Discussion
- 17:00 End of official program day 1

Day 2

Day 2 will focus on structured discussions and planning sessions for ongoing and new collaborative projects between academic and industry partners.

Time: Tuesday, 16 September 2025, 0900 – 1500

Place: Institute for Surgical Research, Oslo University Hospital

Registration:

This is a free event, and lunch and coffee breaks will be provided. To help us plan accordingly, we kindly ask you to register your attendance by sending an email to espen.remme@medisin.uio.no

How to get there:

The presentations will be held in “Seminarrom A3.3067” in building A at Rikshospitalet. This is located on the third floor at Farmakologisk institutt. Go straight ahead once you walk in the institute entrance, and the seminar is at the far end of this right corridor.

Map:

