SHARP

Scottish Lipid Forum

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SHARP & SCOTTISH LIPID FORUM ANNUAL MEETING

PROGRAMME

CRIEFF HYDRO HOTEL

12 - 13 NOVEMBER 2026

WWW.SHARPSCOTLAND.ORG

@SHARPSCOTLAND / @SCOTLIPIDFORUM

Welcome

On behalf of the Organising Committee we are delighted to welcome you to the 2026 Annual Meeting of SHARP and the Scottish Lipid Forum (SLF). We thank you all for taking the time to join us for what we hope will be an educational and inspiring two-day conference here at Crieff Hydro Hotel.

This year's meeting will explore key topics shaping cardiovascular disease prevention, lipid management, and clinical practice. The programme will include sessions on national data programmes and clinical audit, the management of cardiovascular disease in patients with cancer, and updates on emerging antithrombotic therapies.

Delegates will also hear from speakers working across Scotland's remote and rural communities, who will share innovative approaches to care and discuss the challenges of delivering services in diverse settings, including treating vascular risk factors in NHS Highland and the use of GLP-1 receptor agonists in NHS Western Isles.

The Scottish Lipid Forum programme will address important questions in lipid care, including the role of lipid management in older adults, statin side effects and where lipoprotein(a) [Lp(a)] currently fits within clinical practice. We are celebrating 20 years this year and so offer a chance to reflect on the lipid clinic, for all of those who have been, are or will be involved. There will be cake!

These areas are relevant and important for both primary and secondary care, as well as the essential third sector organisations. We look forward to being part of the learning and networking with you all. We hope this conference empowers you to bring evidence-driven approaches into your local practice to prevent cardiovascular disease.

We would like to thank our sponsors, including Amgen who are sponsoring our lunch time symposium on Thursday, Lilly, Novartis & Ultragenyx. We are also grateful to BIASP, Chest Heart and Stroke Scotland and the Royal College of Physicians and Surgeons of Glasgow for supporting the meeting.

Over the next two days, you will hear from experts in diet, lipid disorders, renal disease, hypertension, audit and the results from many trials. Each of the talks will discuss practical issues relevant to everyday clinical practice. We are very grateful to Dr Alexia Pellowe and Professor Brian Kennon for giving us an overview of the national strategy for CVD prevention, which will include both primary and secondary care perspectives.

We are also delighted that Professor Tom MacDonald has agreed to give this year's keynote lecture looking back at the last 30 years since ASCOT. This will be of interest to those of us who have joined clinical practice at various stages since and even before. We hope to inspire our younger attendees to design and lead the clinical trials of the future. We dedicate this talk to Professor Adrian Brady, who sadly passed away earlier this year.

Welcome from the Chairs continues on the next page...

Continued: Welcome

As the emphasis on oral presentation by the top-scoring abstracts was well received last year, we have repeated that format this year. Along with the oral presentations which will be competing for the prestigious SHARP prize, there will also be a prize for the best poster. As a new feature this year we will set aside a session for our poster authors to present their work and share their research with our friendly and receptive audience. We'll also hear from those individuals who have received SHARP research grants & 2026 studentships.

Workshops are back again and we have laid on a programme which will cover topics from air pollution and the findings from EUROASPIRE through to how we can use lipid nurses and clopidogrel testing to help our patients.

Our after-dinner speaker this year will be Dr Allan Gaw, who has moved from doctor to crime fiction author. We hope you enjoy the dinner, and have the opportunity to reconnect with old friends and make new acquaintances.

Finally, we would like to thank everybody involved in this year's Annual Meeting, whether you are delivering a lecture or workshop, sharing your original research, providing sponsorship, supporting the two days as a student ambassador, or asking questions and discussing the latest developments in preventing and managing cardiovascular disease.

Thank you all for contributing to the meeting and helping make it a success. Enjoy!

Best wishes

Professor Mary Joan MacLeod
SHARP Chair

Dr Rosemary Clarke
Scottish Lipid Forum Co-Chair



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Agenda

THURSDAY 12TH NOVEMBER

Time	Description	Location
08:30	Registration & Exhibition	The Hub / Melville Hall
09:25	Welcome & Session 1: CVD Prevention: The National Picture	Ferntower Suite
10:30	Refreshment Break & Exhibition	Melville Hall
11:00	SHARP Prize: Poster Presentations	Melville Hall
11:45	Workshops	Various
12:30	Lunch	Melville Hall
12:40	Amgen Lunchtime Symposium	Ferntower Suite
13:30	Keynote Lecture	Ferntower Suite
14:00	Session 2: What's New?	Ferntower Suite
15:10	Refreshment Break & Exhibition	Melville Hall
15:50	Session 3: Scottish Lipid Forum	Ferntower Suite
17:10	Closing Remarks	Ferntower Suite
17:15	20 years of the Scottish Lipid Forum	Ferntower Suite
19:00	Drinks Reception & Dinner	Melville Hall

FRIDAY 13TH NOVEMBER

Time	Description	Location
08:45	Registration & Exhibition	The Hub / Melville Hall
09:25	Welcome & Session 4: Remote & Rural	Ferntower Suite
10:45	Refreshment Break & Exhibition	Melville Hall
11:15	Workshops	Various
12:50	Lunch	Meikle Restaurant / Melville Hall
14:00	SHARP Prize Awards & Session 5: Data	Ferntower Suite
15:30	Closing remarks and adjourn	Ferntower Suite

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Scottish Lipid Forum

Thursday Morning Programme

Session 1
CVD Prevention: The National Picture

Time: 09:25 - 10:30
Room: Ferntower Suite

Chair: Professor Mary Joan MacLeod, Honorary Consultant Physician, NHS Grampian & Chair in Clinical Pharmacology, University of Aberdeen

08:30 **Registration, Refreshments & Exhibition**
The Hub / Melville Hall

09:25 **Welcome**
Ferntower Suite

09:30 **CVD Prevention Programme Update for 2026**
Professor Brian Kennon, Clinical Lead CVD Prevention Programme/ Consultant Diabetologist Scottish Government /NHS Greater Glasgow and Clyde &
Dr Alexia Pellowe, Associate Medical Director, NHS Ayrshire and Arran

10:00 **The Cardiovascular Academic Network of Scotland – CLANS**
Professor Rachel Myles, Professor and Honorary Consultant Cardiologist
University of Glasgow

10:20 **SHARP Prize Presentation**
Are We Identifying Hypertriglyceridaemic Pancreatitis? An Audit of Serum Triglyceride Requesting in Patients with Suspected Acute Pancreatitis across NHS Greater Glasgow and Clyde
Dr Ben Hall, ST5 Chemical Pathology, NHS Greater Glasgow and Clyde

10:30 **Refreshment Break & Exhibition**
Melville Hall

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Refreshment Break & Exhibition

Time: 10:30 - 11:00
Room: Melville Hall

We invite all delegates to make the most of this Refreshment Break by visiting our exhibitor stands and exploring the posters on display. This is a great opportunity to connect with fellow attendees, engage with our valued sponsors and discover the research and initiatives supported by SHARP.

The poster display features our SHARP Prize oral presenters, who will deliver their talks in the Main Plenary Room throughout the two days. Take this opportunity to learn more about their research, engage with the presenters and discover the work behind their presentations.

In the next session, our SHARP Prize Poster presenters will each deliver a two-minute summary of their project, which may include recent research, an audit project, a clinical audit or a service improvement initiative, highlighting the work undertaken and its relevance to cardiovascular care.

Through these activities, we continue to promote cardiovascular research and support healthcare professionals and students. We encourage you to explore the displays, exchange ideas and celebrate the achievements of our SHARP community.

EXHIBITORS

AMGEN

BIASP British & Irish Association of Stroke Physicians *Advancing stroke medicine*

Chest Heart & Stroke Scotland

Lilly A MEDICINE COMPANY

NOVARTIS

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF GLASGOW

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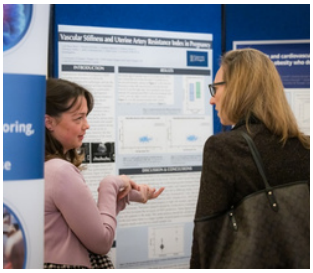
SHARP Prize: Poster Presentations

Time: 11:00
Room: Melville Hall



The SHARP Prize poster presentations reflect SHARP's commitment to supporting cardiovascular research and education through funding opportunities that encourage research, support healthcare professionals and students and nurture the next generation of cardiovascular professionals.

Each presenter will have two minutes to summarise their research or project, followed by questions from the judging panel.

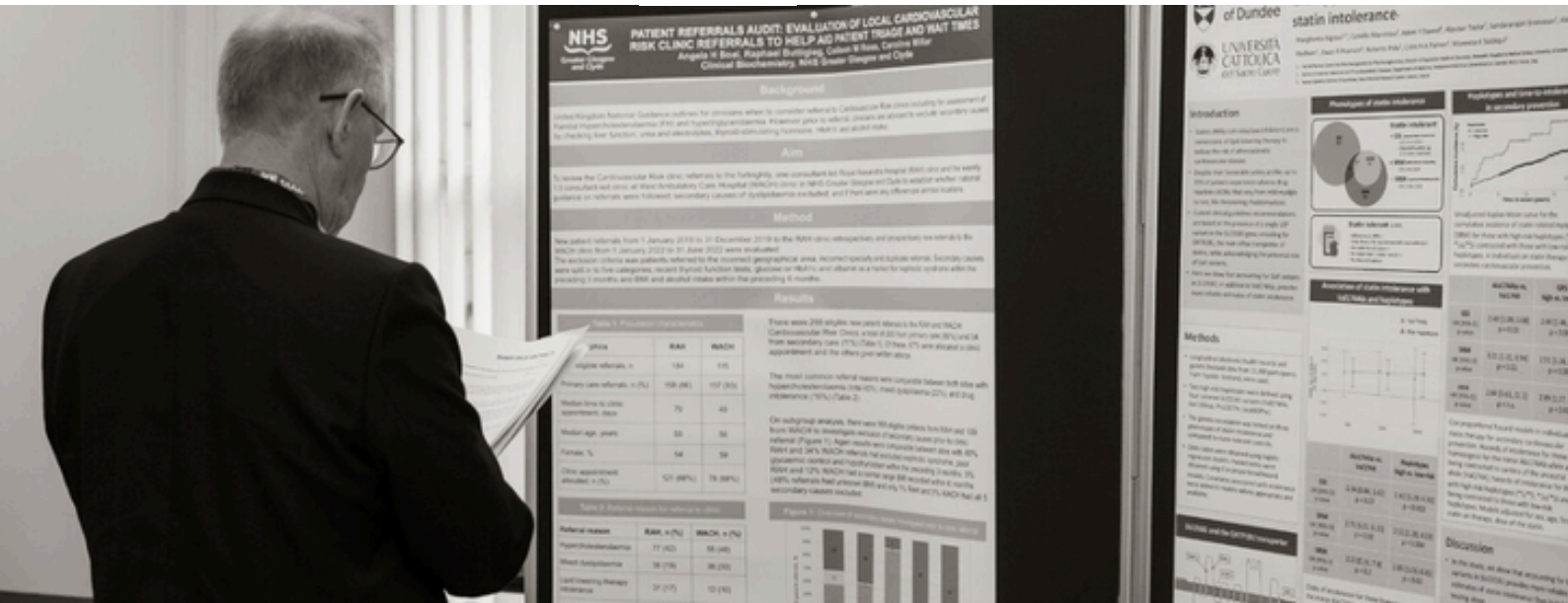


Both the oral and poster presenters will compete for a £300 award in their respective categories: Best Oral Presentation and Best Poster Presentation. These awards recognise the quality of their research and presentation, while the £300 Education Award will support their ongoing professional development through conference and course attendance or the purhase of educational materials.



