EASD 2025 Clinical and AI / ML Preview

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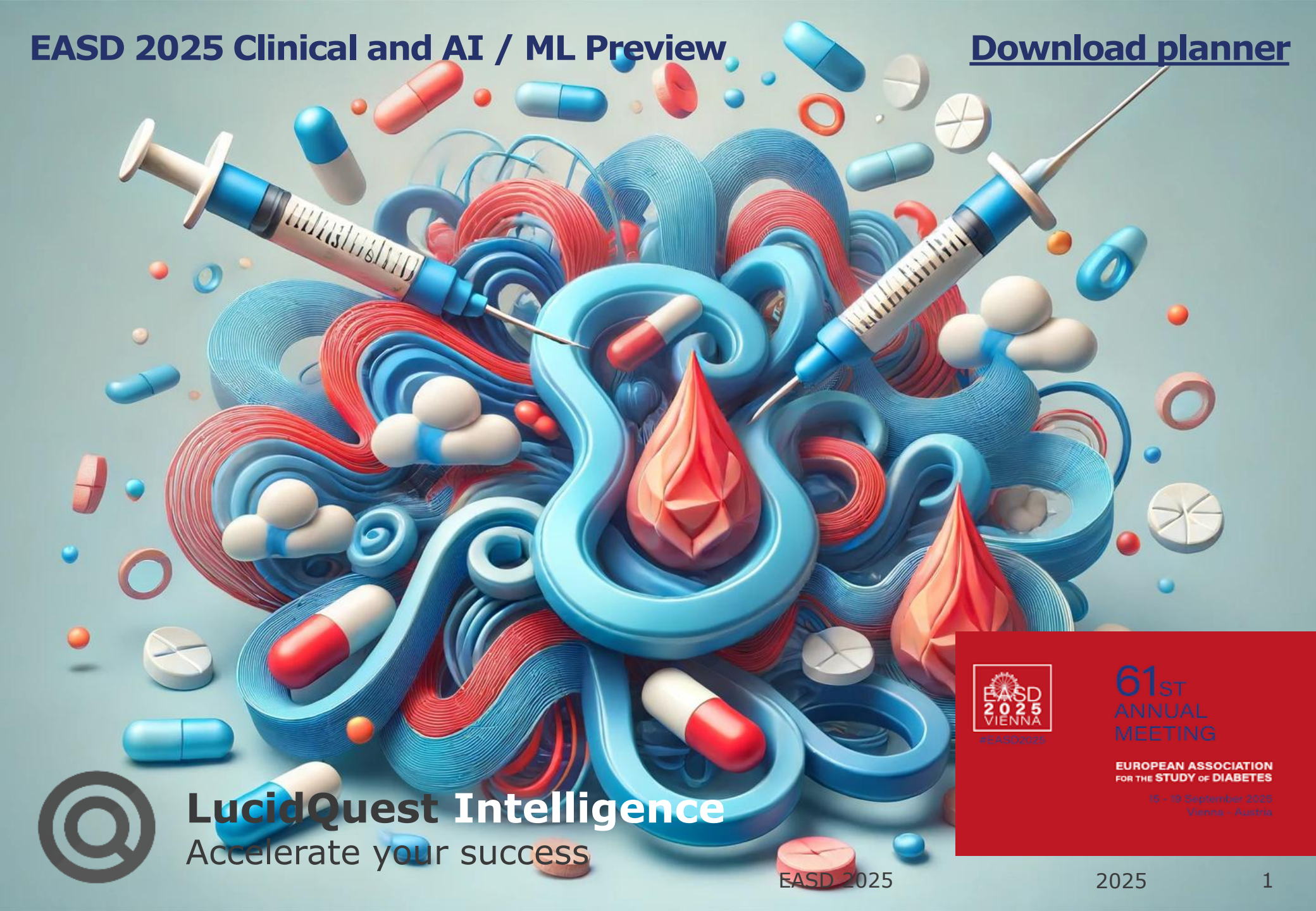

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EASD 2025 – General Overview

- **Unprecedented scale:** EASD 2025 is set to host record-breaking participation across academia, industry, and clinical practice, reflecting diabetes's expanding global health burden
- **Cross-disciplinary focus:** The programme is expected to integrate endocrinology, cardiology, nephrology, hepatology, and neurology under a unified metabolic agenda
- **Therapeutic breakthroughs:** Late-breaking data on GLP-1/GIP co-agonists, weekly insulins, and MASLD/MASH therapies are anticipated to headline the meeting
- **Beyond glycaemia:** Clinical outcomes are expected to extend toward cardiovascular protection, renal preservation, obesity management, and cancer mortality reduction
- **Equity in care:** Dedicated tracks are set to address disparities in diabetes prevalence, technology access, and treatment adoption across geographies
- **Digital transformation:** Real-world studies are expected to highlight automated insulin delivery, smart MDI, and non-invasive glucose monitoring as routine care tools

EASD 2025– Conference Themes (1/2)

- **Redefining diabetes endpoints:** Trials are expected to prioritize survival, hospitalization rates, and complication progression over traditional glucose-centric endpoints
- **Obesity as core driver:** Combination incretin therapies, amylin analogues, and lifestyle timing interventions are set to reshape obesity and weight-loss management
- **Real-world practice insights:** Data from global registries and pragmatic studies are anticipated to refine implementation of SGLT2is, GLP-1RAs, and dual agonists
- **Pregnancy and youth diabetes:** Landmark studies are expected to redefine gestational diabetes care, postpartum prevention, and pediatric technology adoption
- **Complications landscape:** Research is set to advance understanding of retinopathy, nephropathy, neuropathy, and diabetic foot, linking pathophysiology with intervention outcomes

EASD 2025– Conference Themes (2/2)

- **Cognition and mental health:** New evidences are expected to connect diabetes with neurocognitive decline, highlighting olfactory training and behavioral interventions
- **Next-generation insulin strategies:** Once-weekly basal insulins, simplified titration regimens, and fixed-ratio combinations are anticipated to expand clinical adoption
- **Precision medicine:** Biomarker-driven stratification, genetic risk scoring, and phenotyping tools are expected to optimize individualized therapy
- **Immunotherapy in T1D:** Teplizumab extensions and antigen-specific therapies are set to mark a new phase of immune-modulating strategies
- **Health-system innovation:** Cost-effectiveness, telemonitoring, and policy-focused pilots are expected to shape the scalability of diabetes interventions across regions

Noteworthy Scientific presentations at EASD 2025

Key Topics From Notable Presentations (1/8)

- **GLP-1, GIP, Amylin & Incretin-Based Therapies:** EASD 2025 is expected to highlight a new era of incretin-based therapies, with oral, dual, and long-acting agents redefining standards for glycemic control, weight management, and cardiometabolic outcomes

  - Efficacy Across Populations and Risk Profiles: Oral Semaglutide data are expected to show cardiovascular protection amplified at higher HbA1c, while data on GLP-1 analogues will show moderate but meaningful weight reduction even in complex obesity such as craniopharyngioma

  - Next-Generation and Dual Agonists: Data on Emerging therapies like ecnoglutide, amycretin, and HRS9531 are expected to show robust weight loss, cardiometabolic benefits, and improved tolerability, positioning dual and biased analogues as transformative options in obesity and diabetes care

  - Innovations in Dosing and Delivery: Advances include bi-weekly agents (bofanglutide), oral small-molecule GLP-1RAs (HM101460, RGT-075), and novel amylin analogues (eloralintide, VRB-103), addressing adherence and expanding beyond injectable-only treatments

Key Topics From Notable Presentations (2/8)

- **Obesity & Weight Management:** Sessions are expected to showcase a paradigm shift in obesity treatment, where novel incretin-based drugs, dual agonists, and behavioral integration combine to deliver durable, high-quality weight management outcomes
  - Incretin and Amylin-Based Strategies: Cagrilintide monotherapy, semaglutide combinations, and dual incretin regimens are expected to drive meaningful weight loss and waist reductions, with safety largely limited to manageable gastrointestinal events
  - Novel Agents and Mechanistic Innovation: Ultra-long acting GLP-1RAs like zovaglutide, multi-receptor agonists such as NA-931, and fat-specific modulators like HM17321 are anticipated to redefine durability and quality of weight reduction
  - Behavioral and Lifestyle Integration: Food noise reduction with semaglutide, enhanced eating control, and intermittent fasting regimens are projected to complement pharmacotherapy by improving adherence, mental wellbeing, and metabolic health in obesity and T2D

Key Topics From Notable Presentations (3/8)

- **Type 1 Diabetes & Technologies:** Discussion will revolve around how novel therapies and advanced closed-loop technologies transform T1D care, reducing hypoglycaemia, improving metabolic outcomes, and addressing cardiovascular and pregnancy-related risks
  - Cardiometabolic Risk and Inpatient Care: Insulin resistance is expected to be recognised as an independent cardiovascular risk factor in T1D, while proactive specialist inpatient care is projected to improve satisfaction and glycaemic stability during hospitalisation
  - Novel Hypoglycaemia and Adjunctive Therapies: FLO23011 is anticipated to offer a first-in-class, more stable alternative to glucose gels for hypoglycaemia, and tirzepatide is projected to deliver weight loss, insulin sparing, and modest glycaemic benefits in T1D
  - Automated Insulin Delivery and Pregnancy: Omnipod 5, CamAPS FX, and MiniMed 780G trials are expected to confirm superior glycaemic control, improved pregnancy outcomes, and subgroup-specific benefits versus standard care and multiple daily injections

Key Topics From Notable Presentations (4/8)

- **Type 2 Diabetes – Pharmacological Interventions:** Experts will discuss how both novel oral agents and combination regimens complement established therapies, expanding safe and effective treatment options for diverse type 2 diabetes populations
  - Established and Background Therapies: Insulin monotherapy is linked to higher cardiovascular risk, while canagliflozin reduces this excess. Metformin benefits appear less robust after adjustment, highlighting drug-specific effects in cardiorenal protection
  - Emerging Oral and Injectable Agents: HRS-7535, HTD1801, imeglimin, and enavogliflozin demonstrate significant HbA1c reduction and safety across trials, with added weight, lipid, and insulin-sparing benefits, supporting their development as novel therapeutic options
  - Fixed-Combination and Intensive Strategies: iGlarLixi improves time in range and outperforms IDegAsp regardless of injection timing. Early quadruple therapy achieves superior glycemic and insulin resistance improvements compared with stepwise escalation, with good tolerability

Key Topics From Notable Presentations (5/8)

- **Gestational & Postpartum Diabetes:** Presentations are set to address how refining GDM diagnosis, validating CGM's role in pregnancy, and scaling postpartum prevention tools to reduce long-term maternal and offspring diabetes risk
  - Diagnostic Criteria and Treatment Impact: Broader WHO 2013 GDM criteria did not reduce large-for-gestational-age births but increased pharmacotherapy, neonatal hypoglycemia, and healthcare utilization, raising questions on diagnostic thresholds and intervention burden
  - Role of Continuous Glucose Monitoring: rt-CGM significantly reduces large-for-gestational-age infants and improves glycemic control versus SMBG, while isCGM appears well accepted but showed no added metabolic or perinatal benefit
  - Postpartum Prevention and Risk Tools: Tech-enabled lifestyle interventions reveals early cardiometabolic dysfunction in high-risk women, while the 6P behavioral tool effectively identifies lifestyle-linked adiposity, offering scalable strategies for preventing type 2 diabetes progression

Key Topics From Notable Presentations (6/8)

- **Cardiovascular, Renal & Metabolic Outcomes:** Cardiometabolic therapies, particularly semaglutide, SGLT2 inhibitors, and adjunctive strategies like CPAP, expand diabetes care from glucose control to comprehensive cardiovascular, renal, and systemic protection will be discussed
  - Cardiovascular Protection and Risk Stratification: Icosapent ethyl consistently lowers cardiovascular events across insulin resistance tertiles, while semaglutide is set to become the first agent to significantly reduce major adverse limb events in PAD-related type 2 diabetes
  - Renal and Microvascular Health: Physical activity shows limited kidney benefits, whereas anti-VEGF therapy appears linked to eGFR decline. SGLT2 inhibitors reduce injection frequency in mild DME, supporting renal and ocular protection strategies
  - Broader Metabolic and Comorbidity Insights: Semaglutide improves walking in PAD and histology in MASH, CPAP reduces mortality in T2D-OSA, and weight loss interventions modestly lower cancer deaths, underscoring the interconnected risks beyond glycemia

Key Topics From Notable Presentations (7/8)

- **Complications, Precision Medicine & Other Emerging Topics:** Sessions are expected to expand diabetes care beyond glucose control, with precision biomarkers, comorbidity-focused strategies, and novel therapies addressing systemic complications from cardiovascular to hepatic and ocular disease
  - Precision Biomarkers and Risk Tools: TyG index and mitochondrial DNA copy number are emerging as markers for cardiovascular and microvascular risk, supporting precision risk stratification beyond traditional glycemic measures
  - Infectious and Comorbidity-Linked Risks: The DANFLU-2 trial will clarify influenza vaccine strategies in older adults with diabetes, while CPAP use in T2D with OSA reduced long-term mortality, highlighting infection and comorbidity management
  - Therapeutic Innovation Across Systems: Semaglutide improves outcomes in MASH, PAD, and MALE, while naltrexone/bupropion supports MASLD management. SGLT2 inhibitors reduce anti-VEGF injections, though renal safety concerns persist for anti-VEGF therapy

Key Topics From Notable Presentations (8/8)

- **Diabetes Technologies & Digital Health:** Discussions will emphasize how digital and device-based innovations, from telemonitoring and non-invasive sensors to smart insulin systems, are redefining diabetes care, advancing personalization, and easing real-world patient use
  - Early Intervention and Neuropathy Prevention: In prediabetes, glucose-lowering drugs plus lifestyle modestly slow neuropathy progression, suggesting early pharmacologic strategies may support nerve preservation alongside lifestyle measures
  - Telemonitoring and Wearable Integration: Telemonitoring with fitness trackers show high adherence but a gradual decline. Sustained engagement appears feasible, and linking usage with glycemic outcomes may optimize long-term digital care strategies
  - Next-Generation Devices and Digital Ecosystems: Hybrid closed-loop with ultra-rapid insulin preserves control despite delayed dosing, smart MDI improves outcomes with suboptimal feature use, and Glucowear delivers promising non-invasive monitoring accuracy comparable to CGM

Notable Presentations And Late-breaking Sessions At EASD 2025

Notable Presentations At EASD 2025
GLP-1, GIP, Amylin & Incretin-Based Therapies (1/7)

Date	Title	Author	Summary
16 Sep 2025	Oral semaglutide and cardiovascular outcomes by baseline A1c and BMI in people with type 2 diabetes in the SOUL trial	S.E. Inzucchi	• **Introduction:** GLP-1 receptor agonists improve glycemic and weight outcomes in T2D, and oral semaglutide reduced major CV events in SOUL. Whether baseline HbA1c or BMI modify these benefits remains uncertain. • **Methodology**: In a post hoc SOUL analysis (n=9650, T2D with ASCVD/CKD, mean follow-up 47.5 months), Cox regression assessed oral semaglutide's impact on MACE by baseline HbA1c, BMI, and body weight. • **Results:** CV benefit was greater with baseline HbA1c >8%, with effects evident above 7%. No differences were observed across BMI strata or weight categories; benefits were consistent irrespective of adiposity. • **Conclusions:** Oral semaglutide's CV protection is amplified at higher HbA1c but independent of BMI, supporting personalized treatment strategies in high-risk T2D.
16 Sep 2025	Nonclinical evaluation of SNA-003, a long-acting GLP-1 receptor agonist, demonstrating enhanced pharmacokinetics and metabolic efficacy in rodent models of type 2 diabetes	Y. Park	• **Introduction:** Current GLP-1RAs improve glycemia and weight in T2DM but are limited by rapid absorption, GI side effects, and weekly dosing. SNA-003 was developed to enhance pharmacokinetics, tolerability, and durability. • **Methodology**: Male rats received single subcutaneous doses of SNA-003 or comparator; PK parameters were analyzed. Repeated-dose studies in T2DM mice assessed weight, fat mass, glucose, and insulin resistance. Simulations confirmed sustained release. • **Results:** SNA-003 showed delayed Tmax (24h vs 4h), lower Cmax (~30%), stable exposure (PTR 1.2–1.8 vs 2.0–3.7). In T2DM mice, SNA-003 produced greater reductions in body weight, fat mass, fasting glucose, and insulin resistance. • **Conclusions:** SNA-003 demonstrated improved PK stability, tolerability, and superior metabolic efficacy in animals. Phase 1 data in humans support these findings, positioning SNA-003 as a promising next-generation GLP-1RA.

Notable Presentations At EASD 2025
GLP-1, GIP, Amylin & Incretin-Based Therapies (2/7)

Date	Title	Author	Summary
16 Sep 2025	Cranio-GLP1: efficacy and safety of GLP1 analogue treatments in patients with craniopharyngiomas	F. Lambert	• **Introduction:** Secondary obesity after craniopharyngioma (oCP) is difficult to manage, and evidence for GLP-1 analogues (aGLP-1) in this population is limited to small cohorts. • **Methodology**: A retrospective multicenter study across 16 French obesity centers analyzed adults with oCP treated with one or more aGLP-1 agents, assessing weight outcomes and safety. • **Results:** Among 124 patients (mean BMI 39.7), average weight loss was −5.0% over 40 months, with greater effect for semaglutide (−7.3% at 21 months, 1.2 mg/week). Adverse events included GI intolerance (22% nausea, 15% vomiting), 12% discontinuation, and 17% endocrine decompensation requiring hospitalization. • **Conclusions:** aGLP-1 therapy induces moderate but clinically meaningful weight reduction in oCP, though efficacy is lower than in common obesity. Careful monitoring of GI and endocrine complications is essential.
16 Sep 2025	Effects of the novel long-acting amylin analogue petrelintide on body weight and waist circumference by sex in a phase 1 trial	D. Hesse	• **Introduction:** GLP-1 receptor agonists often yield greater weight loss in women. Petrelintide, a once-weekly subcutaneous agent, was assessed in a phase 1 obesity trial with post hoc sex-specific analysis. • **Methodology**:Forty-eight overweight/obese adults (79% men, median BMI 29) were randomized 3:1 to petrelintide (2.4, 4.8, or 9.0 mg) or placebo for 16 weeks. Outcomes included body weight (BW), waist circumference (WC), and adverse events (AEs). • **Results:** Petrelintide reduced BW by 4.8–8.6% and WC by 5.0–7.6 cm versus 1.7% and 1.9 cm with placebo. Women consistently showed greater reductions across cohorts. GI AEs were infrequent, with only one discontinuation. • **Conclusions:** Petrelintide produced clinically meaningful weight and WC reductions with good tolerability. Women exhibited superior response, supporting further evaluation in phase 2 obesity trials.

Notable Presentations At EASD 2025
GLP-1, GIP, Amylin & Incretin-Based Therapies (3/7)

Date	Title	Author	Summary
16 Sep 2025	A phase 3 evaluation of cAMP-biased GLP-1 analogue ecnoglutide in adults with overweight or obesity	S. Xu	• **Introduction:** Ecnoglutide, a cAMP-biased long-acting GLP-1 analogue, is under development for obesity and type 2 diabetes, aiming to enhance efficacy and tolerability. • **Methodology**: A 48-week, double-blind, placebo-controlled phase 3 trial enrolled 664 adults with overweight/obesity across 36 Chinese sites, randomized to weekly ecnoglutide (1.2, 1.8, 2.4 mg) or placebo. Primary endpoints were bodyweight change and ≥5% reduction rate at week 40. • **Results:** Ecnoglutide reduced bodyweight by –9.9% to –15.4% vs –0.3% with placebo (P<0.0001). Up to 92.8% achieved ≥5% loss, 79.6% ≥10%, and 63.5% ≥15%. Benefits extended to lipid and liver fat reduction. Adverse events, mainly mild GI effects, were transient; discontinuation was rare. • **Conclusions:** Weekly ecnoglutide induced robust, sustained weight loss with cardiometabolic improvements and acceptable safety, establishing it as a strong therapeutic candidate for obesity.
16 Sep 2025	Efficacy and safety of bofanglutide (GZR18), a bi-weekly GLP-1 RA, compared to semaglutide in Chinese patients with type 2 diabetes	M. Liu	• **Introduction:** Extended dosing intervals may improve GLP-1RA adherence in type 2 diabetes (T2D). Bofanglutide (GZR18), a novel bi-weekly agent, was compared with once-weekly semaglutide (SEMA) in Chinese patients. • **Methodology**: In a 24-week, phase 2b, randomized trial (n=272, HbA1c 7–11%), patients received GZR18 (12, 18, 24 mg Q2W; 24 mg QW) or SEMA 1 mg QW. Primary endpoint was HbA1c change; safety focused on TEAEs. • **Results:** HbA1c reduction was greater with GZR18 (–1.87% to –2.32%) vs SEMA (–1.6%), with significant benefit in 18 mg Q2W and 24 mg QW groups (P<0.001). Weight reduction favored GZR18. GI AEs were mild, with no severe hypoglycemia. • **Conclusions:** GZR18 bi-weekly dosing achieved superior glycemic and weight benefits versus semaglutide, supporting advancement into phase 3 development.

Notable Presentations At EASD 2025
GLP-1, GIP, Amylin & Incretin-Based Therapies (4/7)

Date	Title	Author	Summary
16 Sep 2025	HM101460, a potent and G protein-biased oral GLP-1R agonist with enhanced bioavailability, exhibits robust efficacy in animal models of type 2 diabetes and obesity	S. Kim	• **Introduction:** Injectable GLP-1RAs are highly effective in T2DM and obesity but limited by parenteral use. HM101460, a novel small-molecule, G protein-biased GLP-1RA, was developed to enable oral delivery with sustained efficacy. • **Methodology**: In vitro assays assessed GLP-1R cAMP activation, β-arrestin recruitment, off-target activity, stability, and CYP inhibition. Pharmacokinetics were evaluated in mice, while efficacy (ipGTT, weight loss) was tested in hGLP-1R knock-in obese mice. Safety was confirmed via hERG assays and rodent toxicology studies. • **Results:** HM101460 showed potent GLP-1R activity (EC_{50}=0.2 nM), strong G protein bias, high metabolic stability, excellent oral bioavailability, and no CYP or hERG liabilities. In obese mice, it improved glucose tolerance and induced marked weight loss without cardio-CNS toxicity. • **Conclusions:** HM101460 demonstrated potent, selective, orally bioavailable GLP-1R agonism with robust metabolic benefits and strong safety, supporting its advancement as a first-in-class oral GLP-1RA candidate.
16 Sep 2025	Amycretin, a novel, unimolecular glucagon-like peptide-1 and amylin receptor agonist: results of a phase 1b/2a clinical trial	K. Dahl	• **Introduction:** Amycretin, a dual GLP-1 and amylin agonist, was evaluated for safety, pharmacokinetics, and weight effects in adults with overweight or obesity. • **Methodology**: In a single-centre, double-blind trial (n=125), participants received single or multiple ascending doses of once-weekly subcutaneous amycretin (0.3–60 mg) or placebo for up to 36 weeks. Primary endpoint was safety; secondary endpoints included PK and weight change. • **Results:** Amycretin was well tolerated up to 60 mg, with mainly mild–moderate gastrointestinal TEAEs. PK showed dose proportionality. Significant, dose-dependent weight loss occurred: –24.3% (60 mg, 36 wks), –22.0% (20 mg, 36 wks), –16.2% (5 mg, 28 wks), –9.7% (1.25 mg, 20 wks) vs minimal placebo change. • **Conclusions:** Weekly subcutaneous amycretin showed favorable safety and robust, dose-dependent weight reduction, supporting its potential as a next-generation therapy for obesity.

Notable Presentations At EASD 2025
GLP-1, GIP, Amylin & Incretin-Based Therapies (5/7)

Date	Title	Author	Summary
16 Sep 2025	Efficacy and safety of HRS9531, a novel dual GLP-1/GIP receptor agonist in Chinese overweight or obese adults without diabetes	Q. Wen	• **Introduction:** HRS9531, a dual GLP-1/GIP receptor agonist, is under investigation for obesity management. This phase 2 trial assessed its efficacy and safety in Chinese adults with overweight or obesity but without diabetes. • **Methodology**: In a 36-week, randomized, double-blind, placebo-controlled study, 61 participants received once-weekly subcutaneous HRS9531 8.0 mg (n=49) or placebo (n=12). Primary endpoint was percent change in body weight; secondary endpoints included metabolic and cardiometabolic markers. • **Results:** HRS9531 achieved a −21.1% placebo-adjusted weight reduction (P<0.0001). ≥20% loss occurred in 59.2%, and ≥25% in 30.6%. Improvements were also seen in waist circumference, BMI, systolic BP, glucose, insulin, HbA1c, and triglycerides. Most adverse events were mild, gastrointestinal, and did not lead to discontinuation. • **Conclusions:** HRS9531 produced profound weight loss and cardiometabolic improvements with manageable GI-related side effects, supporting its promise as an effective therapy for obesity without diabetes.
17 Sep 2025	First report on the small-molecule, oral GLP-1 receptor agonist RGT-075 in obesity: a randomised, placebo-controlled phase 2a proof-of concept 12-week study	D. Lender	• **Introduction:** GLP-1 receptor agonists are effective for T2D and obesity, but oral options remain limited. RGT-075, a novel non-peptide oral GLP-1RA, is being developed for obesity treatment. • **Methodology**: In a 12-week, phase 2a randomized, double-blind trial (N=73), adults with obesity or overweight plus comorbidity (no T2D) received RGT-075 (125 mg QD, titrated) or placebo. Outcomes included weight change, blood pressure, and safety. • **Results:** RGT-075 achieved −5.4% weight loss vs −0.45% with placebo (p<0.0001), with significant placebo-adjusted reductions in systolic (−10.8 mmHg) and diastolic (−4.9 mmHg) BP. GI AEs (nausea 40%, vomiting 24%) were mild/moderate; discontinuation was low (4%). PK supported once-daily dosing. • **Conclusions:** RGT-075 induced meaningful weight and blood pressure reductions with acceptable tolerability, reinforcing its potential as a first-in-class small-molecule oral GLP-1RA.

Notable Presentations At EASD 2025
GLP-1, GIP, Amylin & Incretin-Based Therapies (6/7)

Date	Title	Author	Summary
17 Sep 2025	Eloralintide, a selective, long-acting amylin receptor agonist for obesity: phase 1 proof of concept	E. Pratt	• **Introduction:** Amylin receptor agonists enhance weight management, but calcitonin-related activity limits prior agents. Eloralintide (Elora; LY3841136) is a next-generation, long-acting, once-weekly amylin analogue engineered to minimize off-target effects. • **Methodology**: In a 12-week, phase 1, randomized, placebo-controlled trial, 100 overweight/obese adults (BMI 27–43) received weekly subcutaneous Elora across five ascending-dose cohorts. Endpoints included PK, PD, safety, tolerability, and weight change. • **Results:** Elora showed dose-proportional PK (half-life 13.9–15.8 days). Adverse events were mostly mild: appetite suppression (19%), headache (12%), fatigue (11%); GI events were infrequent. Weight loss ranged from –2.6% to –11.3% at week 12. • **Conclusions:** Elora was well tolerated, with minimal GI side effects and clinically meaningful weight reduction, supporting advancement into phase 2 efficacy studies.
18 Sep 2025	Incidence of non-arteritic ischaemic optic neuropathy across completed phase 2, 3 and 4 trials evaluating the glucagon-like peptide-1 receptor agonists liraglutide and semaglutide	T. Vilsbøll	• **Introduction:** Concerns have emerged regarding semaglutide and non-arteritic ischaemic optic neuropathy (NAION). This study pooled randomized trials of semaglutide and liraglutide to assess incidence versus placebo. • **Methodology**: Data from all completed phase 2–4 placebo-controlled trials (>93,000 participants; >203,000 person-years) were analyzed. Potential NAION events were identified via MedDRA/narrative searches and adjudicated independently by two masked ophthalmologists. • **Results:** Three confirmed NAION events occurred in GLP-1RA arms (all semaglutide) versus five in placebo (one semaglutide, four liraglutide). Incidence was ~8/100,000 person-years for GLP-1RAs and ~7/100,000 for placebo. All cases involved confounding risk factors, with no temporal clustering. • **Conclusions:** Across extensive trial data, semaglutide and liraglutide did not increase NAION incidence compared to placebo, suggesting no causal safety signal.

