Improving CVD care and quality of life: Priorities of the CVD community

Martin Halle, EAPC President

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EAPC
European Association
of Preventive Cardiology

European Society of Cardiology

What we are good at?
What we are bad at?

👎

- Risk prediction models
- Proof-of-concept RCT trials in lifestyle intervention
- Structured and broad health education
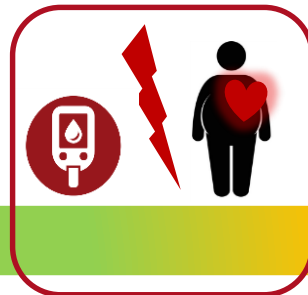- Population-wide prevention initiatives

👍

- High-tech procedures
- Pharmacological therapy
- Cardiology training
- Diabetology training
- Quality of hospital care

👎

Multi-disciplinary approach

Patient-centred therapy

Proof-of concept RCTs to life-style intervention

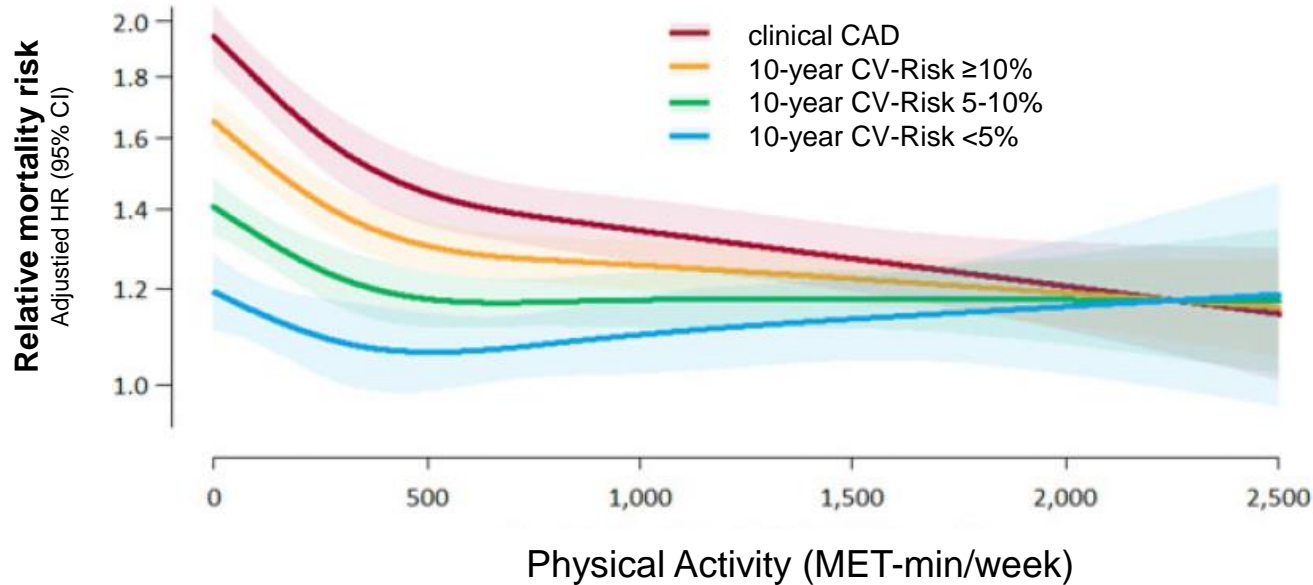Large data aquisition combining pharmacology and life-style
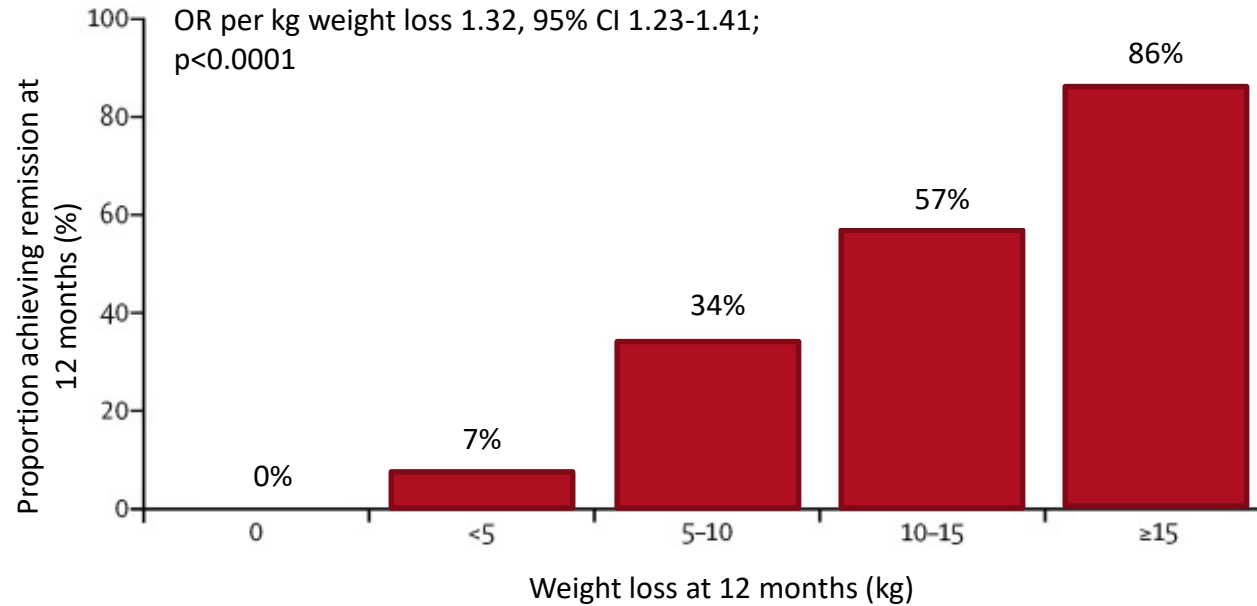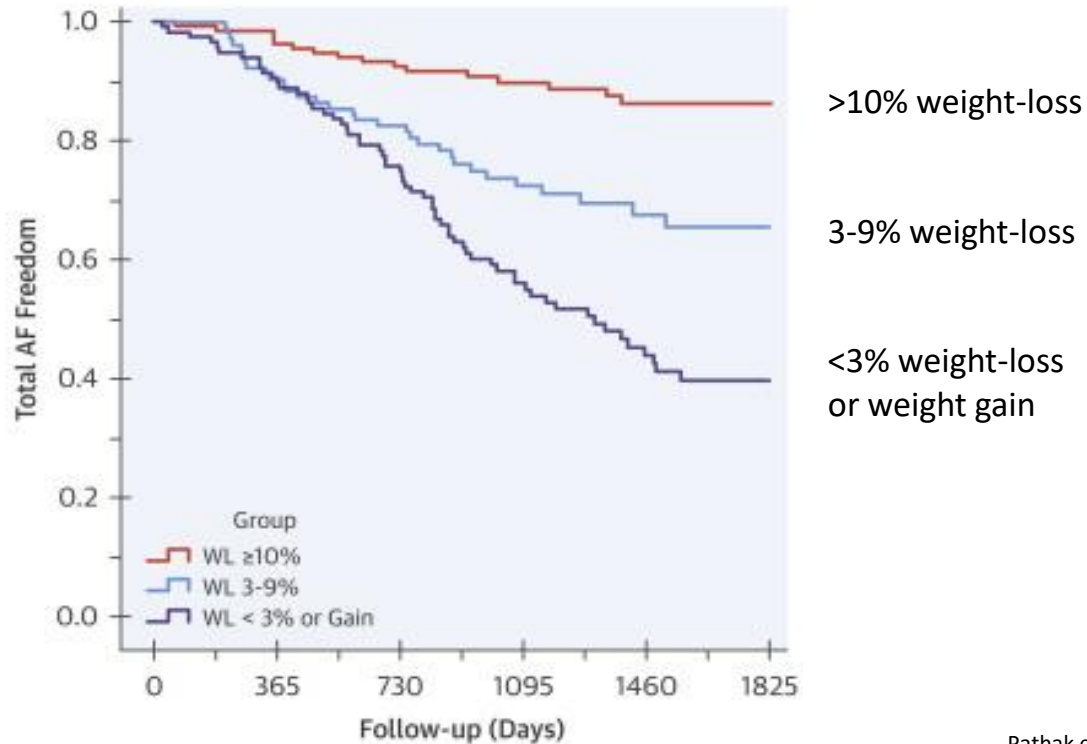
PRIMARY PREVENTION

SECONDARY PREVENTION

ESC

Physical activity and cardiovascular risk

Jeong SW, Eur Heart J (2019) 40, 3547–3555

Weight loss and Diabetes Remission

OR per kg weight loss 1.32, 95% CI 1.23-1.41; p<0.0001

Y-axis: Proportion achieving remission at 12 months (%)

X-axis: Weight loss at 12 months (kg)

- 0: 0%
- <5: 7%
- 5–10: 34%
- 10–15: 57%
- ≥15: 86%

Lean ME et al. Lancet. (2018) 391(10120):541-551.

Weight Loss and Atrial Fibrillation

>10% weight-loss

3-9% weight-loss

<3% weight-loss or weight gain

Pathak et al. JACC (2015)65:2159-69

Physical Activity and Atrial Fibrillation

JACC (2015) 66, 985–996
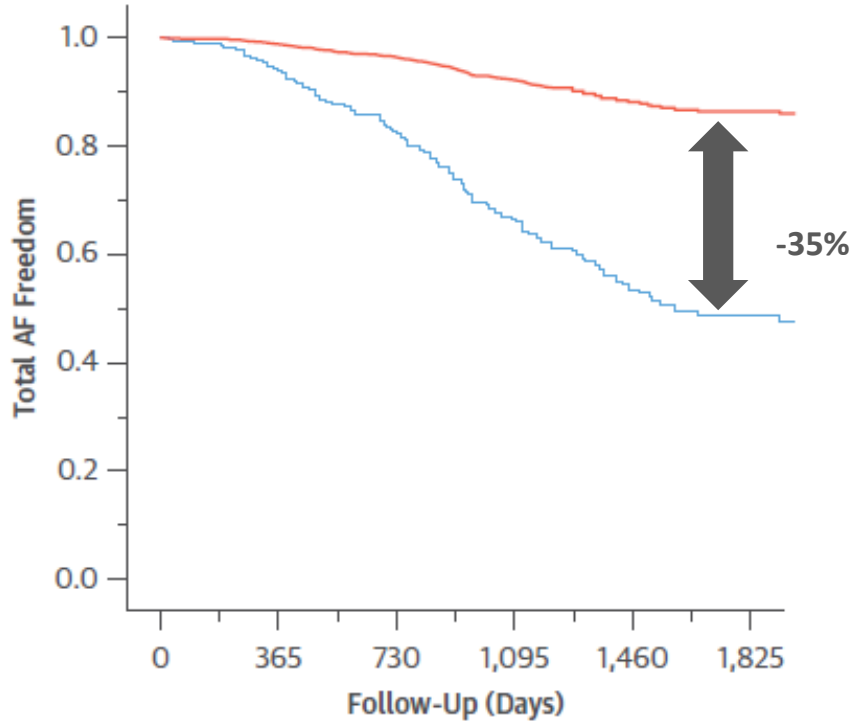
Physical Activity and Coronary Heart Disease Mortality
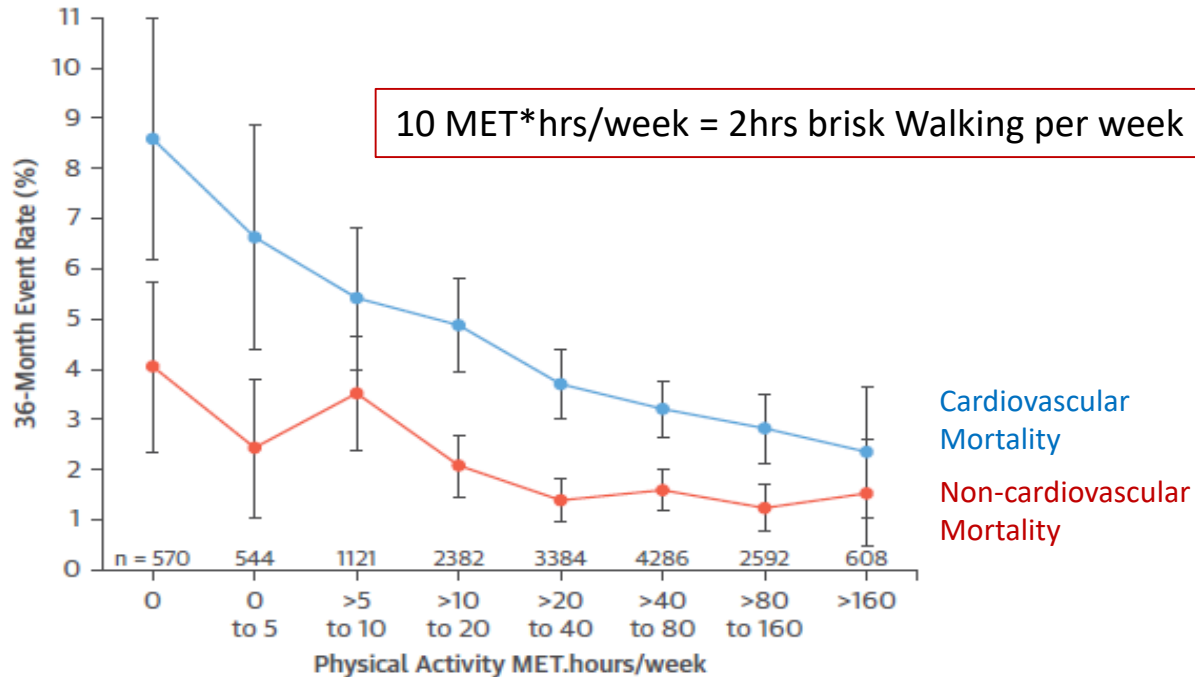
10 MET*hrs/week = 2hrs brisk Walking per week