The presentations will take place in the exhibition hall. Delegates are encouraged to show their support by attending the presentations, engaging with the work being showcased and celebrating our presenters' achievements. This is a valuable opportunity to discover the breadth of cardiovascular research being undertaken across the SHARP community.

Abstracts for all presentations can be found in this programme.



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Thursday's Workshops

Time: **11:45 - 12:30**

Please make sure to attend your allocated workshop, as indicated on your delegate badge. Spaces are limited, so it's important to attend your allocated workshop. Each workshop will last 45 minutes and will run only once.

01

Homozygous Familial Hypercholesterolaemia - Overview of Diagnostic Criteria, Genetics, Management, and a Scottish Perspective

Specialised workshop aimed at secondary care lipid clinic clinicians.
Only running once.

Dr Furruq Quadri, Specialty Registrar (ST7), Chemical Pathology
Royal Infirmary of Edinburgh

Room: Ferntower Suite

02

Keep Calm and Carry On (the Guideline Directed Management): Practical prescribing in patients with kidney disease

Dr Shona Methven, Consultant Nephrologist,NHS Grampian &
Dr Jamie Smith, Consultant Nephrologist, Aberdeen Royal Infirmary

Room: Highlandman

03

How SCAP could support Primary Care

Mrs Claire Louise Cassidy, Senior Nurse - SCAP
Public Health Scotland

Room: Ferntower Upper

04

CVD Prevention in Primary Care

Dr Scott Jamieson, GP, Associate Medical Director
Kirriemuir Medical Practice, Angus HSCP

Room: Tasting Room

05

The EUROASPIRE studies: where did they come from, what have they shown us and what are the latest findings?

Professor Catriona Jennings, Head of Nursing and Interdisciplinary Relations
National Institute for Prevention and Cardiovascular Health, University of Galway

Room: Gallery

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Lunch & Exhibition

Time: 12:30 - 13:30
Room: Melville Hall

We hope you'll take this opportunity to meet our exhibitors and discover more about their work. This is a valuable opportunity to network with fellow attendees, engage with our sponsors and learn more about the organisations supporting SHARP and its activities.

We are extremely grateful to all our sponsors, both pharmaceutical and non-profit, whose support helps make SHARP's activities possible. We encourage delegates to take a moment to visit the stands.

We would also like to highlight BIASP (the British Association of Stroke Physicians), who are supporting the meeting through a promotional contribution but are not attending in person. BIASP works to advance stroke medicine across the UK and Republic of Ireland, leading on clinical standards, promoting research and improving training. Its 2025–2028 strategy also places a strong emphasis on sustainability, equality and diversity.

We encourage everyone to learn more about the organisations supporting the meeting and to recognise their valuable contributions to advancing research, education and the wider cardiovascular community.

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Chest Heart & Stroke Scotland

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Amgen Lunchtime Symposium

This promotional symposium has been organised and funded by Amgen; Amgen products will be discussed.

This symposium is intended for UK healthcare professionals only.

Secondary Prevention After Acute Coronary Syndromes: Practical Approaches to Optimising Lipid Management

Time: 12:40 - 13:25
Room: Ferntower Suite

Chair: Dr. Karen Mitchell, Consultant Chemical Pathologist
Aberdeen Royal Infirmary, NHS Grampian

Speaker: Dr Mark Thomas Speaker, Associate Professor of Cardiology and Honorary Consultant Cardiologist, University of Birmingham and University Hospitals Birmingham NHS Foundation Trust, UK

Overview:
Please join Dr Karen Mitchell, Consultant Chemical Pathologist, at Aberdeen Royal Infirmary and Dr Mark Thomas, Interventional Cardiologist, at University Hospitals Birmingham, as they discuss optimal lipid management in secondary prevention. The session will explore practical care pathways for managing post-ACS patients, with a focus on improving efficiency and reducing clinic waiting times. Dr Thomas will also share his experience of establishing and running a post-ACS lipid clinic, including lessons learned, challenges encountered, and strategies to streamline patient flow and optimise follow-up care.

This meeting has been organised by SHARP and sponsored through funding by Amgen alongside other companies. Amgen has had no involvement in the organisation of this meeting with the exception of the sponsored symposium session, for which Amgen is fully responsible and where medicines will be discussed.

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October 2026



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The Adrian Brady Keynote Lecture

In memory of Professor Adrian Brady

This year's keynote lecture is dedicated to the memory of Professor Adrian Brady, a longstanding and highly respected Trustee of SHARP who served the charity with great dedication over many years, including a term as Chairman.

Adrian made a significant contribution to SHARP through his leadership, insight and commitment to education and clinical excellence. He was also our keynote speaker at the 2025 Annual Meeting, where he shared his knowledge and passion for the field.

He will be remembered with great respect and gratitude by the SHARP community, and this year's keynote lecture honours his lasting contribution to the charity and the wider cardiovascular community.

ASCOT at 30 Years & What Next?

Time: 13:30 - 14:00
Room: Ferntower Suite

Keynote Summary
It is the 30th Anniversary of ASCOT. The achievements of this landmark study will be discussed, along with advances in hypertension.

Chair Professor Mary Joan MacLeod
Honorary Consultant Physician, NHS Grampian
& Chair in Clinical Pharmacology, University of Aberdeen

Speaker Professor Thomas MacDonald, Professor Emeritus, MEMO Research, University of Dundee

Bio Tom MacDonald is Emeritus Professor of Clinical Pharmacology & Pharmacoepidemiology in MEMO Research in the Medical School, University of Dundee. His research interests are hypertension, cardiovascular disease prevention, pharmacoepidemiology and drug safety and innovative trial designs.

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Thursday Afternoon Programme

Session 2 - What's New?

Time: 14:00 - 15:10
Room: Ferntower Suite

Chair: Professor Mary Joan MacLeod, Honorary Consultant Physician, NHS Grampian & Chair in Clinical Pharmacology, University of Aberdeen

14:00 **Factor XIa Inhibitors for the Treatment of CVD**
Professor Jesse Dawson, Professor of Stroke Medicine, University of Glasgow

14:20 **Aldosterone Receptor Antagonists**
Dr Ify Mordi, Clinical Senior Lecturer and Honorary Consultant Cardiologist
University of Dundee

14:40 **SHARP Research Grant: Project Update**
Motivatinng physical Activity with a walking exercise behaViour change intervention and Electrical simulation Remotely in people with Intermittent Claudication (MAvERIC): a feasibility randomised controlled trial
Dr Chris Seenan, Senior Lecturer, University of Stirling

14:50 **SHARP Research Grant: Project Update**
The risks and predictors of major adverse cardiovascular and cerebrovascular events (MACE) after stroke due to intracerebral haemorrhage (ICH): an individual participant data meta-analysis (IPDMA)
Dr Vega Pratiwi Putri, PhD Student, University of Edinburgh

15:00 **SHARP Prize Presentation**
Trends in the incidence, treatment and outcomes of heart failure in patients with kidney failure: a nationwide data-linkage study
Miss Alexandra Armstrong, MB-PhD student, University of Edinburgh

15:00 **Refreshment Break & Exhibition**
Melville Hall

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Refreshment Break & Exhibition

Time: 15:10 - 15:40
Room: Melville Hall

This Refreshment Break provides an opportunity to hear from and celebrate our SHARP Summer Studentship recipients.

Each student will deliver a two-minute summary of their summer research project, sharing their findings, experiences and achievements.

Through this Summer Studentship programme, SHARP supports students studying at Scottish universities to undertake cardiovascular research projects over the summer, gaining valuable hands-on experience and developing skills for future careers in cardiovascular medicine and research.

We are also proud to highlight the Chris Ferguson Summer Studentship, awarded to the highest-scoring studentship project in Chris's memory. Chosen by Chris's family, this special award is now in its second year of a three-year funding commitment, with one further year to follow. It honours Chris's memory by supporting valuable research and helping develop future talent in cardiovascular medicine and research.

We encourage everyone to listen to the presentations, celebrate the students' achievements & recognise SHARP's ongoing commitment which is to reduce cardiovascular disease through healthcare research & educational initiatives.

EXHIBITORS

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Chest Heart & Stroke Scotland

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Thursday Afternoon Programme

Session 3: Scottish Lipid Forum

Time: 15:40 - 17:10
Room: Ferntower Suite

Chair: Dr Rosemary Clarke
Scottish Lipid Forum Chair & Consultant Medical Biochemist, NHS Highland

15:50 **Treating Lipids In Older Patients**
Professor Anthony Wierzbicki, Consultant in Metabolic Medicine/Chemical Pathology
Guys & St Thomas Hospitals, London

16:10 **Lp(a): From Measurement to Management**
Dr Andreas Tridimas, Consultant Chemical Pathologist, Wirral University Teaching Hospital

16:30 **What Side Effects Do Statins Cause?**
Dr Christina Reith, Associate Professor, Nuffield Department of Population Health
University of Oxford

16:50 **SHARP Prize Presentation**
Monitoring & Optimisation of Cholesterol-Lowering Therapy in Cardiac Patients
Dr Niamh Allison, IMT1, NHS Grampian

17:00 **Closing Remarks – End of Day 1 of the Annual Meeting**

17:15 **20 years of the Scottish Lipid Forum**
Please join us for a discussion about where we've come from and where we're going. Open to all who have been, are or will be involved in a lipid clinic.

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Thursday Evening Programme

Time: 19:00
Room: Melville Hall



Drinks Reception

Join us for the Drinks Reception starting at 19:00 in the Melville Hall. This is an excellent opportunity to explore the poster display, connect with colleagues and continue conversations from the day in a relaxed and informal atmosphere.

Annual Dinner

Our Annual Dinner will be held in the Melville Hall, offering an opportunity to unwind, enjoy good company and continue conversations with peers and colleagues. It's the perfect setting to celebrate our shared achievements and foster new connections.

We are delighted to welcome Dr Allan Gaw, author, as our after-dinner speaker. A pathologist by training and a writer by inclination, Allan is an award-winning poet, short story writer and novelist. His first Dr Jack Cuthbert historical crime novel won the Bloody Scotland Debut Prize in 2024, and the series is published by Polygon in the UK and Mysterious Press in the US.

After-Dinner Talk: Fictionalising Your Day Job - When a Pathologist Turns Crime Writer.