Notable Presentations At EASD 2025
GLP-1, GIP, Amylin & Incretin-Based Therapies (7/7)

Date	Title	Author	Summary
19 Sep 2025	Efficacy of a novel oral amylin analogue and the development of an oral GLP-1/amylin co-formulated tablet to produce high in vivo plasma exposures	J. Francis	• **Introduction:** GLP-1 and amylin analogs independently suppress appetite and glucagon, with combination therapy enhancing weight and glycemic benefits. VRB-103, a novel oral amylin analog, was evaluated alone and in co-formulation with GLP-1 analog VRB-101 and permeation enhancer T2026. • **Methodology**: In Sprague-Dawley rats, VRB-103 was administered subcutaneously alone or with VRB-101 to assess body weight (BW) effects. In cynomolgus monkeys, an oral co-formulated tablet (VRB-103+VRB-101+T2026) was dosed daily for 7 days, with PK sampling. • **Results:** VRB-103 dose-dependently reduced BW (–0.3% to –9%) versus +4.7% in controls. Combination with VRB-101 induced –7.4% BW loss, exceeding either agent alone. In monkeys, oral co-formulation achieved high exposures for both agents (AUC ~79,352–93,249 h*ng/ml). • **Conclusions:** VRB-103 and VRB-101 demonstrated synergistic weight reduction and robust oral bioavailability in preclinical models, supporting further development of this first-in-class oral GLP-1/amylin combination for obesity and T2D.

Notable Presentations At EASD 2025
Obesity & Weight Management (1/7)

Date	Title	Author	Summary
16 Sep 2025	Efficacy and safety of cagrilintide 2.4 mg in adults with overweight/obesity: data from REDEFINE 1	W.T. Garvey	• **Introduction:** This post hoc analysis investigated the efficacy and safety of cagrilintide (cagri) 2.4 mg as monotherapy. • **Methodology**: Adults with BMI ≥30 kg/m² or ≥27 kg/m² with comorbidity (no diabetes) were randomized to once-weekly cagri 2.4 mg or placebo for 68 weeks, alongside lifestyle intervention. Endpoints included percent weight change, categorical weight loss, and waist circumference (WC). • **Results:** Among 302 cagri and 705 placebo participants, mean weight loss was −11.5% vs −3.0% (ETD −8.4; p<0.0001). WC decreased −10.6 cm vs −4.0 cm (ETD −6.6; p<0.0001). More cagri patients achieved ≥5%, ≥10%, and ≥15% weight loss. GI AEs were most common (54% vs 40%), primarily mild/moderate, transient, and dose-escalation–related. • **Conclusions:** Weekly cagri 2.4 mg monotherapy achieved meaningful weight and WC reductions with manageable, mostly mild GI side effects, confirming its efficacy and safety in obesity management.
16 Sep 2025	Impact on food noise after initiating semaglutide treatment: results from a US survey (INFORM)	T. Arnaut	• **Introduction:** Food noise—intrusive food thoughts—hinders weight management and wellbeing. While semaglutide's weight-loss efficacy is established, its impact on food noise is less known. • **Methodology**: A May 2025 U.S. mobile survey of 550 semaglutide users assessed food noise and mental health using the Food Noise Questionnaire and wellbeing measures. • **Results:** Respondents (mean age 53; 86% female) reported reductions: constant food thoughts (–46%), uncontrollable thoughts (–37%), preoccupation (–48%), negative impact (–40%), and daily distraction (–32%). Improvements occurred in mental health (64%), confidence (76%), and habits (80%). Satisfaction was 83%. • **Conclusions:** Semaglutide reduces food noise and improves mental wellbeing, extending benefits beyond weight loss. Controlled studies are warranted.

Notable Presentations At EASD 2025
Obesity & Weight Management (2/7)

Date	Title	Author	Summary
16 Sep 2025	Efficacy and feasibility of intermittent versus time-restricted or continuous calorie restriction in managing obesity and type 2 diabetes	H. Zhang	• **Introduction:** Intermittent fasting (5:2 IER) shows promise for obesity and T2D management, but direct comparisons with time-restricted eating (TRE) and continuous energy restriction (CER) are scarce. • **Methodology**: In a 16-week randomized trial (n=90; 63 completers), patients with obesity and T2D were assigned to IER, TRE, or CER with matched caloric intake. Primary endpoint was HbA1c; secondary endpoints included weight, glucose, insulin sensitivity, lipids, safety, and adherence. • **Results:** HbA1c reductions (−1.56% IER, −1.44% TRE, −1.03% CER; P=0.23) and weight loss (−8.6, −8.2, −5.7 kg; P=0.39) were similar. IER yielded greater reductions in fasting glucose (−2.3 mmol/L) and triglycerides, with higher Matsuda index and adherence (85%). Adverse events, including mild hypoglycemia, were comparable. • **Conclusions:** All regimens improved glycemia and weight, but IER conferred superior metabolic benefits and adherence, supporting its value in T2D management.
16 Sep 2025	Left atrial dysfunction in class III obesity: a pilot study using two-dimensional speckle tracking echocardiography	M. Pec	• **Introduction:** Obesity contributes to heart failure with preserved ejection fraction (HFpEF) through hemodynamic stress, inflammation, and atrial dysfunction. Two-dimensional speckle tracking (2D ST) enables detailed assessment of left atrial mechanics. • **Methodology**: A prospective pilot study compared 20 class III obese patients (BMI >40) with 19 healthy controls (BMI 20–25). Echocardiographic evaluation assessed reservoir left atrial strain (R-LAS), conduit time (CT), and contractile displacement (CD). • **Results:** Obese patients (mean BMI 47.7) showed significantly reduced R-LAS (29.9 vs 45.0, p<0.001) and CT (−16.8 vs −29.7, p<0.001) compared to controls. CD values did not differ significantly (−13.2 vs −15.1, p=0.305). • **Conclusions:** Severe obesity is associated with impaired reservoir and conduit left atrial function, highlighting early atrial dysfunction as a pathophysiological feature in obesity-related HFpEF risk.

Notable Presentations At EASD 2025
Obesity & Weight Management (3/7)

Date	Title	Author	Summary
17 Sep 2025	Once-monthly zovaglutide (ZT002) for the treatment of overweight or obesity in adults: a phase 2 study	L. Ji	• **Introduction:** This phase 2 trial evaluated its efficacy, safety, and pharmacokinetics in overweight/obese adults. • **Methodology**: In a 24-week, randomized, double-blind, placebo-controlled study, 303 Chinese adults (mean BMI 34.4) received zovaglutide 80 or 160 mg once monthly (Q4W) or biweekly (Q2W), or placebo. Primary endpoint: weight change; secondary endpoints: waist circumference and cardiometabolic markers. • **Results:** All zovaglutide groups achieved significantly greater weight loss vs placebo, with no plateau. Weight reduction with 160 mg Q4W was comparable to 80 mg Q2W. Waist circumference and cardiometabolic risk factors improved. GI AEs (nausea, vomiting, diarrhea, appetite loss) were mostly mild, transient, and dose-escalation–related. • **Conclusions:** Monthly zovaglutide produced meaningful, sustained weight loss with favorable safety, supporting its development as a long-interval injectable option for obesity management.
17 Sep 2025	Lactate-ketone ester ingestion improves insulin sensitivity in individuals with obesity: a double-blind, randomised, controlled crossover trial	S.K. Kjær	• **Introduction:** Lactate and ketone bodies serve as mitochondrial fuels and signaling molecules influencing glucose and lipid metabolism. A novel oral lactate–ketone ester (LaKe) was investigated for metabolic effects in obesity. • **Methodology**: In a double-blind, randomized, crossover study, 10 obese adults received 28-day LaKe (2×25 mL/day) and placebo regimens separated by 28-day washout. Endpoints included plasma lactate/β-hydroxybutyrate (BHB) and insulin sensitivity via hyperinsulinemic euglycemic clamp. • **Results:** LaKe increased lactate (2.15 mM) and BHB (0.6 mM) peaks. Insulin sensitivity improved (M-value 4.57 vs 3.58 mg/kg/min, P=0.02), with significant GIR interaction (P<0.001). Fasting glucose trended lower (P=0.07), with no weight change. • **Conclusions:** Short-term LaKe improved insulin sensitivity in obesity, supporting potential metabolic benefits and therapeutic relevance in T2D. Further long-term studies are needed.

Notable Presentations At EASD 2025
Obesity & Weight Management (4/7)

Date	Title	Author	Summary
17 Sep 2025	Phase 2 clinical trials of NA-931 to study subjects who are obese with at least one weight-related comorbid condition	L.L. Tran	• **Introduction:** NA-931 is a first-in-class oral small molecule quadruple receptor agonist (IGF-1, GLP-1, GIP, glucagon) under development for obesity, designed to achieve robust weight loss with convenient daily dosing. • **Methodology**: In a 13-week, phase 2, randomized, double-blind, placebo-controlled trial (n=125; BMI ≥30 or ≥27 with comorbidity), participants received daily NA-931 or placebo. Primary endpoint was percent weight change; secondary endpoints included categorical weight loss and safety. • **Results:** NA-931 induced dose-dependent weight reduction, with up to –14.8% at 150 mg (–13.2% vs placebo). Seventy-two percent achieved ≥12% loss versus 2% with placebo. Safety profile was favorable: mild GI events predominated, diarrhea occurred in 8.1% vs 3.2% placebo, and no muscle loss was detected. • **Conclusions:** NA-931 demonstrated substantial, rapid weight loss with good tolerability, supporting advancement to phase 3 trials as a novel oral therapy for obesity.
17 Sep 2025	Association between Alzheimer's disease and obesity: clinical trials of NA-831 for AD and clinical trials of NA-931 for obesity	L.L. Tran	• **Introduction:** Alzheimer's disease (AD), diabetes, and obesity may share overlapping pathways involving neurodegeneration, metabolism, and energy regulation. Two investigational oral drugs, NA-831 and NA-931, were studied for AD and obesity respectively, providing insights into this interplay. • **Methodology**:NA-831: Phase 2, randomized, double-blind trial in mild cognitive impairment/AD patients, assessing cognition and safety. NA-931: Phase 2, randomized, double-blind, placebo-controlled trial in obese/overweight adults, evaluating weight reduction and tolerability. • **Results:** NA-831 improved cognition (ADAS-Cog-13 change: +4.1, p=0.001; 78% improved by CIBIC-Plus) and induced notable weight loss (–13.7% in diabetics). NA-931 reduced body weight by up to –14.8% at 150 mg, with 72% achieving ≥12% weight loss vs 2% placebo. Both drugs showed favorable safety. • **Conclusions:** Findings suggest metabolic-cognitive overlap, with NA-831 benefiting cognition and weight, and NA-931 driving potent weight loss. Further mechanistic studies are needed to clarify causal links between AD, diabetes, and obesity.

Notable Presentations At EASD 2025
Obesity & Weight Management (5/7)

Date	Title	Author	Summary
18 Sep 2025	Effect of semaglutide 7.2 mg on anthropometric measures of obesity: the STEP UP trial	S. Wharton	• **Introduction:** This STEP UP analysis evaluated semaglutide (sema) 7.2 mg vs 2.4 mg and placebo in adults with obesity. • **Methodology**: In a 72-week, phase 3b, double-blind trial, participants (n=1407) were randomized 5:1:1 to sema 7.2 mg, sema 2.4 mg, or placebo with lifestyle intervention. Secondary endpoints included BMI thresholds, WC reduction, and WHtR <0.50 achievement. • **Results:** Sema 7.2 mg achieved superior BMI threshold attainment vs sema 2.4 mg (BMI <25, <27; p<0.05) and placebo (p≤0.0001). WC reduction was greater with sema 7.2 mg (−17.5 cm) vs 2.4 mg (−14.6 cm) and placebo (−5.9 cm). WHtR <0.50 was reached by 14.6% on sema 7.2 mg vs 6.5% (2.4 mg) and 1.1% (placebo). • **Conclusions:** Sema 7.2 mg provided greater improvements in BMI, WC, and WHtR compared with sema 2.4 mg and placebo, highlighting enhanced anthropometric benefits.
18 Sep 2025	Control of eating with semaglutide 7.2 mg in adults with obesity: the STEP UP trial	S. Wharton	• **Introduction:** This STEP UP phase 3b analysis assessed semaglutide (sema) 7.2 mg effects on eating control and disordered patterns. • **Methodology**: Adults with obesity (BMI ≥30, no T2D) were randomized (5:1:1) to weekly sema 7.2 mg, 2.4 mg, or placebo with lifestyle intervention for 72 weeks. Exploratory endpoints included Control of Eating Questionnaire (CoEQ) and Three-Factor-Eating Questionnaire (TFEQ-R18v2). • **Results:** Weight loss was greater with sema 7.2 mg (−18.7%) vs 2.4 mg (−15.6%) and placebo (−3.9%). Sema 7.2 mg improved CoEQ craving control vs placebo at week 72 (p<0.05) and reduced cravings for starchy, salty, and spicy foods. TFEQ-R18v2 showed significant improvements in emotional eating (−6.6, p<0.001) and uncontrolled eating (−6.3, p<0.001) vs placebo; vs sema 2.4 mg, only uncontrolled eating was significantly reduced. • **Conclusions:** Beyond weight reduction, sema 7.2 mg improved long-term eating control, reducing cravings, emotional eating, and uncontrolled eating, highlighting benefits for behavioral aspects of obesity.

