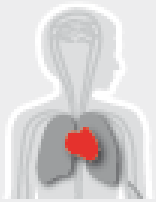
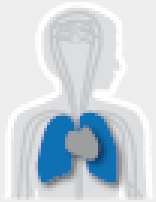
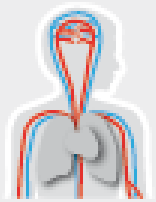


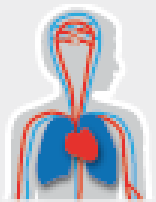
Heart Failure & Arrhythmias



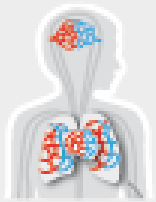
Pulmonary Hypertension & Thrombosis



Atherosclerosis & Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

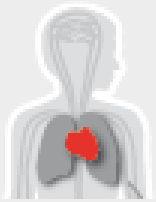
Focus of research group (I)

Name PI: Prof Jan J. Piek
Department, UMC: Cardiologie / Hartcentrum
Size of research group: 8

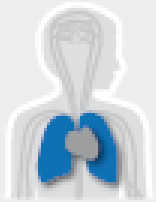
Current mission, vision and aims
Improvement of diagnosis and treatment of coronary syndromes

Current participating departments
Amsterdam UMC – location AMC
- AMC Heart Center
- Biomedical Engineering
- Pathology
- Nuclear Medicine / Radiology
- Vascular Medicine

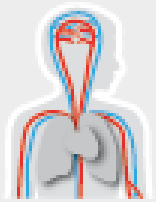
Amsterdam UMC – location VUMC
- Pathology
- Molecular Cell Biology and Immunology



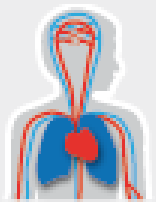
Heart Failure & Arrhythmias



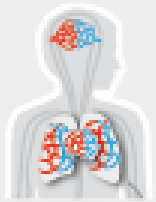
Pulmonary Hypertension & Thrombosis



Atherosclerosis & Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

Focus of research group (II)

Current expertise

Intracoronary hemodynamics

- Diagnosis during cardiac catheterization
- Evaluation effect of PCI
- Prognosis/Gender differences in coronary syndromes

Reperfusion injury AMI

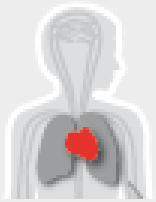
- Translational research on role of monocytes following myocardial infarction
- Exaggeration of
  - Ischemic injury
  - Loss of viable myocardium
  - Development of chronic heart failure

Coronary collateral circulation

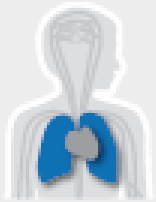
Quantification of arteriogenesis using intracoronary hemodynamics and MRI

Current funding

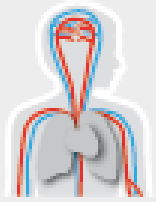
- NHS, NWO-Veni, EU FP7, CTMM, University of Texas, Philips/Volcano



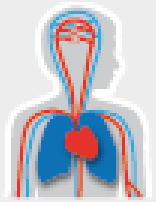
Heart Failure & Arrhythmias



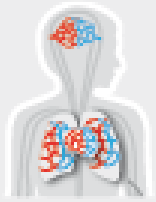
Pulmonary Hypertension & Thrombosis



Atherosclerosis & Ischemic Syndromes



Diabetes & Metabolism



Microcirculation

Future plans

Short term (1-2 year) plan
Plan: Coronary hemodynamics: development of a new diagnostic wire (collaboration Philips/Volcano), effect PCI in discordant coronary lesions, diagnosis and treatment of coronary vasospasm. Reperfusion injury AMI: translational research T-helper cells

Necessary infrastructure:
PET-imaging is mandatory for validation studies. Direct comparison with H2O-PET and novel tracers with longer half time is eagerly awaited. CT imaging for validation study.

Long term (>2 year) plan
Plan:
Conduction of multicenter studies using flow rather than pressure parameters for guidance of interventions.
Modulation of the post-myocardial infarction (MI) inflammatory response to beneficially promote infarct healing
Necessary infrastructure: PET, CT, MRI