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Friday Morning Programme

Session 4: Remote and Rural

Time: 08:45 - 10:40
Room: Melville Hall & Ferntower Suite

Chair: Professor John Webster, Honorary Consultant, NHS Grampian

08:40	**Registration & Exhibition** Melville Hall
09:25	**Welcome** Ferntower Suite
09:30	**SHARP Prize Presentation** **Clinical outcomes of Metformin use in patients with type 2 diabetes mellitus and aortic stenosis** Ms Saraswathi Iyer, Medical Student, University of Dundee
09:40	**Vascular Risk Factors in Remote and Rural Areas** Dr Stephen Makin, Senior Clinical Lecturer, University of Aberdeen
10:00	**Developing a GLP-1 Weight Management Pathway in the Western Isles: Lessons from a Small Island Service** Mrs Karen France MacLeod, Nutrition & Dietetic Manager, NHS Western Isles
10:20	**Once for Scotland Approach: Can Service Provision and Pathways Be Standardised Across Scotland?** Mr Graeme Guthrie, Consultant Vascular Surgeon and Clinical Lead for Vascular Surgery NHS Tayside and CfSD
10:40	**Refreshment Break & Exhibition** Melville Hall

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Refreshment Break & Exhibition

Time: 10:40 - 11:15
Room: Melville Hall

This break offers a further opportunity to engage with our exhibitors and poster presenters, ask questions, exchange ideas and build connections with the people and organisations supporting SHARP.

This year is also a special milestone as we celebrate 20 years of the Scottish Lipid Forum, with SHARP's own 40th anniversary not too far away! To mark these important milestones, we have posters on display in the exhibition hall taking you back in time and showcasing the history and achievements of our community.

We encourage everyone to explore the displays, connect with our exhibitors and sponsors, and celebrate the people and partnerships that shape SHARP and the Scottish Lipid Forum. Together, these contributions advance cardiovascular research, support education through the sessions and opportunities we provide, and help translate learning into clinical practice.



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Friday's Workshops

Time: 11:15 - 12:50

Please make sure to attend your allocated workshop, as indicated on your delegate badge. Spaces are limited, so it's important to attend your allocated workshop. Each workshop will last 45 minutes, and you will have the opportunity to attend two workshops.

01

CYP2C19 Genotyping to Guide Antiplatelet Prescribing in Post-Ischaemic Stroke/TIA Setting
(Only running once)

Ms Jill Swan, Director of Pharmacy, NHS Golden Jubilee Hospital

Room: Gallery

02

The Dietary Management of Cholesterol in Clinical Practice

Mrs Lynne Garton, Dietetic Advisor
HEART UK

Room: Tasting Room

03

The Role of the Lipid Nurse in CVD Risk Management

Ms Laura Robertson, Clinical Nurse Specialist Lipids
Royal Free London NHS Trust

Room: Ferntower Suite

04

Pollution, Inflammation and Health

Professor Jill Belch, Professor of Vascular Medicine
University of Dundee

Room: Ferntower Upper

05

Keep Calm and Carry On (the Guideline Directed Management): Practical prescribing in patients with kidney disease
(Only running once)

Dr Shona Methven, Consultant Nephrologist,NHS Grampian &
Dr Jamie Smith, Consultant Nephrologist, Aberdeen Royal Infirmary

Room: Highlandman

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Lunch & Exhibition

Time: 12:50 - 14:00
Room: Meikle Restaurant & Melville Hall

During this lunch break, you'll have the opportunity to sit down and enjoy lunch with colleagues in the Meikle Restaurant. Tea, coffee and desserts will also be served in the exhibition hall, offering a final opportunity to connect with our exhibitors, sponsors and fellow delegates before the final session of the 2026 meeting. Make the most of this time to continue conversations, exchange ideas and strengthen connections.

Thank you to our exhibitors, sponsors, presenters, student ambassadors and delegates for making this meeting a success. We hope you have enjoyed the opportunity to learn, connect and share ideas. As we bring the 2026 meeting to a close, we encourage you to continue these conversations, build on the connections you've made and carry the spirit of SHARP & the Scottish Lipid Forum forward throughout the year.

We look forward to continuing these conversations and welcoming you all back in a year's time!



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BIASP British & Irish Association of Stroke Physicians *Advancing stroke medicine*

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Friday Afternoon Programme

Session 5: Data

Time: 14:00 - 15:30
Room: Ferntower Suite

Chairs: Dr Rosemary Clarke
Scottish Lipid Forum Chair & Consultant Medical Biochemist, NHS Highland

14:00 **SHARP Prize Awards**

14:10 **Hypertension in Patients with Cancer**
Professor Ninian Lang, Professor of Cardiology and Cardio-Oncology, University of Glasgow

14:30 **The Scottish Stroke Care Audit: Using Data to Improve Stroke Care**
Professor Mary Joan MacLeod, Honorary Consultant Physician, NHS Grampian & Chair in Clinical Pharmacology, University of Aberdeen

14:50 **From Data to Improvement: How SCAP is Supporting Cardiovascular Care in Scotland**
Mrs Claire Louise Cassidy, Senior Nurse - SCAP, Public Health Scotland

15:10 **StrokeApp: Streamlining Clinical Data Capture to Evaluate Post-Stroke Outcomes**
Dr Cameron Brown, Neurology Registrar, Queen Elizabeth University Hospital, Glasgow

15:30 **Closing Remarks & Adjourn**



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SHARP Studentships

These talented students embarked on their research projects this summer, and we were excited to see their contributions to advancing cardiovascular health. We appreciate it if you take the time to view their work and engage with them.

Connor Aldridge

University of Glasgow

The experience of patients (or carers of patients) enrolled in the SUBCUT-HF II clinical trial and randomised to the Early Supported Discharge (ESD) treatment strategy with novel subcutaneous furosemide at home.

Denver Correia

University of Glasgow

Comparing Cardiometabolic & Non-cardiometabolic Multimorbidity in Predicting Cardiovascular Disease: a UK biobank cohort study.

Joe Kallat

University of Glasgow

Diagnostic Performance of AI in Acute Myocardial Injury with Non-Obstructive Coronary Arteries.

Sophie Laurie

University of St. Andrews

Chris Ferguson Summer Studentship

Addressing Inequalities in Cardiovascular Health: A Primary Care Comparison in Fife.

This studentship was supported by a generous donation from the Ferguson family in memory of the late Chris Ferguson.

Antonia Pritchard

University of St. Andrews

Managing risk in structural heart disease - are we over doing it?



SHARP Prize Abstracts

These posters are all in the running to win the Best Poster and Oral Prize, with £300 awarded to the winners to support their educational pursuits and further their research endeavours.

Title:	Adjunctive strategies for optimising reperfusion outcomes after ischaemic stroke: A Systematic review.
Authors:	Tareq Al Tarawni, Prof Mary Joan Macleod, Dr. Claire Whyte, Prof Nicola Mutch.
Affiliations:	Institute of Medical Sciences (IMS), University of Aberdeen, Aberdeen, UK.

Introduction: Despite successful endovascular thrombectomy or intravenous thrombolysis, about half of acute ischaemic stroke patients experience poor functional outcomes. This phenomenon, known as "futile recanalization" results from different pathophysiological mechanisms: microvascular ‘’no-reflow’’ phenomenon, reperfusion injury, inflammatory damage, or rapid reocclusion of the vessels (secondary thrombosis). To address these challenges, both pharmacological and non-pharmacological treatments have emerged as potential add-on strategies to complement standard treatment and improve outcomes.

Methods: We conducted a systematic review of the status and range of randomised clinical trials (RCTs) using pharmacological adjunctive agents in patients with ischaemic stroke. Searches of PubMed, Embase, Cochrane CENTRAL, clinicaltrials.gov, using combined search terms ‘Acute Ischaemic stroke’ and ‘thrombolysis’, ‘thrombectomy’, ‘adjuvant’, ‘adjunctive’, ‘add-on’ together, in addition to a manual search, were conducted. Completed and ongoing RCTs conducted between 2016 and February 2026 were included. Standard thrombolytics, non-pharmacological interventions, and traditional Chinese and herbal preparations were excluded.

Results: A total of 57 agents were identified and classified into four categories according to their targeted pathophysiological mechanism: Microvascularobstruction and no-reflow phenomenon (9 agents), Cytoprotection and reperfusion injury (28 agents), thrombo-inflammation (12 agents), and prevention of reocclusion (8 agents). Several completed trials showed improvement in angiographic reperfusion, early neurological recovery, or mortality, but most phase 2/3 studies have remained neutral on functional outcomes. Some promising agents were periprocedural tirofiban for no reflow, TLR4 antagonist ApTOLL for thrombo-inflammation, edaravone dexborneol as cytoprotective agents, and the GPVI inhibitor glenzocimab for prevention of reocclusion.

Conclusion: After many years of failed neuroprotectants, this review illustrates that promising new agents are being tested. These have the potential to enhance the benefits of revascularisation therapies in acute ischaemic stroke and increase the likelihood of functional independence for patients.

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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	Monitoring & Optimisation of Cholesterol-Lowering Therapy in Cardiac Patients
Authors:	Niamh Allison, Hannah Boland, Lynne Davidson, Philippa Holland, Gavin Pierpoint
Affiliations:	NHS Grampian

Introduction: Patients with acute coronary syndrome (ACS) remain at high risk of recurrent cardiovascular events, and early lipid-lowering therapy is central to secondary prevention. Current ESC guidance recommends intensive lipid lowering; targeting LDL-C <1.4mmol/L and ≥50% from baseline; reflecting evidence that reduction in LDL-C reduces major vascular events [1,2]. NICE advocates the prompt initiation of high-intensity statins and structured follow-up [3]. However, despite clear standards and robust evidence, real-world attainment of lipid targets after ACS remains inconsistent.

We aimed to assess lipid monitoring and optimisation of cholesterol-lowering therapy in ACS patients, comparing local practice with national guidelines.

Methods: 119 cardiology in-patients were stratified into statin-naïve (n=68) and statin-established (n=51) groups. Electronic records were reviewed for baseline lipid testing, initiation/escalation of lipid-lowering therapy and repeat lipid measurement post-discharge.

Results: Baseline lipid testing occurred in 85% of statin-naïve patients (n=58) and 65% of statin-established patients (n=33). Secondary prevention therapy was initiated in 99% of statin-naïve patients (n=67). Post-discharge lipid monitoring was infrequent: 38% of statin-naïve patients (n=27) and 69% of statin-established patients (n=35) had no repeat lipid profile within 3-4 months. Community-based treatment escalation was rare, even when levels remained above guideline targets.

Conclusion: Post-ACS lipid monitoring was suboptimal, with substantial gaps in repeat testing and therapeutic optimisation. Although inpatient initiation was above target, escalation of therapy in response to uncontrolled LDL-C was uncommon, particularly among patients already on statins. These findings indicate an area for intervention, highlighting the need for improved post-discharge monitoring pathways.