Notable Presentations At EASD 2025
Obesity & Weight Management (6/7)

Date	Title	Author	Summary
18 Sep 2025	Effect of semaglutide on body composition and proximal muscle strength: the STEP UP trial	J. Hjelmesæth	• **Introduction:** Semaglutide (sema) induces significant weight loss in obesity, but its effects on body composition and muscle strength require evaluation. • **Methodology**: In this 72-week phase 3b RCT, adults with obesity (BMI ≥30, no T2D) were randomized to sema 7.2 mg, 2.4 mg, or placebo. A subpopulation (n=55) underwent MRI to quantify adipose tissue (AT), visceral AT (VAT), and lean tissue (LT). Sit-to-stand testing assessed muscle strength. • **Results:** Sema led to greater weight loss vs placebo (−16.5%, p=0.0009), with substantial reductions in AT (−11.1 L, p<0.001) and VAT (−1.5 L, p=0.042). LT declined modestly (−1.7 L, NS), accounting for only 15.5% of lost mass. AT:LT ratio improved from 1.80 to 1.35. Sit-to-stand performance was preserved. • **Conclusions:** Sema-driven weight loss was primarily from adipose tissue, with modest lean tissue loss and maintained muscle strength, confirming favorable body composition outcomes.
18 Sep 2025	Reprogramming obesity: preclinical development and phase 1 study design of RES-010, a novel miRNA-targeting therapy	A. Nitsche	• **Introduction:** Obesity is multifactorial with few durable treatments. RES-010, a first-in-class antisense oligonucleotide targeting miR-22, reprograms metabolic regulation via lipid metabolism, mitochondrial function, and adipose remodeling. • **Methodology**: Preclinical studies tested RES-010 in obese mice, NHPs on a fast-food diet, and 3D human adipose models. Combination with GLP-1RA, pharmacokinetics, biodistribution, and safety were assessed. A phase 1, double-blind, dose-escalation trial in overweight/obese adults began November 2024. • **Results:** In mice, RES-010 caused sustained weight loss, persisting post-treatment. With GLP-1RA, it potentiated weight reduction, enabling lower semaglutide dosing. In NHPs, RES-010 reduced weight under obesogenic diet. Preclinical safety was favorable. Phase 1 is ongoing with data expected 2026. • **Conclusions:** RES-010 shows durable gene-level metabolic effects, enhances GLP-1RA efficacy, and holds promise as a novel obesity therapy. Phase 1 outcomes will guide next steps.

Notable Presentations At EASD 2025
Obesity & Weight Management (7/7)

Date	Title	Author	Summary
18 Sep 2025	Safety and efficacy of semaglutide, 2.4mg, once weekly vs placebo in patients with weight regain following metabolic/bariatric surgery: the BARI-STEP randomised clinical trial	R. Mallik	• **Introduction:** Weight regain or poor loss after bariatric surgery is common. Low GLP-1 predicts poor outcomes, and RCT data for semaglutide 2.4 mg are limited. • **Methodology**: BARI-STEP, a double-blind RCT, enrolled 70 adults ≥1 year post-surgery with ≤20% loss or regain. Participants received semaglutide 2.4 mg or placebo plus lifestyle intervention for 68 weeks. • **Results:** Mean weight loss was 17.9% with semaglutide vs –0.4% with placebo (difference –18.3%, p<0.00001). Adverse events were mainly mild gastrointestinal; no treatment-related deaths occurred. • **Conclusions:** Semaglutide 2.4 mg achieved significant, sustained weight loss after bariatric surgery, supporting its role as an effective adjunct therapy.
18 Sep 2025	Efficacy of the novel UCN2 analogue HM17321 in weight loss without muscle wasting in obese non-human primates and its applications with incretins in obese mice	J. Kim	• **Introduction:** This study assessed efficacy in obese monkeys and explored combinational strategies with incretins in rodents. • **Methodology**: Obese monkeys (BMI 49.3) received weekly HM17321 or vehicle for 12 weeks; DEXA measured fat/lean mass. In DIO mice, HM17321 was tested alone or with incretins via add-on, switch, or withdrawal regimens. • **Results:** HM17321 reduced monkey body weight >14% and fat mass >30% while preserving lean mass. In mice, combination therapy enhanced fat loss (–50.5% to –82.2%) versus monotherapy, with lean mass preserved or increased. Adding HM17321 post-incretin plateau further improved outcomes, while switching boosted lean mass by 11–13 points. • **Conclusions:** HM17321 induced fat-selective weight loss without lean reduction in primates and amplified incretin effects in rodents. It shows promise as monotherapy and in regimens enhancing weight-loss quality.

Notable Presentations At EASD 2025
Type 1 Diabetes & Technologies (1/6)

Date	Title	Author	Summary
16 Sep 2025	Higher daily insulin requirements as an indicator of cardiovascular risk in adults with type 1 diabetes: results from the DPV initiative	J. Seufert	• **Introduction:** This study assessed daily insulin requirement as a surrogate of insulin resistance and its relation to cardiovascular outcomes. • **Methodology**: Data from 16,731 patients (30–80 years) in a multicenter registry were analyzed. Insulin requirements (quartiles, kg-adjusted, pump-adjusted) were related to myocardial infarction, coronary artery disease, heart failure, and stroke, using logistic regression adjusted for demographics and traditional risk factors. • **Results:** Mean age was 52.8 years, diabetes duration 21.1 years, 55.3% male. Prevalence: MI 5.6%, CAD 11.6%, HF 1.7%, stroke 3.9%. Higher insulin requirements significantly associated with MI ($p<0.05$) and CAD ($p<0.01$). • **Conclusions:** Elevated insulin requirement is independently linked to cardiovascular disease in type 1 diabetes, warranting its inclusion as a macrovascular risk factor.
16 Sep 2025	Proactive specialist diabetes care for people with type 1 diabetes admitted to hospital improves treatment satisfaction: STOIC-type 1 diabetes randomised controlled trial	M. Kyi	• **Introduction:** This trial evaluated whether proactive specialist inpatient diabetes care improves satisfaction compared with usual care. • **Methodology**: In the STOIC-T1D RCT (Melbourne, 2022–2024), 190 adults with type 1 diabetes admitted under non-endocrinology teams were randomised to proactive bedside consultation within one day vs. usual referral-based care. Primary outcome was inpatient satisfaction (DTSQ-IP score); secondary outcomes included glycaemic stability. • **Results:** Of 133 completing DTSQ-IP, proactive care led to higher satisfaction (mean 4.5 vs 4.0, $p=0.02$) and earlier specialist input (median 1 vs 2 days, $p=0.01$). Glycaemic extremes were reduced (hyperglycaemia 11% vs 15%, $p=0.016$; hypo-/hyper-excursions 16% vs 21%, $p=0.03$). • **Conclusions:** Proactive inpatient diabetes team care significantly improved patient satisfaction and reduced glycaemic extremes in hospitalised adults with type 1 diabetes.

Notable Presentations At EASD 2025
Type 1 Diabetes & Technologies (2/6)

Date	Title	Author	Summary
16 Sep 2025	A breakthrough in hypoglycaemia management: demonstrating the efficacy and acceptability of FLO23011, a novel ketone glucose combination product in type 1 diabetes	D. Russell-Jones	• **Introduction:** Standard glucose gels correct glucose quickly but often cause fluctuations, incomplete recovery, and fatigue. FLO23011 combines glucose with ketones, lactate, and pyruvate to address these gaps. • **Methodology**: Two studies: (A) pharmacokinetics in six healthy adults comparing FLO23011 (single/double dose) vs glucose gel; (B) 12-week crossover in 12 adults with type 1 diabetes assessing recovery, effectiveness, and user experience. • **Results:** FLO23011 showed similar glucose peaks to gel but more stable levels and sustained alternative substrates. In diabetes, FLO23011 was rated superior for reversing hypoglycaemia, reducing fatigue, avoiding rebound, and aiding daily function. Taste and usability scored higher; CGM trends showed more time in range. • **Conclusions:** FLO23011 provided stable recovery, better outcomes, and user preference vs glucose gel. As the first novel hypoglycaemia treatment in 100 years, it shows transformative potential.
16 Sep 2025	Efficacy and safety of the Omnipod 5 system compared with MDI in adults with type 1 diabetes in the RADIANT study	B. Guerci	• **Introduction:** Many adults with type 1 diabetes (T1D) still use multiple daily injections (MDI), with suboptimal control. This trial compared Omnipod® 5 Automated Insulin Delivery (AID) with MDI+CGM. • **Methodology**: Adults (18–70 yrs, T1D ≥1 yr, HbA1c 7.5–11%) on MDI and FreeStyle Libre 2 CGM ≥3 months were enrolled at 8 European sites. After baseline collection, participants were randomized 2:1 to Omnipod 5 + CGM or continued MDI+CGM for 13 weeks. Primary endpoint: HbA1c change. • **Results:** Seventy-nine participants (52 intervention, 27 control). At 13 weeks, AID lowered HbA1c by −0.8% vs control ($p<0.0001$). Time-in-range improved 23.4% ($p<0.0001$). Hypoglycemia rates were low and similar. No severe hypoglycemia or ketoacidosis occurred. BMI and insulin dose changes were not different. • **Conclusions:** Omnipod 5 improved HbA1c and time-in-range vs MDI+CGM, with good safety, supporting direct transition from MDI to AID.

Notable Presentations At EASD 2025
Type 1 Diabetes & Technologies (3/6)

Date	Title	Author	Summary
17 Sep 2025	Tirzepatide reduces weight and insulin dose and improves body composition in type 1 diabetes: a 12-week, randomised, double-blind, placebo-controlled trial (TIRTLE1)	J.R. Snaith	• **Introduction:** Overweight/obesity is common in type 1 diabetes (T1D), raising CV risk. Tirzepatide (TZP), a dual GIP/GLP-1 receptor agonist, has not been studied in T1D. • **Methodology**: Adults with T1D (>2 yrs, BMI >30) were randomized 1:1 to weekly TZP (up-titrated to 5.0 mg or maximum tolerated dose) or placebo for 12 weeks. Primary endpoint: body weight change; secondary: insulin dose, HbA1c, diet, body composition. • **Results:** Twenty-four adults were enrolled; 22 completed. TZP significantly reduced body weight (−8.7 kg, −8.8% vs placebo, p<0.0001), with 82% from fat mass (−7.2 kg, p=0.0002). Fat-free mass decline was modest (−1.8 kg, p=0.06). HbA1c fell (−0.35%, p=0.05), and insulin dose dropped sharply (−35.1%, p=0.0002), especially in pump users (−42% at 6 weeks). Energy intake declined (−429 kcal/d, p=0.05). No severe hypoglycemia or DKA occurred. • **Conclusions:** TZP induced significant fat mass reduction, modest HbA1c benefit, and marked insulin sparing in T1D. Larger phase 3 studies are needed.
17 Sep 2025	Continuous glucose monitoring metrics and pregnancy outcomes in type 1 diabetes: a secondary analysis of the CRISTAL trial	K. Benhalima	• **Introduction:** The study evaluated associations between continuous glucose monitoring (CGM) metrics and pregnancy outcomes in women with type 1 diabetes (T1D). • **Methodology**: Secondary analysis of the CRISTAL RCT (MiniMed™ 780G vs standard therapy; 95 women with T1D). Logistic regression and Spearman correlations, adjusted for HbA1c, assessed binary and continuous outcomes. • **Results:** Each 5% increase in pregnancy-specific TIR (TIRp) lowered odds of gestational hypertension (0.63), birthweight >4.5 kg (0.56), and neonatal hypoglycemia requiring care (0.09). Overnight TIRp showed additional protective effects. Conversely, each 5% increase in TARp raised risks of high birthweight, respiratory distress, and neonatal hypoglycemia. Higher mean glucose and variability independently increased adverse outcomes. • **Conclusions:** TIRp, TARp, overnight TIRp, mean glucose, and variability are strong predictors of maternal and neonatal outcomes in T1D pregnancies.

Notable Presentations At EASD 2025
Type 1 Diabetes & Technologies (4/6)

Date	Title	Author	Summary
18 Sep 2025	Rapid vs ultra-rapid insulin use in the CLOSE IT trial: a fully closed loop study in type 1 diabetes	N. Nanayakkara	• **Introduction:** Fully closed-loop (FCL) insulin delivery may reduce user burden versus hybrid systems. This extension of the CLOSE IT trial compared rapid and ultra-rapid insulin in an FCL system using oref1. • **Methodology**: Twenty adults with T1D used FCL with rapid insulin for 12 weeks, then switched to ultra-rapid for 4 weeks. Outcomes included time-in-range (TIR, 70–180 mg/dL), mean glucose, variability, time in tight range (TITR), time below (TBR) and above range (TAR). • **Results:** TIR increased from 65% to 68% (mean +3.0%, p=0.053). TITR rose modestly (+3.6%, p=0.067). Mean glucose, TAR, TBR, coefficient of variation, and glucose management indicator showed no significant differences. No severe hypoglycemia or DKA occurred. • **Conclusions:** Ultra-rapid insulin in FCL showed small, non-significant improvements in glycemic metrics versus rapid insulin, with similar safety. Larger trials are needed to confirm potential advantages.
18 Sep 2025	Inpatient use of automated insulin delivery during type 1 diabetes pregnancy including intrapartum and delivery: a secondary analysis from the AiDAPT trial	T.T.M. Lee	• **Introduction:** Labour and delivery admissions in women with type 1 diabetes (T1D) disrupt self-management. This AiDAPT secondary analysis assessed safety and glycaemic outcomes of CamAPS FX hybrid closed-loop (HCL) versus standard insulin therapy. • **Methodology**: In AiDAPT, 124 pregnant women with T1D were randomised to HCL or standard therapy with CGM. Glycaemic outcomes during labour/delivery and immediate postpartum admissions were compared. • **Results:** Data from 111 women were analysed. During labour/delivery, HCL users had 72% time-in-range (3.5–7.8 mmol/L) vs 66% with standard care (difference 7%, 95% CI −3, 16%). Postpartum, HCL users spent 77% in range (3.9–10 mmol/L) vs 70% with standard care (difference 7%, 95% CI 0, 15%). Hypoglycaemia was rare, with no time <3.5 mmol/L in labour. • **Conclusions:** CamAPS FX HCL improved intrapartum and postpartum glucose control versus standard therapy, with low hypoglycaemia, supporting safe inpatient continuation.