Cardiovascular Mortality

Non-cardiovascular Mortality

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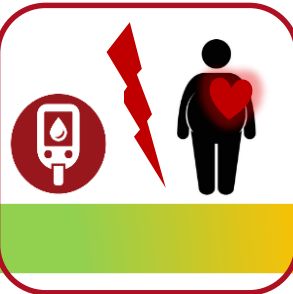- Population-wide prevention initiatives

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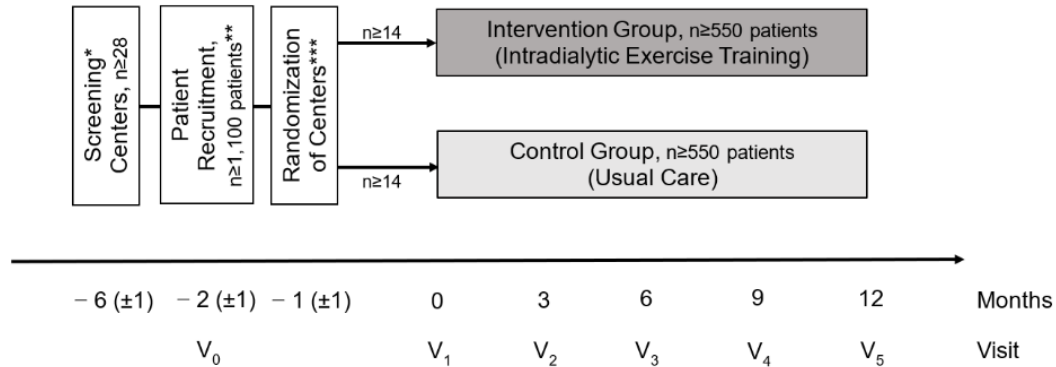
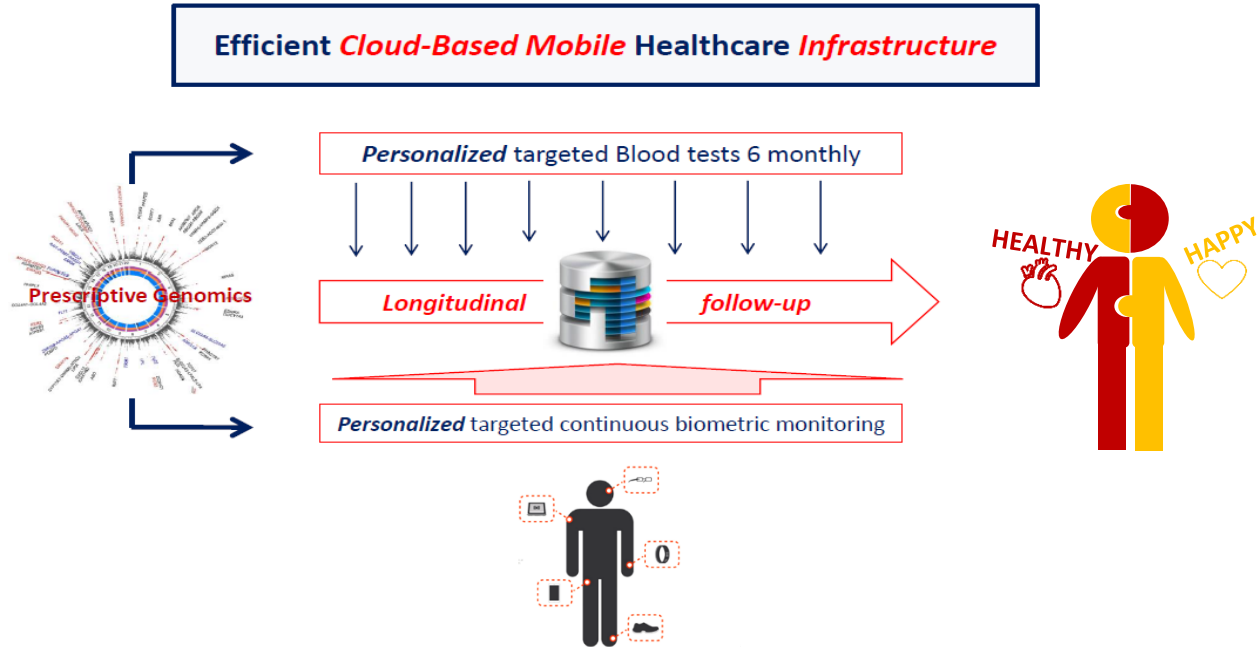**PRIMARY PREVENTION**   **SECONDARY PREVENTION**