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Scottish Lipid Forum

SHARP Prize Abstracts

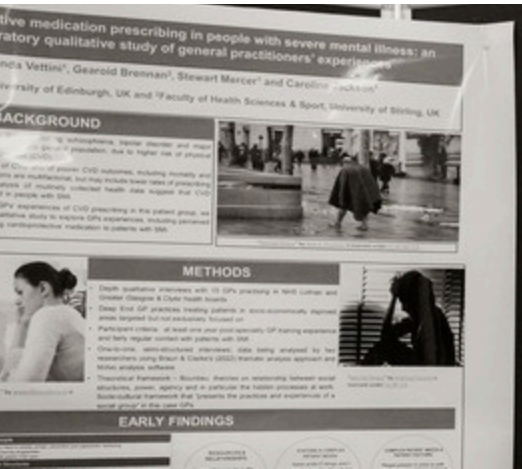
Title:	Trends in the incidence, treatment and outcomes of heart failure in patients with kidney failure: a nationwide data-linkage study
Authors:	Alexandra Armstrong,1 Hannah Preston,1,2 David Yeung,1 Gavin B. Chapman, 1,2 Eve Miller-Hodges,1,2 Marie de Bakker,3 Dorien M. Kimenai,3 Neeraj Dhaun,1,2 Peter J. Gallacher1
Affiliations:	1 Institute for Neuroscience & Cardiovascular Research, University of Edinburgh, UK 2 Department of Renal Medicine, Royal Infirmary of Edinburgh, UK 3 Usher Institute, University of Edinburgh, UK

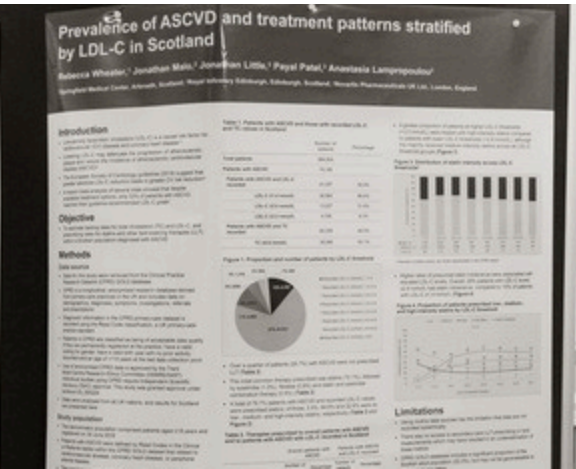
Introduction: Cardiovascular disease is the commonest complication of kidney disease, and this risk is highest in kidney failure. Despite this, the burden of heart failure in this group is unknown. Here, we investigated national trends in heart failure incidence, treatment and outcomes in patients with kidney failure over 25-years.

Methods: All patients with kidney failure receiving maintenance dialysis or with a kidney transplant in Scotland 01/01/1995-31/12/2020 were eligible for inclusion in this nationwide data-linkage study. The primary outcome was incident heart failure; secondary outcomes included cardiovascular death and cardioprotective prescriptions. Age-standardised, sex-stratified trends in heart failure incidence and cardiovascular death were estimated using generalised additive models.

Results: Among 17,090 patients with kidney failure, 1,451 (66 [IQR 57-74] years; 39.2% women) developed incident heart failure. The commonest cause of kidney failure was diabetes mellitus (18.5%), and 22.9% had previous myocardial infarction. Between 1995 and 2020, age-standardised heart failure incidence per 100,000 decreased in men (from 2,407 [95% CI 1,712 to 3,102] to 1071 [95% CI 797 to 1,345]) and women (from 2,157 [95% CI 1,523 to 2791] to 954 [95% CI 704 to 1,204). Cardiovascular death occurred in 282 (19.4%), 454 (31.3%), and 648 (44.7%) patients within 30-days, one- and five-years of diagnosis, respectively. Following non-fatal events, renin-angiotensin system inhibitor prescriptions increased from 33.3% to 42.3%, whilst beta-blocker prescriptions fell from 75.9% to 53.5%.

Conclusion: Heart failure incidence has halved in patients with kidney failure over the past 25 years. However, use of cardioprotective therapies is variable and outcomes remain poor.







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Scottish Lipid Forum

SHARP Prize Abstracts

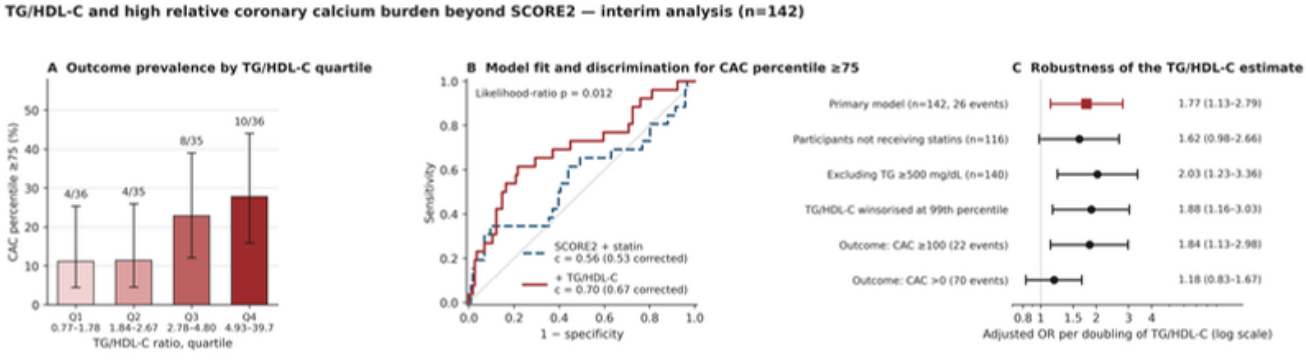
Title:	Triglyceride-to-HDL Cholesterol Ratio Is Associated With High Relative Coronary Calcium Burden Beyond SCORE2: An Interim Analysis
Authors:	Dr Simal Arslan, Dr Erkan Sahin, Dr Bahar Tekgul Unat
Affiliations:	Izmir University of Economics Medical Point Hospital

Introduction: SCORE2 estimates 10-year cardiovascular risk but does not measure subclinical coronary atherosclerosis. We assessed whether the triglyceride-to-high-density lipoprotein cholesterol (TG/HDL-C) ratio was associated with high relative coronary artery calcium (CAC) burden beyond SCORE2.

Methods: This interim complete-case analysis included adults aged 40–69 years without known diabetes from an ongoing single-centre cohort; lipids preceded CT. High relative CAC burden was defined as a vendor-reported CAC percentile ≥75. Logistic regression assessed $\log_2$(TG/HDL-C), adjusting for SCORE2 (high-risk-region algorithm) and documented pre-CT statin use. Models were compared by likelihood-ratio tests; 2,000 bootstrap resamples provided confidence intervals and optimism correction. Sensitivity analyses examined statin-free participants and alternative outcomes (CAC>0, CAC≥100).

Results: Among 142 participants (mean age 52.5±7.8 years; 67.6% male), 26 (18.3%) had CAC percentile ≥75. Each doubling of TG/HDL-C was associated with higher adjusted odds (OR 1.77, 95% CI 1.13–2.79; p=0.013) and improved model fit (likelihood-ratio p=0.012); the c-statistic rose from 0.56 to 0.70 (apparent; 0.53 to 0.67 corrected for optimism). Statin use was associated with the outcome (OR 3.71, 95% CI 1.31–10.50), consistent with confounding by indication. Among statin-free participants the estimate was directionally consistent but imprecise (OR 1.62, 95% CI 0.98–2.66). TG/HDL-C was associated with CAC≥100 (OR 1.84; p=0.014) but not CAC>0 (p=0.368), whereas SCORE2 was associated with CAC>0 (OR 1.12; p=0.014), suggesting a relationship with calcified burden rather than its presence.

Conclusion: TG/HDL-C was associated with high relative CAC burden independently of SCORE2, whose discrimination is constrained by an age- and sex-standardised outcome. Limited events and treatment-related confounding warrant cautious interpretation; recruitment continues.



Primary logistic model used vendor-reported CAC percentile ≥75 as the outcome and included SCORE2 (high-risk-region algorithm), documented pre-CT statin use, and log₂(TG/HDL-C). Panel A shows unadjusted quartile prevalence with Wilson 95% CIs. Panel B shows apparent and optimism-corrected c-statistics from 2,000 bootstrap resamples; likelihood-ratio p compares SCORE2 + statin versus SCORE2 + statin + TG/HDL-C. Panel C shows adjusted ORs for TG/HDL-C per doubling; alternative-outcome analyses used the same covariate structure. The subgroup not receiving statins was adjusted for SCORE2 only.

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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	Emerging treatments for Lacunar Stroke
Authors:	Dania Awad Elkarim & Mary Joan MacLeod
Affiliations:	University of Aberdeen

Introduction: Lacunar stroke is a common manifestation of cerebral small vessel disease and accounts for a substantial proportion of ischaemic strokes. Despite its contribution to recurrent stroke and disability, evidence for specific therapeutic strategies remains limited. This systematic review evaluated emerging therapeutic interventions for secondary prevention of lacunar stroke, focusing on recurrent stroke as the primary outcome and modified Rankin Scale (mRS) and mortality as secondary outcomes.

Methods: MEDLINE, EMBASE, and the Cochrane Library were searched for randomised controlled trials (RCTs) evaluating therapeutic interventions in adults with lacunar stroke. Studies were screened according to predefined eligibility criteria, data were extracted, and risk of bias was assessed using the Cochrane Risk of Bias 2 tool. Due to clinical and methodological heterogeneity, findings were synthesised narratively.

Results: Two RCTs, LACI-2 and SPS3, comprising 3,383 participants, met the inclusion criteria. Although numerous relevant publications were identified, many were protocols, secondary analyses, or subgroup analyses rather than primary reports of eligible RCTs. LACI-2 suggested potential benefits of isosorbide mononitrate (ISMN) on recurrent stroke/TIA, while cilostazol and the combination of ISMN and cilostazol demonstrated benefits in selected functional outcomes. In contrast, SPS3 demonstrated no significant reduction in recurrent stroke with dual antiplatelet therapy or a lower blood-pressure target. Dual antiplatelet therapy was associated with increased mortality and major haemorrhage.

Conclusion: Evidence for therapeutic strategies specifically targeting lacunar stroke remains limited. Further adequately powered RCTs with standardised outcomes and longer follow-up are required to establish the efficacy and safety of emerging secondary prevention strategies.



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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	Evaluation of severe high-density lipoprotein cholesterol deficiency in NHS Greater Glasgow and Clyde
Authors:	Angela H Boal, Jonathan Strachan, Christina Kanonidou
Affiliations:	Clinical Biochemistry, Royal Alexandra Hospital, NHS Greater Glasgow and Clyde

Introduction: Low high-density lipoprotein cholesterol (HDL-C) is a major risk factor for cardiovascular disease (CVD). Causes of severe deficiency include genetics, moderate/severe hypertriglyceridaemia, critical illness, acquired lecithin cholesterol acyltransferase deficiency (eg severe cholestasis, acute hepatitis), and laboratory interference with paraproteinaemia.