Notable Presentations At EASD 2025
Type 1 Diabetes & Technologies (5/6)

Date	Title	Author	Summary
18 Sep 2025	Who benefits most from advanced hybrid closed loop therapy in pregnancy based on baseline characteristics? A secondary analysis of the CRISTAL trial	K. Benhalima	• **Introduction:** This secondary analysis explored subgroups most likely to benefit. • **Methodology**: CRISTAL was a multicenter RCT of 95 pregnant women with type 1 diabetes, randomized to AHCL or SoC. Outcomes included TIRp, overnight TIRp, and TBRp, stratified by baseline characteristics. • **Results:** AHCL users with HbA1c <7.0% (n=35) had significantly higher TIRp than SoC (n=37): +5.6% (95% CI 1.3–10.0), equating to +1h21min/day, and +11.9% higher overnight TIRp. In women without prior AHCL use, TIRp was +6.3% (95% CI 0.9–11.7) with AHCL and +11.9% higher overnight. Women without higher education (n=14) also had greater TIRp with AHCL (+7.3%, 95% CI 0.9–13.8). TBRp was lower in AHCL users with HbA1c <7.0% and without prior AHCL use. • **Conclusions:** AHCL improved glycemic outcomes in pregnant women with baseline HbA1c <7.0%, no prior AHCL use, and without higher education, suggesting these groups may particularly benefit.
18 Sep 2025	Time below range alone is insufficient to identify severe hypoglycaemia risk in type 1 diabetes: the critical role of hypoglycaemia awareness: results from the SFDT1 study	D. Canha	• **Introduction:** This study examined whether time below range (TBR70, TBR54) predicts SHE and how impaired awareness of hypoglycemia (IAH) modifies risk. • **Methodology**: Data from 848 SFDT1 participants using CGM were analyzed. IAH was assessed by Gold Score, and SHE reported at 12 months. Logistic regression adjusted for demographics, social vulnerability, insulin regimen, and TBR–IAH interactions; spline analyses explored non-linear patterns. • **Results:** SHE prevalence was 11.7%. TBR70 >6% alone did not increase SHE risk, but combined with IAH significantly raised odds (OR 3.32, 95% CI 1.40–7.82). Similarly, TBR54 ≥1% predicted SHE only in IAH (OR 2.99, 95% CI 1.46–5.92). Without IAH, SHE risk remained low across TBR values. • **Conclusions:** TBR alone does not stratify SHE risk. Coupling TBR with hypoglycemia awareness status better identifies high-risk patients, underscoring IAH's central role in predicting severe outcomes.

Notable Presentations At EASD 2025
Type 1 Diabetes & Technologies (6/6)

Date	Title	Author	Summary
18 Sep 2025	Relationship between time below range and weekly rates of hypoglycaemia in people with type 1 diabetes: results from the Hypo-METRICS study	G. Martine-Edith	• **Introduction:** Hypoglycemia exposure is often measured as total time below range (TBR), but episodic rates may better reflect patient experience. This analysis examined correlations between TBR and hypoglycemia episodes in type 1 diabetes (T1D) from the Hypo-METRICS study. • **Methodology**: Over 10 weeks, 259 adults with T1D wore blinded CGM and logged hypoglycemia episodes via smartphone. Sensor-detected (SDH3.9, SDH3.0) and person-reported hypoglycemia (PRH) were compared with TBR using Spearman's correlation. • **Results:** Median age was 48 years, diabetes duration 21 years, 75% used CGM. TBR strongly correlated with SDH rates (<3.9 mmol/L: r=0.97; <3.0 mmol/L: r=0.96, both p<0.001). Weekly SDH3.9 rates rose from 1.9 events (≤2% TBR) to 4.9 events (2–4% TBR). Correlation with PRH was weaker (r=0.45 for <3.9 mmol/L; r=0.39 for <3.0 mmol/L). • **Conclusions:** TBR closely reflects sensor-detected hypoglycemia event rates and can serve as a surrogate for estimating hypoglycemia burden in T1D.
18 Sep 2025	The effect of fenofibrate on the progression of diabetic retinopathy in participants with type 1 diabetes: results from the LENS trial	R. Humphrey	• **Introduction:** Evidence in type 1 diabetes (T1DM) remains limited; this analysis assessed secondary ocular outcomes by diabetes type. • **Methodology**: LENS, a randomized, placebo-controlled trial (n=1151; T1DM 305, T2DM 846; mean follow-up 4 years), applied Cox proportional-hazards models adjusted for baseline covariates to evaluate fenofibrate's effect on DR progression, referable maculopathy, and diabetic macular oedema. • **Results:** Fenofibrate reduced DR progression consistently across T1DM and T2DM, with no heterogeneity. In T1DM, DR progression occurred in 34% vs. 46% (HR 0.68, 95% CI 0.48–0.98), and referable maculopathy in 18% vs. 27% (HR 0.61, 95% CI 0.38–0.99). Few macular oedema events occurred. • **Conclusions:** Fenofibrate slows DR progression in both T1DM and T2DM with early disease, supporting its protective role across diabetes types. Ongoing trials will further define benefits in T1DM.

Notable Presentations At EASD 2025
Type 2 Diabetes – Pharmacological Interventions (1/5)

Date	Title	Author	Summary
16 Sep 2025	Impact of background insulin treatment on cardiorenal outcomes in patients with type 2 diabetes: a patient-level analysis of merged CANVAS and CREDENCE trials	M. Chiriacò	• **Introduction:** The cardiovascular (CV) and renal effects of insulin and metformin monotherapy in type 2 diabetes (T2D) remain uncertain, particularly their interaction with canagliflozin. This analysis assessed cardiorenal outcomes by background therapy. • **Methodology**: Data from CANVAS and CREDENCE (n=14,530; median follow-up 2.6 years) were pooled. Of these, 2,766 received insulin monotherapy and 2,127 metformin monotherapy. Outcomes included hHF/cvDeath, MACE, all-cause death, nfMI, and renal events. Cox regression with multivariable adjustments was applied. • **Results:** Insulin users had older age, longer diabetes duration, and worse glycemia. Adjusted models showed insulin independently increased hHF/cvDeath (HR 1.18) and MACE (HR 1.22). Metformin benefits observed in univariate analyses disappeared after adjustment. Canagliflozin reduced the excess risk linked to insulin. • **Conclusions:** In high CV-risk T2D, insulin—but not metformin—monotherapy confers higher risk of HF and MACE, suggesting a drug-specific effect. Canagliflozin mitigates insulin-associated CV risk.
16 Sep 2025	Efficacy and safety of a novel oral small molecule GLP-1RA (HRS-7535) in Chinese patients with type 2 diabetes inadequately controlled by metformin and SGLT2 inhibitor	L. Yan	• **Introduction:** This trial assessed its efficacy and safety in Chinese patients inadequately controlled on metformin and an SGLT2 inhibitor. • **Methodology**: In this randomized, double-blind, phase 2 study, 155 adults were assigned to HRS-7535 (30 mg, 60 mg) or placebo for 16 weeks following a lead-in period. The primary endpoint was HbA1c change; secondary endpoints included weight reduction and safety. • **Results:** Of 147 completers, baseline HbA1c averaged 8.5%. At week 16, HbA1c reduction was -1.5% (30 mg), -1.8% (60 mg), vs -0.4% (placebo, $p<0.0001$). In baseline HbA1c >8.5%, reductions were -1.6% and -2.6% vs -0.7%. HbA1c <7% was achieved in 51% (30 mg), 66% (60 mg) vs 9.8% (placebo). Weight decreased modestly (-1.6% to -2.4%). TEAEs (mainly nausea, vomiting, increased lipase, appetite loss) were mostly mild-moderate; no hepatotoxicity was observed. Hypoglycemia was rare and mild. • **Conclusions:** HRS-7535 significantly improved glycemic control with a tolerable safety profile, supporting its further development as an oral GLP-1RA in T2DM.

Notable Presentations At EASD 2025
Type 2 Diabetes – Pharmacological Interventions (2/5)

Date	Title	Author	Summary
16 Sep 2025	The efficacy and safety of iGlarLixi in insulin-naive adults with type 2 diabetes by baseline A1c and diabetes duration: posthoc analysis of Soli-CGM	A. Ratzki-Leewing	• **Introduction:** The Soli-CGM study evaluated the efficacy and safety of iGlarLixi (insulin glargine + lixisenatide) in adults with type 2 diabetes (T2D) and high baseline HbA1c. This post hoc analysis assessed outcomes by baseline HbA1c and diabetes duration. • **Methodology**: In this 16-week, single-arm, open-label trial, 124 adults with T2D on ≥2 oral antihyperglycemic drugs ± GLP-1RA were enrolled. Subgroups were analyzed by HbA1c (<9%, ≥9–<10%, ≥10%) and diabetes duration (<10, ≥10 years). Outcomes included changes in time in range (TIR, 70–180 mg/dL), time below range (TBR), time above range (TAR), proportion achieving TIR >70%, and hypoglycemia events. • **Results:** Mean age was 55.6 years, 58.9% male. iGlarLixi significantly improved TIR across all subgroups ($p<0.05$), except HbA1c <9% (likely due to small sample size, n=17). No ADA Level 3 hypoglycemia occurred; Level 1 and 2 events varied by subgroup. • **Conclusions:** iGlarLixi improved TIR without severe hypoglycemia, independent of baseline HbA1c or diabetes duration.
16 Sep 2025	Impact of time of injection on the efficacy and safety of iGlarLixi vs IDegAsp in Chinese people with type 2 diabetes: exploratory analysis of the Soli-D study	X. Li	• **Introduction:** The Soli-D trial showed iGlarLixi (insulin glargine + lixisenatide) provided superior glycemic and body weight (BW) benefits vs IDegAsp in Chinese adults with T2D. This analysis examined whether injection timing influenced outcomes. • **Methodology**: Outcomes were analyzed by injection timing: iGlarLixi before breakfast (n=291) vs IDegAsp before breakfast (BB; n=139), lunch (BL; n=54), or dinner (BD; n=98). Endpoints included HbA1c, BW, insulin dose, postprandial glucose (PPG), and hypoglycemia rates over 24 weeks. • **Results:** HbA1c reductions were greater with iGlarLixi (−1.88%) vs IDegAsp BL (−1.64%) and BD (−1.59%), and numerically better vs BB (−1.76%). More iGlarLixi users achieved HbA1c <7% (72.5% vs 58–61%). iGlarLixi yielded greater 2-h PPG reductions, BW benefits, and lower insulin doses. Hypoglycemia rates were numerically lower with iGlarLixi across all subgroups. • **Conclusions:** Breakfast-administered iGlarLixi provided superior HbA1c, PPG, BW, and insulin outcomes vs IDegAsp at all timings, with reduced hypoglycemia risk

Notable Presentations At EASD 2025
Type 2 Diabetes – Pharmacological Interventions (3/5)

Date	Title	Author	Summary
16 Sep 2025	Mifepristone, a glucocorticoid receptor antagonist, reduced HbA1c and body weight in difficult-to-control type 2 diabetes with hypercortisolism: the CATALYST prevalence and treatment trial	R.A. DeFronzo	• **Introduction:** Many people with type 2 diabetes (T2D) remain uncontrolled despite therapy. CATALYST Part 1 showed hypercortisolism in 24% of such cases. Part 2 tested mifepristone, a glucocorticoid receptor antagonist. • **Methodology**: In this phase 4, double-blind study, adults with T2D (HbA1c 7.5–11.5%) and hypercortisolism (cortisol >1.8 µg/dL on dexamethasone suppression test) were randomized 2:1 to mifepristone (300–900 mg daily, n=91) or placebo (n=45) for 24 weeks. Outcomes included HbA1c, medication use, weight, waist circumference, and safety. • **Results:** Baseline HbA1c was 8.6% (mifepristone) and 8.4% (placebo). Mifepristone reduced HbA1c (−1.47%) vs placebo (difference −1.32%; p<0.0001), despite reduced medication use. Weight (−5.1 kg) and waist (−5.1 cm) also improved (p<0.01). Common adverse events included hypokalemia (30%; serious 5.5%), fatigue, nausea, and edema. No adrenal insufficiency occurred. • **Conclusions:** In uncontrolled T2D with hypercortisolism, mifepristone improved HbA1c, weight, and waist circumference. Findings support addressing hypercortisolism in this population.
16 Sep 2025	Symphony 2: a randomised, placebo-controlled phase 3 study of berberine ursodeoxycholate in patients with type 2 diabetes inadequately controlled with metformin	L. Ji	• **Introduction:** HTD1801, a gut–liver metabolic modulator activating AMPK and inhibiting NLRP3, was tested for efficacy and safety in T2D patients inadequately controlled on metformin. • **Methodology**: This phase 3, double-blind study randomized 365 patients to HTD1801 1000 mg BID and 184 to placebo across 64 Chinese sites. Key criteria included HbA1c 7.0–10.5%, FPG ≤13.9 mmol/L, and stable metformin ≥1500 mg. The primary endpoint was HbA1c change at week 24. • **Results:** At 24 weeks, HbA1c decreased −1.21% with HTD1801 vs −0.68% with placebo (difference −0.53%, p<0.0001). HbA1c <7% was achieved in 33% vs 11% (p<0.0001). HTD1801 also improved postprandial glucose, FPG, lipids, and inflammation. Adverse events (75% vs 68%) were mostly mild; serious events 4% vs 6%. Hypoglycemia occurred in 5.8% vs 2.0%, all mild/moderate. • **Conclusions:** HTD1801 was well tolerated and improved glycemic control, weight, and cardiometabolic parameters in T2D patients on metformin, supporting its potential as a novel therapy.