Secondary prevention: RCT Exercise during hemodialysis (40% diabetic nephrology) - *DiaTT trial*

→ To investigate the effects of a 12-month intradialytic exercise program on physical functioning, frailty and health economics in a large cohort of HD patients in a **real-world setting**.

von Gersdorff G. et al. Methods Protoc. 2021 Aug 31;4(3):60.

´Augmented Intelligence':
Platform for Personalised Prevention

Efficient *Cloud-Based Mobile* Healthcare *Infrastructure*

Prescriptive Genomics

Personalized targeted Blood tests 6 monthly

Longitudinal   *follow-up*

Personalized targeted continuous biometric monitoring

HEALTHY HAPPY

Ference BA, et al. EAS Consensus Statement on the Future of Risk Prediction in Cardiovascular Medicine

EU Strategy to overcome diabetes-induced CV morbidity and mortality

OPTIMIZE

Individuals at high risk identification

↓

Therapy
Pharmacological/non-pharmacological

↓

Data and Intervention Network

↓

HEALTHY HAPPY
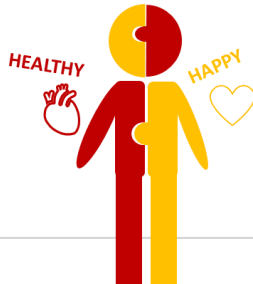
Data
- Genetics, Imaging
- Novel Algorithms
- AI

RCT's
- Non-pharmcological intervention
- Education

Education Network
Diabetes/Heart/NCDs

Europe`s Eliminating Heart Disease Plan: 10 Flagship Initiatives and Topics

1. **RESEARCH NETWORK INITIATIVE (CVD – METABOLIC/DIABETIC - CANCER/NCDs)**
2. **"THE ONE" PREVENTION POPULATION STRATEGY FOR NCDs**
3. **HARMONIZE EDUCATION STRATEGY FOR PREVENTIVE CARDIOLOGY/NCDs**
4. **POPULATION EDUCATION / KNOWLEDGE STRATEGY FOR CVD/NCDs**
5. **EARLY DETECTION OF CVD**
6. **EARLY-LIFE-LONG INSTITUTIONAL PREVENTION**
7. **CVD IMAGING INITIATIVE**
8. **CVD DATA SHARING / DIGITAL INITIATIVE (EU CVD KNOWLEDGE/DATA SCIENCE CENTRE)**
9. **BETTER LIVING WITH CVD**
10. **HEALTHY HEART CITY / HEALTHY CITY**