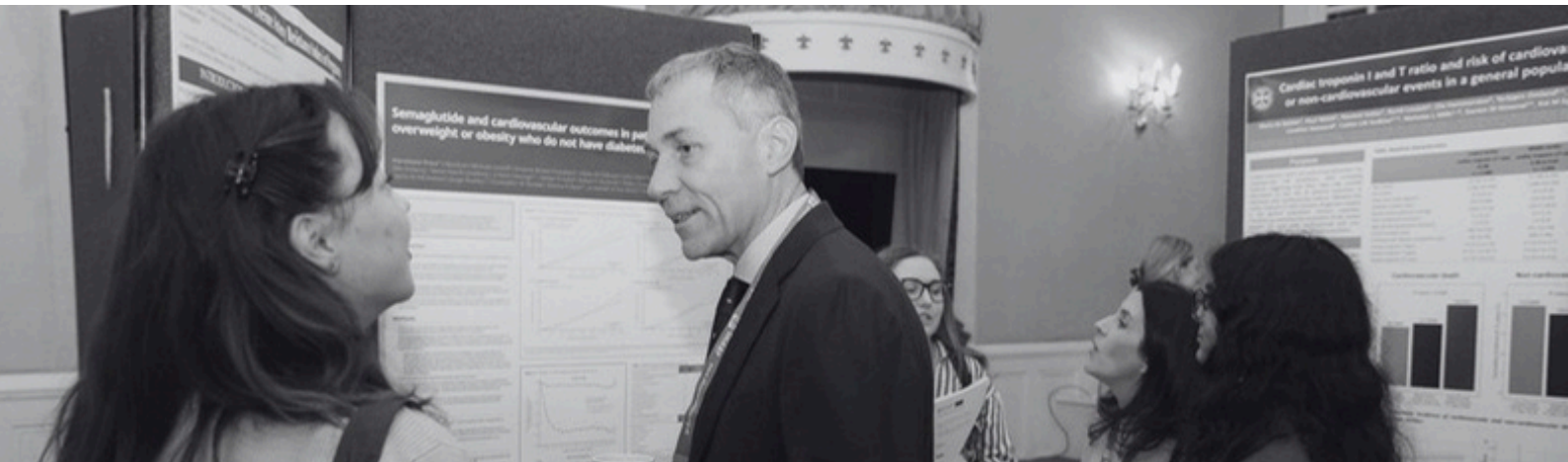
We reviewed HDL-C≤0.2mmol/L results from NHS Greater Glasgow and Clyde to identify the cause(s).

Methods: All HDL-C ≤0.2mmol/L results from 3rd June 2025 to 3rd June 2026 were reviewed in patients ≥18 years. Secondary causes were triglycerides≥10mmol/L, CRP≥100mg/L, total bilirubin≥100umol/L, alanine transaminase (ALT) and/or aspartate transferase (AST)≥120U/L and paraprotein present.

Results: HDL-C was measured in 273,061 patients≥18 years. 57 eligible patients had HDL-C≤0.2mmol/L (0.02%). Median age was 58 years, 69% male and 72% inpatients. There were many multifactorial causes with overall most common inflammation (75%, 40/53 patients), hepatitis (51%, 29/57), and cholestasis (33%, 19/57). 13 patients had no significant paraprotein detected (13/13) and 1 patient had triglycerides≥10mmol/L.

33% patients had one identified cause including isolated inflammation (84%, 16/19), 35% two causes including inflammation and hepatitis (60%, 12/20), and 18% had inflammation and mixed liver dysfunction (10/10). 8 patients had unclear cause (14%): 3 had previous low results, 2 had no repeat and 4 had previous within reference range results.

Conclusion: It is well known that secondary HDL deficiency increases risk of CVD, however investigation and management appears limited. Most common causes identified were inflammation and liver disease, however a small cohort had no clear cause or follow-up. To improve knowledge and management, we plan to add electronic autocomments as per recent recommendations for lipid reporting.



SHARP Prize Abstracts

Title:	Validating a 12 lead electrocardiogram from a wearable - Hacking the Apple Watch with a central terminal.
Authors:	Archa Arun Cheriyan, Mr. Liam Cronin, Ms. Barbara Timlin
Affiliations:	Department of Science, Dubai International Academy, Emirates Hills, United Arab Emirates Department of Cardiology, Al Qassimi Hospital, Sharjah, United Arab Emirates

Introduction: The feasibility of acquiring accurate 12-Lead electrocardiogram (ECG) strips from an easily accessible consumer device like the Apple Watch (AW) or similar wearables, democratises access to an essential diagnostic tool in the field of emergency medicine.

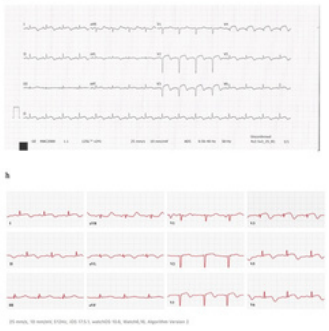
Methods: In this non-randomized, adjudicator-blinded study on 5 healthy volunteers and 5 patients with Anterior Wall Myocardial Infarction, 360 ECG complexes each from standard ECGs (SECG) and serial 12 leads of Apple Watch ECGs (AWECG) obtained by using a portable 3 lead electrode set fused into a common terminal were analysed for heart rate (HR), QRS axis, duration and net amplitude of P wave, QRS complex, T wave, PR interval, corrected QT (QTc) interval and ST segment deviation.

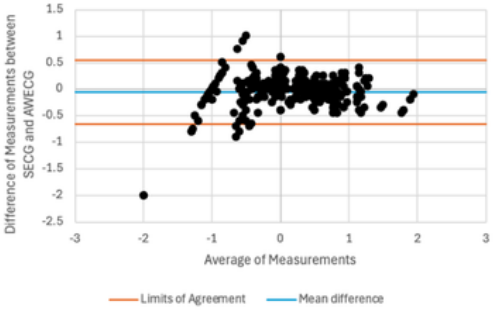
Results: Five blinded evaluators had successfully matched all the 10 sets of randomly alphabetised SECGs with their AWECGs. Cardiac axis showed a very strong correlation (r = 0.89), while moderate to strong correlations were noted for P wave, QRS and QTc (r = 0.40, 0.60 and 0.58 respectively) compared to moderate correlations for T wave and PR duration. The mean HR of the SECGs at 79.06±12.18 bpm and that of AWECGs at 77.83±8.95 bpm showed a weak correlation (r = 0.33) due to the time difference in getting the AWECG and the SECG.

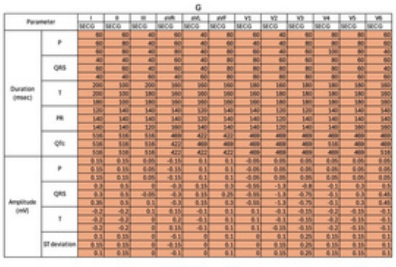
Conclusion: Despite expectations that amplitude comparisons would be compromised by limitations of AWECG recording frames, a very strong and significant correlation (r > 0.8) was observed between the methods with a near absence of fixed bias proving that the AWECG and SECG can be used interchangeably.

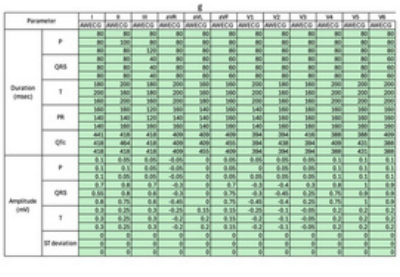
Table 4 | Amplitude

Component		SECG ± SD	AWECG ± SD	Correlation Coefficient	p-Value	Bias (95% LoA)
Amplitude (mV)	P wave	0.04 ± 0.07	0.05 ± 0.07	0.83	<0.001	-0.01
	QRS complex	0.07 ± 0.75	0.13 ± 0.69	0.91	<0.001	-0.05
	T wave	0.03 ± 0.22	0.01 ± 0.27	0.90	<0.001	0.02
	ST deviation	0.05 ± 0.09	0.05 ± 0.10	0.88	<0.001	-0.01









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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	Beyond Calf Pain: Exercise Ankle-Brachial Pressure Index Reveals a Lipid-Management Gap in Symptomatic Peripheral Arterial Disease
Authors:	Kayleigh Dickson (presenting author)1, Alan Meldrum2
Affiliations:	1) School of Medicine, University of Glasgow 2) Department of Vascular Surgery, NHS Greater Glasgow & Clyde

Introduction: Symptomatic peripheral arterial disease (PAD) confers a cardiovascular risk comparable to established coronary artery disease, yet LDL-cholesterol target attainment in PAD populations is often suboptimal. Exercise ankle-brachial pressure index (exABPI) testing is used to confirm PAD in patients with exertional leg symptoms and a non-diagnostic clinical assessment, providing an opportunity to review lipid-lowering therapy at diagnosis. We evaluated the diagnostic yield of exABPI and subsequent lipid management.

Methods: We retrospectively reviewed 280 consecutive exABPI studies performed between January 2024 and January 2026 following vascular clinic assessment for exertional leg symptoms and diagnostic uncertainty. A positive test was defined as a ≥20% post-exercise reduction in ABPI. Medical optimisation and LDL-C measurements before and after diagnosis were recorded. The audit target was LDL-C <1.8 mmol/L or ≥50% reduction from baseline.

Results: ExABPI was positive in 138/280 patients (49.3%). Medical therapy was subsequently modified in 107/138 (77.5%). Pre-diagnosis LDL-C was available in 122 patients; 93/122 (76.2%) were ≥1.8 mmol/L. One hundred patients had paired LDL-C measurements. Mean LDL-C fell from 2.56 to 2.05 mmol/L, a reduction of 0.51 mmol/L with 44/100 achieving the audit target. Of 93 patients initially ≥1.8 mmol/L, 19 (20.4%) had no subsequent LDL-C recorded.

Conclusion: ExABPI identifies more than a cause for exertional leg symptoms; individuals with very-high cardiovascular risk requiring guideline-recommended secondary prevention. Lipid control improved after diagnosis, but incomplete target attainment and repeat testing expose a modifiable care gap. These findings support a protocolised vascular lipid pathway with defined repeat testing, treatment escalation and ownership of follow-up.



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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	Are We Identifying Hypertriglyceridaemic Pancreatitis? An Audit of Serum Triglyceride Requesting in Patients with Suspected Acute Pancreatitis across NHS Greater Glasgow and Clyde
Authors:	Ben Hall, Lyn Ferguson
Affiliations:	NHS Greater Glasgow and Clyde

Introduction: Acute pancreatitis is associated with significant morbidity and mortality. It has several risk factors including raised triglycerides, particularly when >10mmol/L(1). This audit sought to review the requesting pattern of triglycerides in patients with possible diagnoses of acute pancreatitis in NHS Greater Glasgow and Clyde.

Methods: Between 1/7/2025 and 1/7/2026, samples from adult patients attending secondary care in NHS Greater Glasgow and Clyde with a serum amylase >500U/L were identified using the laboratory IT system. Samples were CHI matched to triglyceride results taken either 7 days before or after the primary sample. Analysis was performed by sample, patient and episode of pancreatitis. New episodes of pancreatitis were defined as an amylase requested following a 5 day gap in requesting, or where there was attendance at a new hospital site. Analysis was performed using Microsoft Excel and R.

Results: 984 samples had an amylase >500U/L. 54.1% were female, and the mean age was 57.5 years old. 55.3% of samples came from emergency medicine and 29.1% from Surgical specialities. Overall, 16.2% of samples had a triglyceride test requested within 7 days. Of 159 samples with triglycerides requested, 15 samples (9.4%) had triglycerides >10mmol/L. By episode, 826 patient episodes of acute pancreatitis were identified, of which 16% had a triglyceride level checked. By patient, 132 of 754 patients (17.5%) had a triglyceride level checked.

Conclusion: Triglycerides are under requested in patients presenting with acute pancreatitis. Increased triglyceride requesting may help identify this important modifiable risk factor in this patient group.