Notable Presentations At EASD 2025
Type 2 Diabetes – Pharmacological Interventions (4/5)

Date	Title	Author	Summary
17 Sep 2025	Efficacy and safety of enavogliflozin as add-on in adults with type 2 diabetes inadequately controlled with insulin or insulin with other antidiabetic drugs	J. Hong	• **Introduction:** Glycemic control in long-standing type 2 diabetes (T2D) is difficult due to β-cell decline. As SGLT-2 inhibitors act independently of insulin, a phase 3 trial tested enavogliflozin as an add-on in insulin-treated T2D. • **Methodology**: In this 24-week, randomized, double-blind trial, adults with T2D on basal/premixed insulin ± up to 2 OADs received enavogliflozin 0.3 mg/day or placebo. Endpoints included HbA1c (primary), fasting plasma glucose (FPG), body weight, insulin dose (TDDI), HOMA-B, HOMA-IR, urine albumin-creatinine ratio (UACR), and urine glucose-creatinine ratio (UGCR). • **Results:** 240 participants were randomized (mean HbA1c 8.6%). At 24 weeks, placebo-adjusted HbA1c change was −0.92% ($p<0.001$). Enavogliflozin also lowered FPG (−32.4 mg/dL), body weight (−1.3 kg), and TDDI (−1.3 U), all significant. UGCR increased, confirming mechanism, and HOMA-B improved. No significant changes in HOMA-IR or UACR. Adverse events were similar (50% vs 56.7%), with hypoglycemia in 29.2% vs 22.5% and genitourinary infections in 3.3% vs 2.5%. • **Conclusions:** Enavogliflozin significantly improved glycemic control, reduced insulin needs, and was safe, supporting its use as an add-on therapy in insulin-treated T2D.
17 Sep 2025	Efficacy and safety of imeglimin in metformin-intolerant patients with type 2 diabetes: a retrospective real-world study	x	• **Introduction:** Imeglimin, a novel oral agent, may be a safer alternative. This study assessed its real-world glycemic and metabolic effects. • **Methodology**:A retrospective study of T2DM patients switched from metformin (500–1500 mg/day) to imeglimin (500–2000 mg/day) due to intolerance/contraindications. Data from May 2023–Jan 2025 were analyzed. Glycemic, lipid, renal, and BP parameters were recorded at baseline and follow-up. • **Results:** 53 patients (mean age 54 yrs, BMI 27.7 kg/m²) were included. Weight and BMI decreased modestly (−2.66% and −0.46%), not significant. HbA1c fell significantly (8.33%→8.12%, P=0.011, −0.21%). FBG (−12.8%) and PPG (−14.0%) showed numerical but nonsignificant reductions. No changes were observed in renal or lipid measures. • **Conclusions:** Imeglimin significantly improved HbA1c in metformin-intolerant/contraindicated T2DM patients, with stable renal and lipid safety. It represents a viable alternative for glycemic management.

Notable Presentations At EASD 2025
Type 2 Diabetes – Pharmacological Interventions (5/5)

Date	Title	Author	Summary
17 Sep 2025	Most individuals with type 2 diabetes on intensified insulin therapy do not require daytime basal insulin: results from a fasting glucose assessment in 531 patients	B. Mertes	• **Introduction:** In T2D, intensified insulin therapy (IIT) may be needed, but the requirement for daytime basal insulin remains unclear. This study assessed its necessity during metabolic decompensation. • **Methodology**: 531 T2D patients (mean age 59 yrs, HbA1c 10.5%) underwent a structured education program with IIT. Daytime basal insulin was withdrawn. A standardized meal omission test with CGM measured glucose change between 8:00–14:00; ≥2 mmol/L rise was considered clinically relevant. • **Results:** Only 6.6% showed significant glucose increases (7.7→11.8 mmol/L, p<0.001), while 93.4% had stable or reduced levels (8.5→7.4 mmol/L, p<0.001). No moderate/severe hypoglycemia occurred. • **Conclusions:** Most T2D patients on IIT maintain stable glucose without daytime basal insulin. Routine use is unnecessary and may add hypoglycemia risk, highlighting the need for individualized therapy.
17 Sep 2025	Efficacy and durability of early quadruple with lobeglitazone and empagliflozin to uncontrolled type 2 diabetes under metformin and DPP4 inhibitors: 112-week interim results of a 224-week RCT	S. Kim	• **Introduction:** Early intensive therapy may benefit T2D patients with inadequate control on oral agents. This study compared early quadruple combination therapy (EQC: SGLT2-i + TZD + metformin + DPP4-i) with stepwise escalation (SE). • **Methodology**: In this randomized, open-label study, 158 patients inadequately controlled on metformin+DPP4-i (HbA1c 7.0–8.5%) were randomized to EQC or SE. In SE, lobeglitazone or empagliflozin was initiated, with the other added if HbA1c >7.0%. Primary endpoint: HbA1c change at week 112. • **Results:** At week 112, HbA1c decreased more with EQC than SE (−1.10% vs −0.92%, P=0.031). HOMA-IR improved more with EQC (7.06→1.88 vs 4.69→2.19, P=0.020). Body weight remained stable in EQC but decreased in SE with empagliflozin (−2.8 kg, P<0.001). Hepatic steatosis and fibrosis improved similarly across groups. No hypoglycemia or major safety concerns reported. • **Conclusions:** EQC achieved superior glycemic control and greater insulin resistance improvement versus stepwise therapy, with good safety and tolerability.

Notable Presentations At EASD 2025
Gestational & Postpartum Diabetes (1/3)

Date	Title	Author	Summary
16 Sep 2025	Treatment of gestational diabetes in women with discordant OGTT results using the 2013 and 1999 WHO criteria: the TANGO-DM randomised controlled trial	R.C. Painter	• **Introduction:** The adoption of WHO 2013 criteria for gestational diabetes mellitus (GDM) versus WHO 1999 remains debated; impact on pregnancy outcomes is unclear. • **Methodology**: Open-label, multicenter RCT (21 Dutch hospitals, 2018–2024) randomized 1,032 women (singleton pregnancy, 16–32 weeks, OGTT discordant between WHO 2013/1999) to GDM treatment vs routine care. Primary endpoint: large-for-gestational-age (LGA) neonates. • **Results:** LGA rates were similar (18.3% vs 17.4%; RR 1.05, P=0.70). GDM treatment increased pharmacotherapy (RR 3.35), neonatal hypoglycemia (RR 1.47), and admissions (RR 1.19). • **Conclusions:** Broader GDM diagnostic criteria did not reduce LGA risk but raised interventions and healthcare utilization.
16 Sep 2025	Glycaemic control and pregnancy outcomes with real-time continous glucose monitoring in gestational diabetes (GRACE): an open-label, international, randomised controlled trial	T. Linder	• **Introduction:** Gestational diabetes (GDM) lacks sufficiently powered RCTs evaluating whether real-time CGM (rt-CGM) improves obstetric and neonatal outcomes compared with self-monitoring of blood glucose (SMBG). • **Methodology**: An open-label, international multicenter RCT (n=375) randomized women with GDM to rt-CGM (n=190) or SMBG (n=185). The primary endpoint was incidence of large-for-gestational-age (LGA) infants; secondary endpoints included glucose-lowering therapy and CGM-derived metrics. • **Results:** rt-CGM reduced LGA risk (3.5% vs 10.3%, p=0.014), lowered newborn weight percentiles, and improved time-in-range, though rapid-acting insulin use was higher (41.2% vs 30.3%). • **Conclusions:** rt-CGM significantly improves neonatal outcomes and glycemic control, supporting adoption as standard care in GDM.

Notable Presentations At EASD 2025
Gestational & Postpartum Diabetes (2/3)

Date	Title	Author	Summary
17 Sep 2025	The CGM results do not always match with the classical glucose metabolism criteria in HLA-susceptible individuals monitored in the Finnish DIPP study	R. Squintani	• **Introduction:** Continuous glucose monitoring (CGM) has been proposed to define stage 2 and 3 type 1 diabetes, but its alignment with standard criteria (OGTT, HbA1c) remains uncertain. • **Methodology**: In the Finnish DIPP study, 253 CGMs (mean 9.1 days) from 149 HLA-susceptible individuals (median age 10.2 years) were compared with ADA stage definitions using OGTT and HbA1c. Sensor glucose profiles were categorized as normoglycemic, dysglycemic, or hyperglycemic. • **Results:** CGM profiles often diverged from ADA staging. Notably, 51% of stage 2 and 19% of stage 3 cases showed normoglycemic CGM profiles. Some progressed to stage 3 despite earlier normoglycemic or dysglycemic OGTT/HbA1c. • **Conclusions:** CGM detects early abnormalities but does not consistently match ADA-defined staging; it should complement, not replace, conventional criteria.
17 Sep 2025	Uncovering cardiometabolic risks in postpartum women with prior gestational diabetes: baseline insights from the I-HIPS randomised trial in Singapore	P. Quah	• **Introduction:** Women with prior gestational diabetes mellitus (GDM) have elevated risk of dysglycemia and type 2 diabetes, with incidence markedly higher in Singapore. Few postpartum programs sustain long-term prevention. • **Methodology**: The I-HIPS trial randomized 200 women (8–10 weeks postpartum, prior GDM, normal OGTT, BMI 20–40) to a 6-month tech-enabled lifestyle intervention or standard care. Baseline cardiometabolic profiles were assessed. • **Results:** Participants (mean age 33.9) were predominantly overweight/obese (74%), with 38% having family history of T2DM. Despite normal OGTT, mean HbA1c was 5.6% and cholesterol 5.5 mmol/L, indicating early metabolic dysfunction. • **Conclusions:** This high-risk multiethnic cohort demonstrates early cardiometabolic abnormalities postpartum, underscoring urgent need for scalable, technology-based interventions to prevent diabetes progression.

Notable Presentations At EASD 2025
Gestational & Postpartum Diabetes (3/3)

Date	Title	Author	Summary
17 Sep 2025	Unravelling the 6P lifestyle tool: predicting cardiometabolic risk in a postpartum diabetes prevention trial	S.M.H. Chai	• **Introduction:** Women with prior gestational diabetes (GDM) face elevated risk of type 2 diabetes, yet behavior-based prevention tools are scarce. The 6P tool was developed to capture actionable lifestyle behaviors. • **Methodology**: In the I-HIPS RCT (n=200, Singapore), baseline analysis of 100 intervention participants assessed 6P self-reported scores against BMI, adiposity, lipids, and glycemic markers. Regression models adjusted for demographics and parity. • **Results:** Every 5-unit increase in 6P score raised overweight risk 59% and obesity risk twofold, with a 0.87% rise in body fat. No significant associations were seen with glycemic or lipid measures. • **Conclusions:** The 6P tool effectively identifies postpartum women with adverse lifestyle behaviors linked to adiposity, offering a scalable approach to personalize early diabetes prevention.
17 Sep 2025	Intermittently scanned continuous glucose monitoring versus self-monitoring of blood glucose in gestational diabetes: a randomised controlled trial	K. Zorko	• **Introduction:** Evidence on subcutaneous glucose monitoring in gestational diabetes mellitus (GDM) remains scarce. This trial assessed whether intermittently scanned CGM (isCGM) improves glycemic and perinatal outcomes compared to SMBG alone. • **Methodology**: In a single-centre RCT (n=201), women with GDM were randomized to isCGM+SMBG or SMBG alone until delivery. Primary endpoint: SMBG glycemic control; secondary: HbA1c, maternal/neonatal outcomes, isCGM metrics, and patient satisfaction. • **Results:** Postprandial glucose was marginally lower with SMBG alone (p=0.042). No differences emerged in fasting glucose, HbA1c, perinatal outcomes, or neonatal complications. Satisfaction with isCGM was high, with strong willingness for future use. • **Conclusions:** isCGM did not improve glycemic or perinatal outcomes beyond SMBG but was highly acceptable, supporting its role as a patient-centered adjunct in GDM care.

Notable Presentations At EASD 2025
Cardiovascular, Renal & Metabolic Outcomes (1/6)

Date	Title	Author	Summary
16 Sep 2025	Efficacy of icosapent ethyl across the spectrum of baseline triglyceride glucose indices	R. Aggarwal	• **Introduction:** TyG index, a marker of insulin resistance, predicts cardiovascular (CV) risk; its interaction with icosapent ethyl was evaluated in REDUCE-IT. • **Methodology**: Post hoc analysis of 8,179 statin-treated patients with diabetes/risk factors or CVD, randomized to icosapent ethyl 2 g BID vs placebo, stratified by TyG tertiles; Cox models assessed composite CV endpoints. • **Results:** Higher TyG tertiles increased CV risk in placebo. Icosapent ethyl consistently lowered events across tertiles (HR 0.70–0.81), with amplified benefit in secondary prevention and greater TyG reduction. • **Conclusions:** Icosapent ethyl reduced CV events regardless of baseline TyG index.
16 Sep 2025	Effectiveness of high-dose vs standard-dose inactivated influenza vaccine in older adults with diabetes: a prespecified analysis of the DANFLU-2 trial	A.B. Nielsen	• **Introduction:** Influenza carries high complication risk in older adults with diabetes; HD-IIV shows superior efficacy over SD-IIV, but data on severe outcomes in diabetes remain limited. • **Methodology**: DANFLU-2, a pragmatic registry-based, open-label, randomized trial in Denmark (2022–2025), enrolled 332,438 adults ≥65 years, including 40,995 with diabetes. Participants were randomized 1:1 to HD-IIV vs SD-IIV, with outcomes tracked via national health registries. • **Results:** Of 332,438 participants, 166,218 received HD-IIV and 166,220 SD-IIV. Diabetes prevalence was 12.3%. Extensive baseline comorbidities were captured. Endpoint data remain under analysis and will be presented at EASD 2025. • **Conclusions:** DANFLU-2, the largest trial of its kind, will deliver definitive evidence on HD-IIV vs SD-IIV effectiveness in older adults with and without diabetes

Notable Presentations At EASD 2025
Cardiovascular, Renal & Metabolic Outcomes (2/6)

Date	Title	Author	Summary
16 Sep 2025	Effect of a high-intensity physical activity programme on the decline in renal function in high renal risk people with type 2 diabetes: randomised, controlled trial ActiDiaNe	S. Hadjadj	• **Introduction:** Physical activity benefits kidney health, but intervention data in type 2 diabetes (T2D) with rapid decline are limited; HIPA had not been tested. • **Methodology**: ActiDiaNe randomized 122 T2D patients (mean age 66, cys-eGFR 54) to HIPA (≥2×60 min/week) vs standard advice for 2 years. Primary endpoint: cys-eGFR slope. • **Results:** Of 103 evaluable, HIPA adherence was low. Decline rates: −2.04 ml/min/year (HIPA) vs −2.76 (STD, p=0.442). No major safety issues. • **Conclusions:** HIPA was safe but not significantly better than standard advice in slowing renal decline.
16 Sep 2025	Effect of smoking status on once weekly semaglutide 1 mg treatment in people with peripheral artery disease and type 2 diabetes: a secondary analysis of the STRIDE trial	H. Sourij	• **Introduction:** Semaglutide improves walking capacity in PAD with T2D. Smoking, a major PAD risk factor, may influence outcomes; STRIDE post-hoc analysis assessed treatment effect by smoking status. • **Methodology**: STRIDE randomized PAD+T2D patients to semaglutide 1.0 mg s.c. weekly vs placebo for 52 weeks. Endpoints: maximum walking distance (MWD) and pain-free walking distance (PFWD). Subgroup analyses compared never, previous, and current smokers using mixed models. • **Results:** Of 792 participants, 26% were current, 46% previous, 28% never smokers. Baseline walking capacity was lowest in current smokers. Semaglutide improved MWD and PFWD similarly across groups; no interaction (MWD p=0.746; PFWD p=0.632). • **Conclusions:** Semaglutide consistently improved walking outcomes in PAD+T2D regardless of smoking status, supporting broad therapeutic applicability.

