

# New Medical Therapies for AAA

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Disclosures:

- LIMIT clinical trial:
- 1) NIH 5R33 HL146835-04
- 2) EMD Serono Inc.



# Metformin

Study ID	MetaAA*	MAAAG†	LIMIT‡	MAT§
NCT03507413	NCT04240511	NCT04560756	ACTRN12618001707250	
Austria	Sweden, Denmark, the Netherlands	USA	Australia, New Zealand, UK	
Principal investigator	Wolfgang Eichinger, Medical University of Vienna, Vienna, Austria	Rolf Andersson, Stanford University, Stanford, CA, USA	Ronald Dalman, Uppsala University, Uppsala, Sweden	Jonathan Calligaris, James Cook University, Queensland, Australia
Funding	Medical University of Vienna and Merck Serono GmbH, Germany	National Institute of Health and EMD Serono Inc., USA	National Institute of Health and Medical Research Council of Australia, the Royal Australian College of Surgeons, the Australian and New Zealand Society for Vascular Surgery, the Townsville Hospital and Health Services, and the Health Research Council of New Zealand	
Study design	Single centre, prospective, randomised, double blind, placebo controlled trial	Multi-centre, prospective, randomised, double blind, placebo controlled trial, with masked outcome assessment	Single centre, prospective, randomised, double blind, placebo controlled trial	Multi-centre, prospective, randomised, double blind, placebo controlled trial

Wanhainen and Dalman (VEVES 2024, August 30<sup>th</sup> Online ahead of print)



# Metformin

Randomisation and treatment time	1:1 to metformin (dose escalation up to 2g on alternate days) or placebo	1:1 to metformin (dose escalation up to 2g on alternate days) or placebo	After an initial run-in phase for metformin, 1:1 to metformin (2g on alternate days) or placebo
Patients	Non-diabetic patients with small AAA (20-30mm in men and 30-44mm in women) as measured by CT	Non-diabetic patients with small AAA (20-30mm in men and 30-44mm in women) as measured by CT	Non-diabetic patients with small AAA (20-30mm in men and 30-44mm in women) as measured by CT
Primary outcome	Change in AAA diameter, measured by CT, after 12 months	Change in AAA diameter, measured by CT, after 12 months	Change in AAA diameter, measured by CT, after 12 months
Secondary outcomes	AAA volume (CT), AAA diameter (US), AAA cross-sectional area (US), cardiovascular morbidity, mortality, quality of life, patient-reported outcomes	AAA volume (CT), AAA diameter (US), AAA cross-sectional area (US), cardiovascular morbidity, mortality, quality of life, patient-reported outcomes	AAA volume (CT), AAA diameter (US), AAA cross-sectional area (US), cardiovascular morbidity, mortality, quality of life, patient-reported outcomes
Current status	Started in 2018, stopped recruitment in 2022 due to safety concerns (14 had been randomised to placebo)	Started in 2018, stopped recruitment in 2022 due to safety concerns (14 had been randomised to placebo)	Started in 2018, stopped recruitment in 2022 due to safety concerns (14 had been randomised to placebo)

MetaAA – Metformin Therapy in Non-Diabetic AAA Patients; MAAAG – Metformin for Abdominal Aortic Aneurysm Growth Inhibition; LIMIT – Limited AAA with Metformin; MAT – Metformin, Aneurysm; AAA – abdominal aortic aneurysm; CT – computed tomography; US – ultrasonography; QoL – quality of life; COVID-19 – coronavirus disease 2019

Wanhainen and Dalman (VEVES 2024, August 30<sup>th</sup> Online ahead of print)



# All hypoglycemic agents?

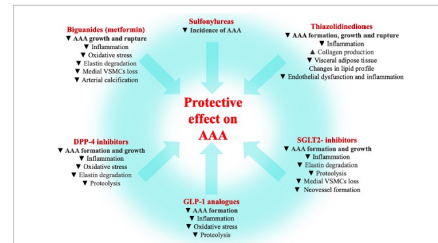


FIGURE 2 Antidiabetic agents and AAA. Summary of the mechanisms by which biguanides (DPP-4), sulfonylureas (SU), thiazolidinediones (TZD), dipeptidyl peptidase inhibitors (DPP-4), incretin-like peptides (GLP-1 analogues (GLP-1RA, GLP-2)), and glucose co-transporter (SGLT)-inhibitors (SGLT-2) exert a protective effect on AAA (data from experimental and clinical studies).

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# PGG (Nectero)

Nectero Medical Receives FDA Clearance of IND Application to Initiate Phase II/III Clinical Trial of Nectero EAST® System for Treatment of Small- to Mid-Sized Abdominal Aortic Aneurysms

**Recent News**

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Nectero Medical Announces Completion of Phase II/III Clinical Trial

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July 14, 2023  
Nectero Medical Receives FDA Clearance of IND Application to Initiate Phase II/III Clinical Trial of Nectero EAST® System for Treatment of Small- to Mid-Sized Abdominal Aortic Aneurysms



# PCSK-9 inhibition (evolucomab)

**Genome-wide association meta-analysis identifies risk loci for abdominal aortic aneurysm and highlights PCSK9 as a therapeutic target**

**Mechanistic Clinical Trial of PCSK9 Inhibition for AAA**

Genome-wide association meta-analysis identifies risk loci for abdominal aortic aneurysm and highlights PCSK9 as a therapeutic target

Genome-wide association meta-analysis identifies risk loci for abdominal aortic aneurysm and highlights PCSK9 as a therapeutic target