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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	Clinical outcomes of Metformin use in patients with type 2 diabetes mellitus and aortic stenosis
Authors:	1. Saraswathi Iyer 2. Professor Chim Lang
Affiliations:	1. School of Medicine, University of Dundee 2. Division of Cardiovascular Research, University of Dundee, Ninewells Hospital

Introduction: Aortic stenosis is a leading cause of cardiovascular mortality and currently lacks disease-modifying pharmacological therapy. It is characterised by progressive valvular calcification and shares overlapping pathophysiological features with heart failure (HFpEF in particular), a condition in which metformin has shown potential benefit. Observational evidence also suggests that metformin may exert anti-inflammatory, anti-fibrotic, and anti-calcific effects relevant to AS progression.

Methods: Objective: To evaluate whether metformin use is associated with clinical outcomes in patients with type 2 diabetes mellitus (T2DM) and aortic stenosis.

Methods: Adults (≥18) with T2DM and AS from 2015 onwards were identified via TriNetX. Those with prior HF or congenital aortic valve disease were excluded and stratified by metformin use with 1:1 propensity score matching. Primary outcomes (all-cause mortality, incident HF, AVR) over 5 years were assessed using Kaplan-Meier survival analysis and Cox regression.

Results: Results: After PSM, 25,776 patients were included in each cohort. Metformin use up to 1 year prior diagnosis of AS was associated with reduced all-cause mortality (HR 0.80, 95% CI 0.78-0.84, p=0.001). Higher rates of AVR (HR 2.34, p=0.091) and heart failure (HR 2.03, p<0.001) were observed in the metformin cohort, likely reflecting survival bias, whereby longer survival increases the likelihood of reaching intervention thresholds and clinical detection of disease rather than a direct effect on disease progression.

Conclusion: Conclusion: Overall, metformin use was associated with improved survival in patients with T2DM and AS, but its relationship with disease progression remains uncertain. Prospective randomised studies incorporating detailed imaging and haemodynamic endpoints are required to confirm these findings.

Table 3. All-Cause Mortality by Duration of Metformin Exposure

Metformin Duration	HR (vs no metformin)	p-values	CI (95%)
3 months	0.800	0.057	0.761-0.840
6 months	0.804	0.016	0.770-0.841
1 year	0.808	0.001	0.776-0.841
2 years	0.837	0.001	0.806-0.869
3 years	0.857	<0.001	0.826-0.889
5 years	0.874	0.048	0.844-0.904
All-time (overall)	0.881	0.001	0.851-0.912

Table 3. HR = hazard ratio; CI = confidence interval. Hazard ratios are presented relative to the non-metfor

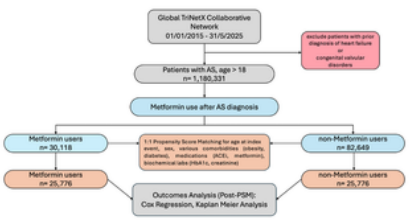
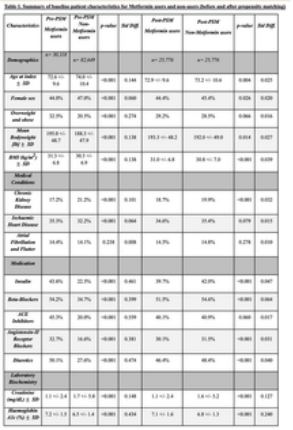


Figure 1. Study Design



Clinical Outcomes (Table 2)

Table 2. Clinical Outcomes After Propensity Score Matching

Outcome	Metformin n(%)	Control n(%)	HR (95% CI)	p-value
All-cause Mortality	4,330 (16.8%)	5,113 (19.8%)	0.80 (0.78-0.84)	0.001
Aortic Valve Replacement	2,398 (9.3%)	1,026 (4.0%)	2.34 (2.17-2.52)	0.091
Heart Failure	5,758 (22.3%)	2,919 (11.3%)	2.03 (1.94-2.12)	<0.001

Table 2. Clinical outcomes of metformin users and non-users summarised after PSM; HR = hazard ratio; CI = confidence interval.

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Scottish Lipid Forum

SHARP Prize Abstracts

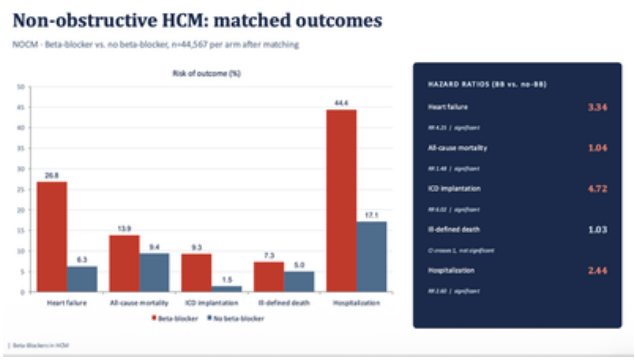
Title:	Association of Beta-Blocker Therapy With Clinical Outcomes in Obstructive and Non-Obstructive Hypertrophic Cardiomyopathy
Authors:	1. Saraswathi Iyer 2. Dr. Anna-Maria Choy
Affiliations:	1. School of Medicine, University of Dundee 2. Division of Cardiovascular Research, University of Dundee, Ninewells Hospital

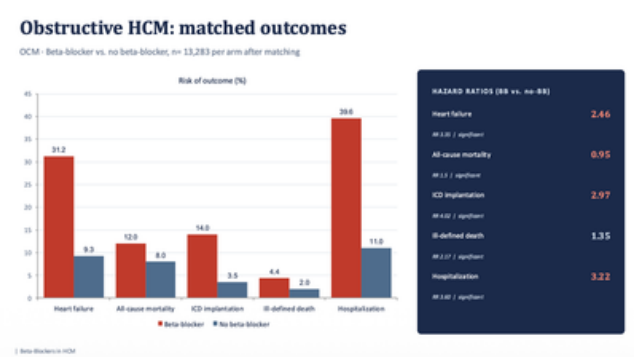
Introduction: Beta-blockers are widely used in hypertrophic cardiomyopathy (HCM) for prevention of arrhythmia and to reduced obstruction, although evidence for reduction in hard clinical outcomes remains limited. The recent MAPLE-HCM trial failed to show functional benefit of beta-blockade in obstructive HCM, therefore we investigated the association of beta-blocker therapy with morbidity and mortality in real-world patients with obstructive and non-obstructive HCM.

Methods: A retrospective cohort study was performed using the TriNetX Global Collaborative Network across 182 healthcare organisations. Adults with obstructive (ICD-10 I42.1) or non-obstructive (I42.2) HCM were identified. Patients exposed to beta-blockers (ATC C07) following HCM diagnosis were compared with those without recorded exposure. Cohorts underwent 1:1 propensity score matching for demographics, comorbidities, laboratory measures and relevant medications. Outcomes included heart failure, all-cause mortality, ill-defined death, new ICD implantation and all-cause hospitalisation.

Results: After matching, 13,283 patients per arm were analysed for obstructive HCM and 44,567 per arm for non-obstructive HCM. In obstructive HCM, beta-blocker exposure was associated with higher risks of heart failure (RR 3.35), all-cause mortality (RR 1.50), ICD implantation (RR 4.02) and hospitalisation (RR 3.60). Similar associations were observed in non-obstructive HCM for heart failure (RR 4.25), mortality (RR 1.48), ICD implantation (RR 6.02) and hospitalisation (RR 2.60). Ill-defined death was significantly increased in obstructive HCM but not non-obstructive HCM.

Conclusion: Beta-blocker exposure was associated with worse clinical outcomes in both HCM subgroups. These findings are hypothesis-generating and may primarily reflect residual confounding by disease severity and treatment indication. Prospective studies are required to determine the effect of beta-blockers on long-term HCM outcomes.





SHARP Prize Abstracts

Title:	Cardiovascular Risk Factors and Biomarkers in the Decades Prior to a Cardiovascular Event
Authors:	Marie de Bakker 1, Anoop SV Shah 2, Magnus N Lyngbakken 3,4, Torbjørn Omland 3,4, Kristian Hveem 5,6, Eric J Brunner 7, Paul Welsh 8, Naveed Sattar 8, Peter J Gallacher 9, Dave Yeung 9, Joao AC Lima 10, Susan R Heckbert 11, Stephen L Seliger 12, Bruce M Psaty 13, Christopher R deFilippi 14, Thijs MH Eijsvogels15, Neeraj Dhaun 9,16, Eric Boersma 17, Dorien M Kimenai 1
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Introduction: Understanding trajectories of cardiovascular risk factors and biomarkers and their relation to cardiovascular events may help inform early prevention strategies.

Methods: We used individual participant data of four population-based cohort studies to evaluate sex-specific trajectories of cardiovascular risk factors and circulating biomarkers in relation to cardiovascular events. Cardiovascular risk factors, kidney function, and biomarkers (C-reactive protein, cardiac troponins, and N-terminal pro–B-type natriuretic peptide) were repeatedly measured over a 34-year period. The primary outcome was a composite of non-fatal myocardial infarction, non-fatal stroke, or cardiovascular death.

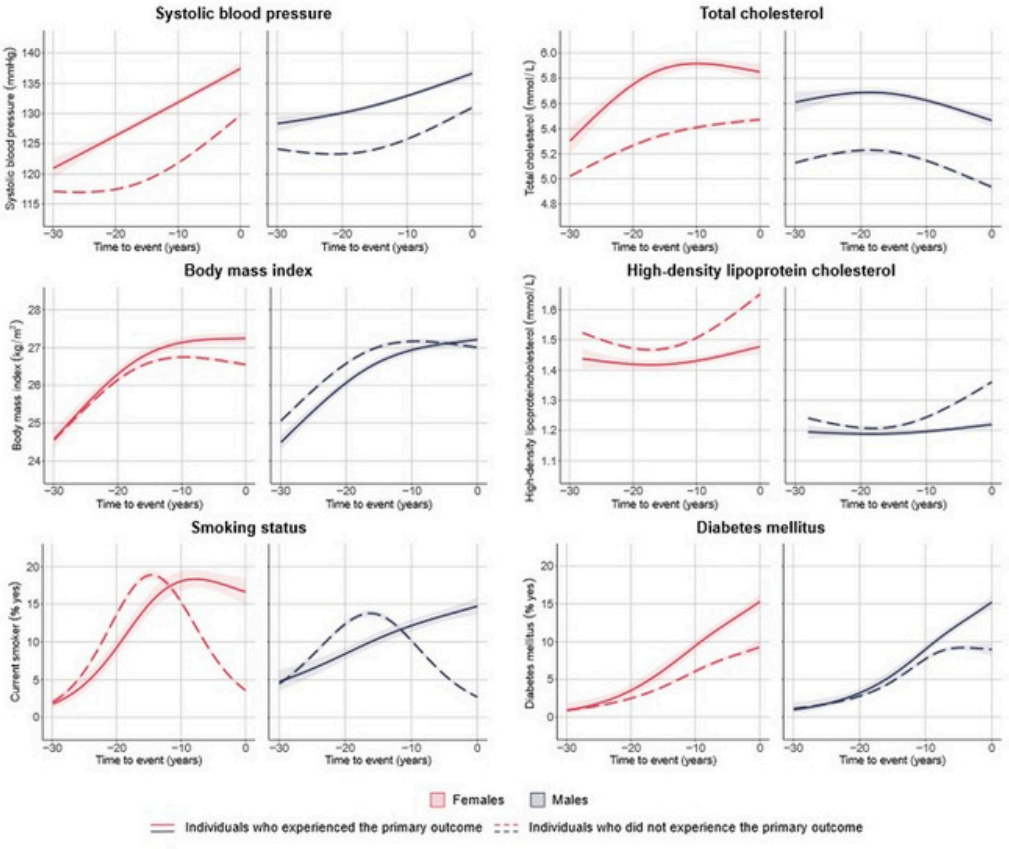
Abstract continued on next page

SHARP Prize Abstracts

Title:	**Abstract (continued)** Cardiovascular Risk Factors and Biomarkers in the Decades Prior to a Cardiovascular Event
Authors:	Marie de Bakker 1, Anoop SV Shah 2, Magnus N Lyngbakken 3,4, Torbjørn Omland 3,4, Kristian Hveem 5,6, Eric J Brunner 7, Paul Welsh 8, Naveed Sattar 8, Peter J Gallacher 9, Dave Yeung 9, Joao AC Lima 10, Susan R Heckbert 11, Stephen L Seliger 12, Bruce M Psaty 13, Christopher R deFilippi 14, Thijs MH Eijsvogels15, Neeraj Dhaun 9,16, Eric Boersma 17, Dorien M Kimenai 1