Notable Presentations At EASD 2025
Cardiovascular, Renal & Metabolic Outcomes (3/6)

Date	Title	Author	Summary
16 Sep 2025	Intensive weight loss intervention and cancer mortality in adults with type 2 diabetes: analysis of the Look AHEAD randomised trial	H.-C. Yeh	• **Introduction:** Excess weight increases cancer deaths; Look AHEAD tested whether lifestyle-driven weight loss reduces cancer mortality in overweight/obese adults with T2D. • **Methodology**: 4,901 participants were randomized to intensive lifestyle intervention (ILI) vs diabetes support/education (DSE). Cancer deaths were adjudicated; hazard ratios estimated using Cox models. • **Results:** Over 16.7 years, cancer was the leading cause of death. Obesity-related cancer mortality was lower in ILI (1.9 vs 2.3/1,000 person-years; HR 0.83, 95% CI 0.60–1.13). Year-one weight loss magnitude showed no clear mortality benefit. • **Conclusions:** ILI modestly reduced obesity-related cancer deaths, though statistical power limited definitive conclusions.
16 Sep 2025	Long-term survival associated with continuous positive airway pressure in type 2 diabetes and obstructive sleep apnoea: results from Swedish national data	J. Agholme	• **Introduction:** OSA is highly prevalent in T2D yet underdiagnosed; its impact on long-term survival and CPAP's benefit in this population remain unclear. • **Methodology**: Using five Swedish national registers, 12,388 T2D patients with OSA prescribed CPAP were compared with 737,911 T2D patients never prescribed CPAP. Adjusted time-varying Cox regression modeled all-cause mortality over 14 years. • **Results:** There were 212,336 deaths in the non-CPAP group vs 764 in CPAP. CPAP was associated with 26% lower mortality risk (HR 0.74, 95% CI 0.68–0.82, p<0.001). • **Conclusions:** CPAP prescription significantly reduced mortality in T2D-OSA patients, though causal inference requires further validation.

Notable Presentations At EASD 2025
Cardiovascular, Renal & Metabolic Outcomes (4/6)

Date	Title	Author	Summary
16 Sep 2025	Impact of semaglutide on liver-related responses in people with metabolic dysfunction-associated steatohepatitis with/without type 2 diabetes: post hoc analysis of the ESSENCE trial	M. Roden	• **Introduction:** ESSENCE tested semaglutide in biopsy-confirmed MASH with F2–F3 fibrosis; this analysis assessed whether baseline glycaemia modifies liver outcomes. • **Methodology**: 800 participants received semaglutide 2.4 mg or placebo, stratified into normoglycaemia, prediabetes, or T2D. Outcomes: ELF reduction, ≥30% VCTE LSM decrease, and histological endpoints at 72 weeks. • **Results:** Semaglutide improved ELF, VCTE LSM, and histology across all glycaemia groups (p=0.009–<0.0001). Effects were strongest for ELF in normoglycaemia, VCTE LSM in T2D, and histology in normoglycaemia. • **Conclusions:** Semaglutide improved liver biomarkers and histology consistently, regardless of baseline glycaemic status.
16 Sep 2025	Assessing the effects of naltrexone-bupropion on hepatic steatosis and hepatic fibrosis in type 2 diabetes patients with overweight or obesity: insights from a placebo-controlled trial	A.N. Saidi	• **Introduction:** MASLD is common in overweight/obese T2DM, driving morbidity. This study assessed whether naltrexone/bupropion (NB) improves hepatic steatosis and fibrosis risk using non-invasive indices. • **Methodology**: In a 56-week RCT, 505 T2DM patients were randomized (2:1) to NB or placebo with lifestyle support. Outcomes: HSI, FIB-4, MAF-5, and liver enzymes. Analyses included regression and weight-loss subgroups. • **Results:** NB improved HSI (–2.94 vs –1.18, p<0.001) and MAF-5 (–0.80 vs –0.31, p=0.003) vs placebo; no FIB-4 changes. Weight loss strongly correlated with improvements, with ≥5–10% loss yielding greater ALT/AST reductions. • **Conclusions:** NB improved hepatic steatosis and fibrosis risk in T2DM, with weight loss the key driver, underscoring weight management's importance in MASLD care.

Notable Presentations At EASD 2025
Cardiovascular, Renal & Metabolic Outcomes (5/6)

Date	Title	Author	Summary
17 Sep 2025	Efficacy of sodium-glucose cotransporter 2 inhibitor in mild diabetic macular edema: a sub-analysis from the COMET trial	R. Ishibashi	• **Introduction:** Mild DME lacks optimal therapy; SGLT2i may reduce anti-VEGF injection needs. This COMET post-hoc analysis evaluated outcomes in early-stage disease. • **Methodology**: Patients with CRT ≤375 µm and BCVA ≤0.155 logMAR received luseogliflozin (SGLT2i) or sulfonylurea plus IVR as per protocol. Injection frequency was compared over 48 weeks. • **Results:** SGLT2i markedly reduced IVR in mild CRT (<375 µm) cases (0.5 vs 4.3; p=0.005). No significant reductions occurred in higher CRT or BCVA subgroups. • **Conclusions:** SGLT2i reduced IVR frequency in mild DME, supporting its role in early disease management.
17 Sep 2025	Prospective analysis of renal function changes in diabetic macular edema patients receiving intravitreal anti-VEGF therapy: findings from the COMET trial	T. Sakai	• **Introduction:** Anti-VEGF is standard for DME, but its renal safety is uncertain; prior data suggest possible eGFR decline. • **Methodology**: In the COMET Trial, 54 T2D patients on anti-VEGF were followed for eGFR (baseline–48 weeks) and UACR (baseline, 24, 48 weeks). Analyses included injection frequency and SGLT2i vs sulfonylurea. • **Results:** eGFR dropped from 72.1 to 68.6 at 4 weeks (p=0.001), persisting to 48 weeks. UACR showed no rise. Decline was not injection-related; SGLT2i users trended better. • **Conclusions:** Anti-VEGF therapy caused sustained eGFR decline, warranting renal monitoring; SGLT2i may offer protective benefit.

Notable Presentations At EASD 2025
Cardiovascular, Renal & Metabolic Outcomes (6/6)

Date	Title	Author	Summary
18 Sep 2025	The relationship of mitochondrial DNA copy number with cardiovascular and microvascular complications in adults with type 2 diabetes: a FIELD trial sub-study	A. Mangani	• **Introduction:** Mitochondrial dysfunction may drive vascular complications in T2D. This study assessed whether mitochondrial DNA copy number (mtDNA-CN) predicts cardiovascular or microvascular outcomes. • **Methodology**: In FIELD, 497 adults with T2D had baseline whole-blood mtDNA-CN quantified. Cox models assessed CVD risk, while logistic regression examined microvascular outcomes (nephropathy, retinopathy, neuropathy, amputations) over 5 years. • **Results:** Mean mtDNA-CN was 444. Lower mtDNA-CN was unrelated to CVD (HR 1.05, p=0.68) but associated with increased microvascular risk (OR 1.58, p=0.004), especially neuropathy (OR 1.72, p=0.008). Associations were strongest in patients without hyperuricemia. • **Conclusions:** mtDNA-CN is a potential biomarker for microvascular, but not cardiovascular, risk in T2D.
18 Sep 2025	Semaglutide and risk reduction of major adverse limb events in diabetes: a pooled analysis of 13,975 participants from the SOUL, FLOW and STRIDE randomised trials	S. Verma	• **Introduction:** PAD-related limb events remain a major unmet need in T2D. No antihyperglycaemic therapy has shown benefit on major adverse limb events (MALE). This pooled analysis evaluated semaglutide's effect. • **Methodology**: Patient-level data from SOUL (oral), FLOW (renal), and STRIDE (PAD) trials were pooled (n=13,975). Participants with and without PAD were randomized to semaglutide or placebo. Primary outcome: MALE; secondary outcomes: MALE plus MACE, CV death, or all-cause death. • **Results:** Semaglutide reduced MALE risk by 30% (HR 0.70, 95% CI 0.53–0.91; p=0.0072). Benefits extended to MALE/all-cause death (HR 0.85), MALE/CV death (HR 0.82), and MALE/MACE (HR 0.83). Effects were consistent across PAD status, eGFR, and SGLT2i use. • **Conclusions:** Semaglutide significantly lowered MALE risk in T2D, independent of PAD status or renal function, marking the first antihyperglycaemic therapy with proven PAD-related limb benefit.

Notable Presentations At EASD 2025
Complications, Precision Medicine & Other Emerging Topics (1/6)

Date	Title	Author	Summary
16 Sep 2025	The reduction of pancreatic noradrenergic innervation, consequent to Roux-en-Y gastric bypass, restores the first-phase of insulin secretion	A. Avolio	• **Introduction:** β-cell dedifferentiation and excess noradrenergic innervation impair insulin in T2D. We tested whether RYGB reduces pancreatic noradrenergic fibers and restores first-phase secretion. • **Methodology**: Obese diabetic Zucker rats underwent RYGB or sham. After 14-h fast, GTTs were done pre-op and 6 weeks post-op. Noradrenergic fibers (IHC) and β-cell dedifferentiation scores were quantified. • **Results:** RYGB lowered glucose AUC ($p<0.0001$) and restored first-phase insulin (+36% at 15 min; $p=0.0075$). Fiber reduction correlated with 15-min insulin rise ($p=0.02$). • **Conclusions:** RYGB reduces pancreatic noradrenergic innervation, promotes β-cell redifferentiation, reinstates early insulin secretion, and improves tolerance—suggesting a mechanistic basis for T2D remission.
16 Sep 2025	GM-60106, a novel 5-HT2a antagonist improves MASLD and fibrosis with a safe phase 1 profile	W.-I. Choi	• **Introduction:** MASLD/MASH lacks approved therapies. GM-60106, a peripheral 5-HT_2A antagonist, was evaluated for antifibrotic and metabolic effects. • **Methodology**: GM-60106 was tested in murine MASLD/MASH models and in a Phase 1 trial with single/multiple ascending doses and 28-day dosing in MASLD patients. • **Results:** GM-60106 was tested in murine MASLD/MASH models and in a Phase 1 trial with single/multiple ascending doses and 28-day dosing in MASLD patients. • **Conclusions:** GM-60106 shows strong preclinical efficacy and Phase 1 safety, supporting further development as a first-in-class MASLD/MASH therapy.

Notable Presentations At EASD 2025
Complications, Precision Medicine & Other Emerging Topics (2/6)

Date	Title	Author	Summary
16 Sep 2025	Obesity and schizophrenia: the road back to better physical health with glucagon-like peptide-1 therapy: results at 6 month follow-up	A. Heald	• **Introduction:** Obesity in severe mental illness (SMI) drives high cardiometabolic risk. This feasibility study tested weekly semaglutide in obese inpatients with schizophrenia/schizoaffective disorder • **Methodology**: Fifteen adults (BMI ≥30) received semaglutide for 2–6 months with weight-management support. Outcomes included BMI, HbA1c, and EQ5D5L quality-of-life scores. • **Results:** Weight change ranged from +1% to −12% (median −5%). Mean HbA1c fell from 41 to 35 mmol/mol, with reductions in nearly all patients. Quality-of-life improved by 9.7 points on average. • **Conclusions:** Semaglutide was acceptable, reduced BMI and HbA1c, and improved wellbeing in SMI, warranting larger trials.
16 Sep 2025	Olfactory training improves cognitive function in type 2 diabetes patients with mild cognitive impairment: a 16-week randomised controlled trial	Y. Bi	• **Introduction:** T2D heightens risk of MCI/dementia, with olfactory dysfunction linked to faster decline. This RCT tested olfactory training (OT) in T2D with MCI. • **Methodology**: Sixty patients were randomized to 16-week OT (twice-daily odor exposure) or control. Outcomes: MoCA, MMSE, domain-specific cognition, olfactory tests, and MRI changes. • **Results:** OT improved MoCA (+1.8 vs +0.2, p=0.001), MMSE (+0.8 vs −0.3, p=0.001), visuospatial, executive, and memory domains. Olfactory scores rose (p=0.030). MRI showed hippocampal/amygdala volume gains and prefrontal hypoactivation. • **Conclusions:** OT enhanced cognition and olfaction, offering a feasible home-based intervention for T2D with MCI.

Notable Presentations At EASD 2025
Complications, Precision Medicine & Other Emerging Topics (3/6)

Date	Title	Author	Summary
17 Sep 2025	Pilavapadin, an oral, non-opioid, AAK1 inhibitor for diabetic peripheral neuropathic pain (DPNP): results from a Phase 2b, dose-ranging, randomised, placebo-controlled, multicenter study	R. Pop-Busui	• **Introduction:** DPNP affects ~30% of people with diabetes; current treatments are limited. Pilavapadin, a non-opioid AAK1 inhibitor, was evaluated in PROGRESS. • **Methodology**: 496 adults with T1D/T2D and moderate–severe DPNP were randomized to placebo or pilavapadin (10 mg, 20/10 mg, 20 mg) for 8 weeks. Primary outcome: ADPS change. • **Results:** All arms improved vs baseline. ADPS reductions were greater with 10 mg (−0.42) and 20/10 mg (−0.40) vs placebo. Post hoc analysis confirmed significance. Pilavapadin 10 mg also reduced sleep interference and burning pain. Adverse events were mild (dizziness, nausea). • **Conclusions:** Pilavapadin 10 mg improved pain and function with good tolerability, supporting Phase 3 trials.
17 Sep 2025	The impact of BMI on placebo response in patient-reported symptoms and functional tests in a knee osteoarthritis trial	S. Heimbürger	• **Introduction:** Obesity complicates knee OA management. This post-hoc placebo subgroup analysis explored the effects of baseline BMI on functional and patient-reported outcomes. • **Methodology**: From a Phase II trial (n=288), 143 placebo recipients were stratified into BMI subgroups (<25–45). Outcomes included the 20-meter walk test and PROMs (WOMAC, ICOAP, PGA) assessed over 52 weeks using mixed-effects models. • **Results:** PROMs showed significant improvements across nearly all BMI groups, while 20-meter walk gains were limited to BMI 30–35 and 40–45 ($p<0.0001$–0.004). Higher-BMI groups displayed less consistent PROM benefits. • **Conclusions:** Placebo improved functional and PROM measures, but responses varied by BMI. PROMs were more sensitive across BMI strata, suggesting BMI may confound OA outcome assessments.