Results: We included 59,328 females and 54,284 males without prior myocardial infarction or stroke, aged 19 to 103 years. The primary outcome occurred in 8,025 (13.5%) females and 8,892 (16.4%) males during a median follow-up of 18.9 years. Individuals who experienced the primary outcome had less favourable cardiovascular risk factor trajectories and greater cumulative exposure than those who remained event-free, with divergence evident up to three decades before the event (Figure). For instance, systolic blood pressure among females was 4 mmHg higher three decades before the event (121 [95%CI,119-123] versus 117 [95%CI,117-177] mmHg) and 7 mmHg higher at time of the event or censoring (137 [95%CI,136-139] versus 130 [95%CI,129-130] mmHg). Similar long-term differences were observed in males and for other cardiovascular risk factors. Cardiovascular biomarker trajectories began to diverge one to three decades before the event.

Conclusion: Trajectories of cardiovascular risk factors and biomarkers diverged between individuals who experienced the event and those who remained event-free up to three decades before first-onset cardiovascular disease.



SHARP Prize Abstracts

Title:	Improving Statin Monitoring and Treatment Escalation for Primary Prevention: A General Practice Audit
Authors:	Ahmed Ali Kindawi
Affiliations:	General Practice, North East England, United Kingdom

Introduction: NICE guidelines recommend atorvastatin 20mg for primary prevention of cardiovascular disease, including repeat lipid measurements after three months of statin initiation, and treatment escalation if non-HDL cholesterol falls less than 40%. This audit assessed the compliance of lipid monitoring, target achievement and subsequent management in a general practice setting.

Methods: SystmOne records were retrospectively reviewed for 50 patients started on atorvastatin 20 mg for primary prevention between February and June 2025. Lipid testing, percentage reduction in non-HDL cholesterol, action following inadequate response, management of adverse effects and documentation were recorded.

Results: Forty-five patients (90%) underwent repeat lipid testing at three months. Overall, 23 patients (46%) achieved at least a 40% reduction in non-HDL cholesterol, 22 (44%) did not achieve the target and five (10%) could not be assessed. Management and documentation were inconsistent. One patient stopped treatment because of adverse effects without being offered an alternative statin. One patient changed to rosuvastatin after an inadequate response and adverse effects. Another record described the result as satisfactory without documenting a follow-up plan. One patient underwent lipid testing too early without a documented plan for repeat testing.

Conclusion: Although lipid monitoring was high, less than half of the patients achieved the recommended non-HDL cholesterol reduction, and follow-up of inadequate response or intolerance was inconsistent. A proposal was made for a SystmOne statin-initiation template, containing the treatment target and escalation options, programmed review prompts, referral for selected patients to a lipid clinic and a repeat audit after six months.



SHARP Prize Abstracts

Title:	Trends in recording of cardiovascular risk assessment among individuals without established cardiovascular disease
Authors:	Dr Marie De Bakker (1) , Dr Iona Lyell (2), Dr Peter J Gallacher (2), Dr Naomi Launders (3), Dr Caroline Jackson (1), Prof Sarah Wild (1), Dr Fiona Wright (4), Prof Paul Welsh (5), Prof Mark Woodward (6,7), Prof Anoop SV Shah (8,9), Prof Neeraj Dhaun (2,10), Dr Dorien M Kimenai (1)
Affiliations:	1. Usher Institute, University of Edinburgh, Edinburgh, UK 2. Institute for Neuroscience and Cardiovascular Research, University of Edinburgh, UK 3. Division of Psychiatry, University College London, London, UK 4. Stroke Service, Glasgow Royal Infirmary, NHS Greater Glasgow and Clyde, Glasgow, UK 5. School of Cardiovascular & Metabolic Health, University of Glasgow, Glasgow, UK 6. The George Institute for Global Health, School of Public Health, Imperial College London, London, UK 7. The George Institute for Global Health, University of New South Wales, Sydney, New South Wales, Australia 8. Department of Non-Communicable Disease Epidemiology, London School of Hygiene and Tropical Medicine, London, UK 9. Department of Cardiology, Imperial College NHS Trust, London, UK 10. Department of Renal Medicine, Royal Infirmary of Edinburgh, Edinburgh, UK

Introduction: Cardiovascular disease risk assessment using the ASSIGN score has been recommended for eligible individuals in Scotland since 2007. We aimed to examine temporal trends in recording of cardiovascular risk assessment using the ASSIGN score and to explore variation by demographic subgroups.

Methods: We conducted an observational cohort study using linked routinely collected healthcare data to identify individuals eligible for risk assessment between 6 April 2010 and 5 April 2025 in South-East Scotland. The primary outcome was an ASSIGN score recorded in the primary care record within the preceding five years.

Results: A total of 449,711 individuals (median age 46 years [25th-75th percentile, 40-55], 51.5% female) were included (Table 1). The percentage of individuals with a recorded ASSIGN score increased from 6.7% in 2010-2011 to 16.3% in 2015-2016 and remained stable until the end of the study period (Figure 1). Recording was higher in those aged 50-70 years compared to other age groups and in females compared to males (Figure 2). Individuals living in the most deprived areas had the highest proportion of ASSIGN recording until 2019-2020 when this pattern reversed. Black individuals had higher proportions of ASSIGN recording until 2019-2020 compared to other groups. These patterns remained in an adjusted analysis.

Abstract continued on next page

SHARP Prize Abstracts

Title:	**Abstract (continued)** Trends in recording of cardiovascular risk assessment among individuals without established cardiovascular disease

Conclusion: Recording of ASSIGN risk scores has been low over the past 15 years in South-East Scotland and patterns varied by demographic subgroups. The changing recording patterns over time suggest influence from targeted policies. More consistent and equitable implementation strategies may be required to improve guideline based cardiovascular disease prevention.

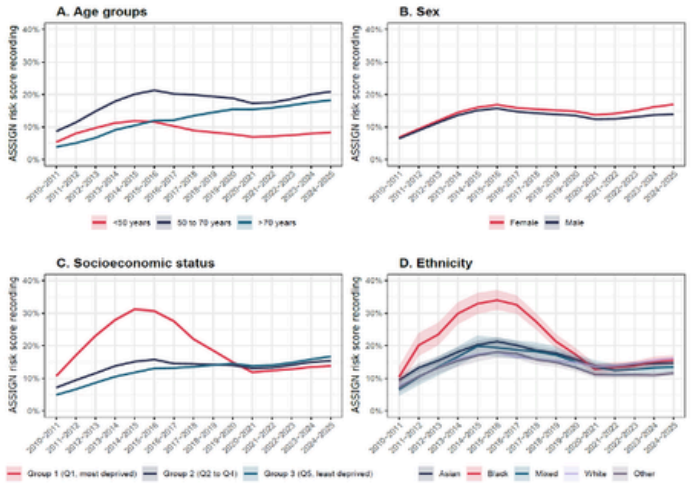


Figure 2. Time trends in recording of the ASSIGN risk score by financial year and sociodemographic subgroups. Panel A: Age (<50 years, 50 to 70 years, >70 years); Panel B: Sex (female, male); Panel C: Socioeconomic deprivation (Group 1 [quintile 1, representing the most deprived 20% of the population], group 2 [quintiles 2–4], group 3 [quintile 5, representing the least deprived 20% of the population]); Panel D: Ethnicity (Asian, Black, Mixed, White, Other). Lines represent the percentage of cardiovascular risk assessment recording in the preceding five years. The shaded areas representing the 95% confidence intervals are not visible for age, sex, and socioeconomic status groups, as they are very small due to the large sample size.

	Total study population n = 449,711
Age groups	
<50 years	274,855 (61.1%)
50 to 70 years	137,657 (30.6%)
>70 years	37,199 (8.3%)
Sex (male)	218,814 (48.7%)
Ethnicity	
Asian	13,109 (3.5%)
Black	3,419 (0.9%)
Mixed	2,311 (0.6%)
White	347,383 (92.9%)
Other	7,640 (2.0%)
Socioeconomic deprivation	
Group 1 (Q1, most deprived)	53,526 (12.1%)
Group 2 (Q2 to Q4)	238,536 (54.0%)
Group 3 (Q5, least deprived)	149,919 (33.9%)

Missing data were 1.7% for socioeconomic deprivation status and 13.1% for ethnicity. Additionally, 3.7% of individuals had 'Not stated' recorded for ethnicity.

Table 1. Baseline characteristics of individuals eligible for cardiovascular risk assessment between 2010 and 2025 in South-East Scotland

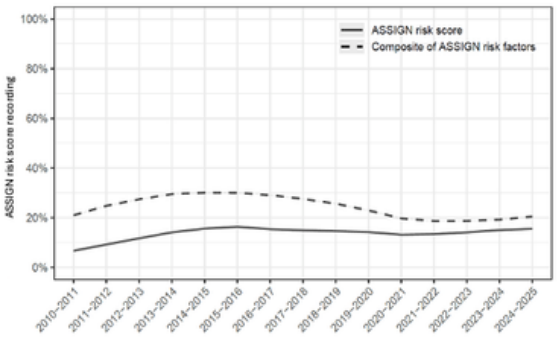


Figure 1. Time trends in recording of cardiovascular risk assessments by financial year. Lines represent the percentage of cardiovascular risk assessment recording in the preceding five years. The shaded areas representing the 95% confidence intervals are not visible in the plot as they are very small due to the large sample size.

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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	Hypertriglyceridaemia in acute pancreatitis: are we missing treatment opportunities?
Authors:	Thomas Morgan, Thomas M Barber, Jawad Ahmad, Sethsiri Wijeratne
Affiliations:	University Hospital Coventry, Coventry, Warwickshire, United Kingdom

Introduction: Hypertriglyceridaemia (HTG) is a common precipitant of acute pancreatitis (AP). HTG-associated AP is more severe, with higher rates of multi-organ failure, recurrence and mortality. HTG prevalence in the UK is high, linked to rising obesity. GLP-1 receptor agonists increase AP risk indirectly through weight-loss-induced gallstone formation, and directly, although this remains poorly understood. With rising GLP-1RA usage, identification and management of HTG is therefore increasingly important. International Association of Pancreatology (IAP) guidelines recommend specific approaches to identifying and managing HTG in AP, but these have not yet been incorporated into National guidelines. This study examines current standards of investigating and managing HTG in AP at a major academic NHS teaching hospital.

Methods: An audit was conducted on 43 patients admitted with AP from August–November 2025, using documentation from electronic patient records and biochemical investigation results. An automated lipid profile add-on intervention is in the implementation phase.

Results: Triglycerides were measured in only 20.9% of patients admitted with confirmed AP, including just one of six with known pre-existing HTG. In the two patients where HTG was identified, both were managed appropriately with treatment aligned to IAP guidance.

Conclusion: This audit reveals that most AP admissions at a major academic NHS teaching hospital did not have triglycerides measured. Given the high prevalence of HTG and its importance as an AP risk factor, triglycerides should be measured during all AP admissions. Automated lipid profile measurement should improve HTG detection, but National guidelines urgently need updating to include specific recommendations for managing HTG risk in AP.



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Scottish Lipid Forum

SHARP Prize Abstracts

Title:	A review of patients receiving Inclisiran therapy within NHS Ayrshire and Arran
Authors:	Dr Kelly Scott (Specialty Doctor), Dr Suzanne MacKenzie (Consultant Biochemist)
Affiliations:	Department of Biochemistry, NHS Ayrshire and Arran

Introduction: Public Health Scotland cites cardiovascular diseases being leading causes of deaths. Raised low density lipoprotein cholesterol (LDL-C) is a modifiable risk factor.

Inclisiran is a lipid lowering injectable therapy. Patients receive initial treatment, then at 3 months and then 6 monthly thereafter. Our aim was to assess the efficacy of Inclisiran by monitoring change at 3 months and the effect of ongoing treatment amongst this cohort in NHS Ayrshire and Arran (NHSAAA). The first NHSAAA patients commenced Inclisiran in 2023.

Methods: Thirteen patients in NHSAAA are receiving Inclisiran as a monotherapy or adjunct to oral lipid lowering agents. All patients had a pre-treatment and current lipid profile taken when attending for their Inclisiran treatment. Comparisons were made between LDL-C pre-treatment, at 3 months and currently.

Data was collected on August 31st 2026. LDL-C was calculated using the Sampson Equation as the laboratory calculation (Freidewald Equation) was not available in all cases due to hypertriglyceridaemia.

A Wilcoxon signed-rank test was used to compare paired LDL-C measurements. Significance was defined as $p < 0.05$.

Results: Table 1. A comparison between LDL-C pre-treatment, at 3 months after initiation of Inclisiran therapy and current

Table 2. Statistical comparison using paired Wilcoxon signed rank test

Treatment duration range was 7 to 36 months (median 17 months).

Reduction in LDL-C from pre-treatment levels was 40.5% (range 15.6% – 82.4%).

Conclusion: All patients demonstrated a reduction in their LDL-C with the data showing a statistically significant reduction by 3 months which has been sustained.

Whilst this is a small cohort, Inclisiran remains a promising treatment as monotherapy or as an adjunct to oral agents. These results are similar to large, ongoing multi-centre trials.

Table 1. A comparison between LDL-C pre-treatment, at 3 months after initiation of Inclisiran therapy and current

	Number of patients	Mean (mmol/L)	Standard deviation	95% confidence interval (mmol/L)
Pre-treatment LDL-C	13	4.78	0.97	4.19 - 5.37
3 month LDL-C	11	2.78	1.13	2.02 - 3.53
Recent LDL-C	13	2.84	1.00	2.24 - 3.44

Table 2. Statistical comparison using paired Wilcoxon signed rank test

	Median change (mmol/L)	p-value
LDL-C change pre-treatment to 3 months	-1.86	<0.001
LDL-C change pre-treatment to current	-1.92	<0.001
LDL-C change 3 months - current	-0.16	1.00

SHARP Prize Abstracts

Title:	Role of natriuretic peptides and cardiac troponins in staging hypertensive heart disease: the REMODEL study
Authors:	Ashley Sharp, Tar-Choon Aw, Thu-Thao Le, Soon-Kieng Phua, A Mark Richards, Michael Böhm, Javier Díez, Javed Butler, Calvin W L Chin
Affiliations:	School of Medicine, University of Dundee, Dundee, United Kingdom. Department of Laboratory Medicine, Changi General Hospital, Singapore 529889, Singapore. National Heart Research Institute of Singapore, National Heart Centre Singapore, Singapore 169609, Singapore. Cardiovascular Medicine Academic Clinical Program (ACP), Duke-NUS Medical School, Singapore 169609, Singapore. Christchurch Heart Institute, University of Otago, Christchurch, New Zealand. Klinik für Innere Medizin III and HOMICAREM-Homburg Institute for CardioRenalMetabolic Medicine, Universitätsklinikum des Saarlandes, Saarland University, Homburg/Saar, Germany. Program of Cardiovascular Diseases, Center of Applied Medical Research and School of Medicine, University of Navarra, Pamplona, Spain. Baylor Scott and White Research Institute, Dallas, TX, United States. Department of Medicine, University of Mississippi School of Medicine, Jackson, MS, United States. Department of Cardiology, National Heart Centre Singapore, Singapore 169609, Singapore.

Introduction: Hypertensive heart disease (HHD) develops progressively and may precede overt heart failure. We evaluated whether N-terminal pro-B type natriuretic peptide (NT-proBNP) and high-sensitivity cardiac troponin T (hsTnT) can stage HHD by identifying biomarker-defined risk groups associated with adverse cardiac remodelling and cardiovascular outcomes in essential hypertension.

Methods: The REMODEL study prospectively enrolled 1,054 asymptomatic individuals with essential hypertension and no prior cardiovascular disease. Participants underwent cardiovascular magnetic resonance and measurement of NT-proBNP and hsTnT. Maximal log-rank statistics identified prognostic biomarker thresholds. The primary outcome comprised acute coronary syndrome, heart failure hospitalization, stroke, and all-cause mortality. Median follow-up was 53 months.

Results: Thresholds of 152 pg/mL for NT-proBNP and 12.7 pg/mL for hsTnT stratified participants into low, intermediate, and high-risk groups. High-risk participants, with both biomarkers elevated, showed the most adverse cardiac magnetic resonance phenotype, including increased left ventricular mass, greater diffuse and replacement fibrosis, impaired longitudinal strain, and larger left atrial volumes. Fifty-eight participants experienced an event. After multivariable adjustment, high-risk participants had the greatest cardiovascular event risk (HR 17.11, 95% CI 8.12–36.09; $p<0.001$), followed by intermediate-risk participants (HR 3.44, 95% CI 1.71–6.94; $p<0.001$)).

Conclusion: Combined NT-proBNP and hsTnT measurement identifies distinct HHD risk strata that reflect both cardiac remodelling severity and long-term cardiovascular risk. These biomarkers may provide a scalable approach to disease staging and support more personalized, stage-specific management.

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Scottish Lipid Forum

SHARP Prize Abstracts

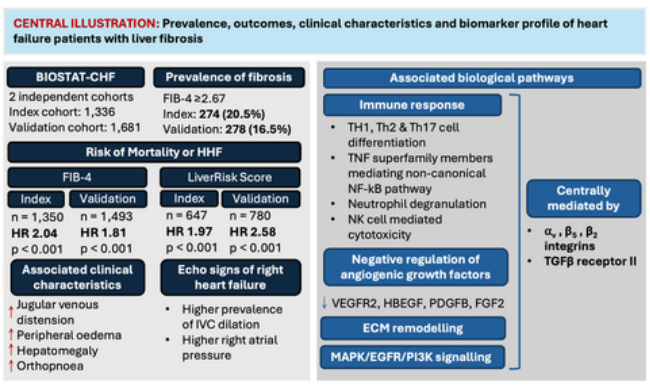
Title:	Liver fibrosis in heart failure patients is associated with adverse outcomes, signs of congestion, and αv integrin-related processes: insights from BIOSTAT-CHF
Authors:	Mr MZK. Tow1, Doctor W. Ouwerkerk2, Doctor ML. Win1, Mr MS. Hussain1, Mr APM. Lang1, Doctor IR. Mordi1, Doctor AM. Choy1, Professor JF. Dillon1, Professor AA. Voors3, Doctor PN. Brennan1, Professor CC. Lang1
Affiliations:	(1) Ninewells Medical School (Division of Cardiovascular & Diabetes Medicine), Dundee, United Kingdom of Great Britain & Northern Ireland (2) Amsterdam UMC, Amsterdam, Netherlands (The) (3) University Medical Center Groningen, Groningen, Netherlands (The)

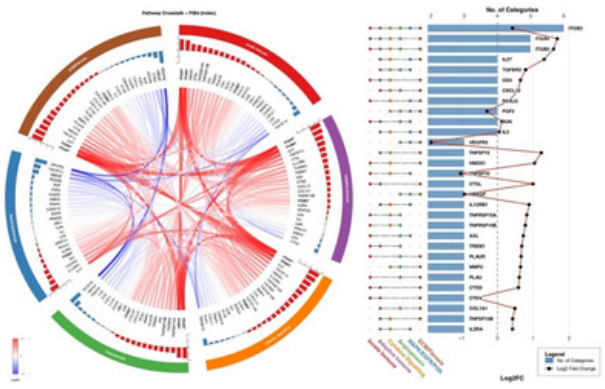
Introduction: Liver disease is common in heart failure (HF) and associated with worse outcomes, but its mechanisms remain poorly understood. We describe the outcomes and clinical characteristics of HF patients with non-invasively assessed liver fibrosis, and use proteomics to identify mechanisms and therapeutic targets.

Methods: We analysed 3,017 patients from BIOSTAT-CHF with FIB-4 available, 1,531 of whom had the LiverRisk score (LRS). Fibrosis was ruled in by FIB-4 ≥2.67 or LRS ≥10 and ruled out by FIB-4 ≤1.3 or LRS ≤6. Cox models for mortality or HF hospitalisation were adjusted for NT-proBNP, age, sex and alcohol. Proteomics pathway analysis was performed using 359 plasma proteins; shortlisted proteins were validated in RNA-sequencing data from biopsy-staged liver fibrosis.

Results: Fibrosis prevalence was 20.5% (index) and 16.5% (validation). Fibrosis was associated with systemic congestion (peripheral oedema, hepatomegaly, jugular venous distension) and elevated right heart pressures. After adjustment, fibrosis remained prognostic [FIB-4 ≥2.67: HR 1.26 (1.06–1.51), p=0.01; LRS ≥10: HR 1.68 (1.23–2.29), p=0.001]. Fibrosis-associated pathways involved ECM remodelling, negative regulation of angiogenesis, MAPK/EGFR/PI3K signalling and inflammation, with TGFβ receptor II and integrin αv as central hubs (Figures 1–2). In biopsy-staged liver fibrosis, integrin αv was upregulated in advanced fibrosis; single-cell data localised integrin αv and TGFβ receptor II upregulation to scar-associated mesenchymal cells derived from hepatic stellate cells.

Conclusion: In new-onset or worsening HF, liver fibrosis is associated with mortality or HF hospitalisation, systemic congestion and elevated right heart pressures. The integrin αv/TGFβ axis is a plausible therapeutic target in congestive liver fibrosis.





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