Notable Presentations At EASD 2025
Complications, Precision Medicine & Other Emerging Topics (4/6)

Date	Title	Author	Summary
18 Sep 2025	Characteristics and impact of diabetes and prediabetes in pre- and post-liver transplantation: results of a large single-centre study	M. Scopelliti	• **Introduction:** DM and PD are frequent in liver transplant (LTx) candidates, but their evolution post-LTx and survival impact require clarification. • **Methodology**: This single-center study analyzed 1,467 candidates and 1,112 recipients. Pre-LTx glycemia was classified via HbA1c, FPG, OGTT. Outcomes: survival, post-LTx DM/PD prevalence, and NODAT predictors. • **Results:** Pre-LTx DM (32.5%) and PD (21.4%) increased to 48% and 29% at 5 years post-LTx. Pre-LTx PD, poorly controlled DM, and >10 years' duration impaired survival. Predictors of NODAT included pre-LTx PD (OR 6.0), BMI, FPG, smoking, and low eGFR. • **Conclusions:** DM/PD affect >70% post-LTx; risk profiling may improve long-term outcomes.
18 Sep 2025	Effect of colchicine on vascular inflammation in patients with type 2 diabetes: results from a randomised placebo-controlled FDG-PET/CT study	J.M. Baier	• **Introduction:** Inflammation drives vascular complications in T2D. Colchicine reduces CV risk, but its vascular anti-inflammatory role is unclear. • **Methodology**: Inflammation drives vascular complications in T2D. Colchicine reduces CV risk, but its vascular anti-inflammatory role is unclear. • **Results:** No significant changes were observed: SUVmean –1.0% (p=0.75), MRFDG –0.5% (p=0.96), TBR p=0.88. Repeatability was acceptable (ICC 0.66–0.69). • **Conclusions:** Colchicine did not reduce vascular inflammation, suggesting cardioprotective effects may act through mechanisms beyond direct vascular anti-inflammation.

Notable Presentations At EASD 2025
Complications, Precision Medicine & Other Emerging Topics (5/6)

Date	Title	Author	Summary
18 Sep 2025	Efficacy of the AS01E-adjuvanted respiratory syncytial virus prefusion F protein vaccine in adults ≥60 years of age with diabetes and/or obesity across 3 RSV seasons	V. Hulstrom	• **Introduction:** RSV poses severe risk in older adults with comorbidities. This post-hoc analysis assessed efficacy of the adjuvanted RSVPreF3 vaccine in participants with diabetes and/or obesity. • **Methodology**: In a phase 3 RCT, 24,966 adults ≥60 years were randomized to RSVPreF3 or placebo and followed across three RSV seasons. Subgroups included diabetes and obesity (BMI ≥30). Outcomes: RSV-LRTD and RSV-ARI. • **Results:** In diabetes, VE was 69.8% (RSV-LRTD) and 61.8% (RSV-ARI). In obesity, VE reached 74.1% (RSV-LRTD) and 62.4% (RSV-ARI). Safety remained favorable. • **Conclusions:** Adjuvanted RSVPreF3 demonstrated sustained protection against RSV illness in older adults with diabetes and/or obesity.
18 Sep 2025	Incident sepsis in people with or without type 2 diabetes: the Fremantle Diabetes Study Phase II	W.A. Davis	• **Introduction:** Sepsis causes >10% mortality worldwide. People with T2D face elevated risk, but contemporary community-level data are scarce • **Methodology**: The Fremantle Diabetes Study II tracked 1,430 T2D patients and 5,720 matched controls (2008–2021). Incident sepsis was identified via hospital and death registries. Incidence ratios and Cox regression estimated risk; predictors were explored in T2D. • **Results:** Sepsis occurred in 11.8% with T2D vs 5.0% without (IRR 2.38; HR 2.16). Risk was highest ≤60 years. Predictors included smoking, hyperglycemia, insulin use, polyneuropathy, cerebrovascular disease, and NT-proBNP. • **Conclusions:** T2D doubles sepsis risk. Targeting modifiable factors and comorbidities is crucial for prevention.

Notable Presentations At EASD 2025
Complications, Precision Medicine & Other Emerging Topics (6/6)

Date	Title	Author	Summary
18 Sep 2025	Impact of SGLT2i use on risk of phimosis and penile cancer: a Danish cohort study emulating a target trial	C. Ljungberg	• **Introduction:** Phimosis and penile cancer risk in men with T2D using SGLT2is is poorly studied. This trial emulation compared outcomes vs GLP-1RAs. • **Methodology**: Danish registry data (2016–2021) included 32,486 male SGLT2i and 14,793 GLP-1RA initiators. Inverse probability weighting balanced 41 confounders. Weighted risks/ratios of phimosis and penile cancer were estimated over 1–8 years. • **Results:** Phimosis risk was higher with SGLT2is (1-yr: 0.9% vs 0.5%; RR 1.88; 8-yr: 4.8% vs 3.6%; RR 1.36). Penile cancer was rare but higher with SGLT2is (0.09% vs 0.01%; RR 6.34). • **Conclusions:** SGLT2is modestly increase phimosis risk and may raise long-term penile cancer concern, though absolute risk is very low.
19 Sep 2025	Effects of the first European Food Prescription Programme for people with type 2 diabetes and low socioeconomic status:a randomised controlled pilot trial	K.A.C. Berk	• **Introduction:** Healthy diet improves T2D management, but low SES limits access. This pilot tested a Food Prescription Program (FPP) offering free plant-based food boxes plus workshops. • **Methodology**: Thirty-five overweight adults with T2D and low income were randomized to FPP + dietician care or standard dietician care for 3 months. Outcomes: HbA1c, diet, weight, QoL, satisfaction. • **Results:** FPP improved fruit/vegetable intake, weight, BMI, fasting glucose, quality of life, and treatment satisfaction. Between-group differences favored FPP for vegetables, QoL, and satisfaction. HbA1c, CV risk factors, and medications showed no difference. • **Conclusions:** Europe's first FPP showed feasibility and meaningful benefits on diet, weight, and wellbeing in low-SES T2D patients, warranting larger RCTs for equity-focused diabetes care.

Notable Presentations At EASD 2025
Diabetes Technologies & Digital Health (1/4)

Date	Title	Author	Summary
16 Sep 2025	Improvement of small fibre peripher nerve function after two years of treatment with antidiabetic drugs and/or lifestyle mofification in prediabetes: the ePREDICE European trial	R. Gabriel	• **Introduction:** Peripheral neuropathy is common in prediabetes. Whether early GLDs plus lifestyle improve nerve preservation vs lifestyle alone is uncertain. • **Methodology**: In a 2-year RCT, 875 adults with prediabetes were randomized to metformin, linagliptin, or both plus lifestyle (n=653) vs placebo plus lifestyle (n=222). Primary endpoint: high-risk SFPN (FESC <70 µS). • **Results:** HR-SFPN rose to 26.3% (GLD) vs 28.8% (placebo). Adjusted difference favored GLD (–4.6%; OR 0.66; p=0.052). Among low-risk, progression was similar (30.5% vs 28.7%). • **Conclusions:** GLDs modestly reduced neuropathy risk, though not significantly, suggesting possible early benefit.
17 Sep 2025	Adherence to activity trackers in a telemonitoring trial for people with insulin-dependent type 2 diabetes: a post hoc analysis	J. Rosenskjold	• **Introduction:** Telemonitoring improves glycemic control, but optimal technologies and adherence in insulin-dependent T2D remain unclear. • **Methodology**: Post-hoc DiaMonT RCT: telemonitoring arm wore Fitbit Charge 4 continuously for 12 weeks. Heart-rate data estimated wear days/hours; weekly variation tested by repeated-measures ANOVA. • **Results:** n=163; mean wear 74.5±19.4 days/84 and 19.3±7.9 h/day. Users decreased 99% (week 1)→88% (week 12). Daily wear time varied (p<0.01), highest initially. • **Conclusions:** Adherence was high but modestly declined. Activity trackers appear feasible within telemonitoring; studies should relate adherence to clinical outcomes.

Notable Presentations At EASD 2025
Diabetes Technologies & Digital Health (2/4)

Date	Title	Author	Summary
17 Sep 2025	A study comparing the efficacy of dosing ultra rapid insulin lispro in a Medtronic 780G hybrid closed loop system at mealtime or postmeal	R. Eldor	• **Introduction:** Hybrid closed-loop systems like MiniMed 780G improve T1DM outcomes but require premeal boluses. Many patients dose late, impairing control. Ultra-rapid lispro (URLi) may offset this issue. • **Methodology**: In a 4-week pilot, 12 adults with T1DM on 780G+URLi shifted from premeal to postmeal bolusing. Baseline vs intervention data (time in range, GMI, variability, insulin use) were extracted from CareLink. • **Results:** No significant differences were seen in time in range (70.0% vs 71.4%), tight range, GMI, or variability. Daily insulin dose (57.1→60.2 U; p=0.03) and basal insulin (23.5→26.5 U; p=0.005) rose slightly. • **Conclusions:** Postmeal URLi dosing with 780G preserved glycemic control, offering flexibility for patients struggling with premeal bolusing, without compromising outcomes.
17 Sep 2025	Characterising glycaemic management and severe hypoglycaemia in adults with type 1 diabetes using diabetes technologies in Belgium: a post-hoc analysis of 3 CGM trials	L. Valgaerts	• **Introduction:** IAH with recurrent severe hypoglycemic events (SHEs) remains challenging in T1D despite CGM. This analysis assessed persistence of SHEs and glycemic control. • **Methodology**: Data from three CGM trials (n=49) included adults with T1D, IAH, and ≥2 annualized SHEs after ≥12 months of CGM. Primary outcome: no SHEs + HbA1c <7% at 12 months. • **Results:** Only 13.8% achieved the primary endpoint. HbA1c (~7.5%), TIR (~56%), and insulin dose were unchanged. SHEs and rare hospitalizations persisted. • **Conclusions:** Most high-risk T1D patients continued to experience SHEs despite CGM, highlighting the need for novel therapies.

Notable Presentations At EASD 2025
Diabetes Technologies & Digital Health (3/4)

Date	Title	Author	Summary
18 Sep 2025	Efficacy of continuous glucose monitoring using FreeStyle Libre 3 in type 2 diabetes managed with basal insulin plus SGLT2 inhibitor and/or GLP-1 agonist: the FreeDM2 randomised controlled trial	E.G. Wilmot	• **Introduction:** Evidence for rtCGM in T2DM on basal insulin with SGLT2i/GLP-1RA is scarce. FreeDM2 evaluates FreeStyle Libre 3 (FSL3) in this setting. • **Methodology**: In this UK multicentre RCT, 303 adults with T2DM (HbA1c 7.5–11.0%) were randomized 2:1 to FSL3 (n=198) or SMBG (n=105) for 32 weeks. Primary endpoint: HbA1c change at 16 weeks; secondary outcomes included CGM metrics, therapy changes, activity, and PROs. • **Results:** Baseline characteristics were comparable. Primary endpoint results will be reported at presentation. • **Conclusions:** FreeDM2 will clarify rtCGM's role in basal-only insulin T2DM with adjunct therapies.
18 Sep 2025	Glucowear: clinical trials and real-life results of a non-invasive wearable blood glucose monitor	D.J. Fowles	• **Introduction:** Current glucose monitoring is invasive. Glucowear, a wrist-worn device, was tested against FreeStyle Libre 3 for non-invasive accuracy. • **Methodology**: In a 2024 clamp trial (n=11), participants wore both devices. Controlled glucose spikes were induced. Accuracy was measured by mean absolute relative difference (MARD). • **Results:** Glucowear achieved mean/median MARDs of 10.5/9.9 vs Libre 3's 8.7/9.0. Most values fell in low-risk error zones. Compared with earlier designs (MARD 10–28%), Glucowear showed marked improvement. • **Conclusions:** Glucowear delivered accuracy comparable to Libre 3 with a non-invasive design, supporting its promise as a next-generation glucose monitoring tool.

Notable Presentations At EASD 2025
Diabetes Technologies & Digital Health (4/4)

Date	Title	Author	Summary
18 Sep 2025	Real world results from the first 1'852 European INPENtm smartMDI system users: association between user behaviour and outcomes	A. Laurenzi	• **Introduction:** Smart MDI (CGM + InPen + app) integrates alerts and bolus calculators to improve T1D care. This real-world European analysis assessed glycemic outcomes and feature use. • **Methodology**: From Oct 2024–Jan 2025, 1,852 T1D users with ≥10 days of InPen and CGM data were analyzed. Outcomes: CGM metrics, bolus calculator/alert use, and correlations with time in range (TIR). • **Results:** Users achieved mean GMI 7.5% and TIR 55.7%. Bolus calculator preceded ~53% of doses; ~52% followed recommendations. Higher alert responsiveness correlated with greater TIR (MDA rho=0.28; CHGA rho=0.45). Top responders (>75%) had TIR 67–71%. • **Conclusions:** Smart MDI supports good glycemic control, but feature use was suboptimal. Enhancing education may improve outcomes.

Noteworthy AI / ML presentations at EASD 2025

Themes from key AI / ML presentations at EASD 2025 (1/4)

- **EASD 2025 is expected to showcase AI/ML as a catalyst for diabetes care transformation, advancing early diagnosis, personalized risk prediction, optimized therapies, and stronger patient engagement into routine clinical practice**
- Check out the key AI / ML themes at EASD 2025 below:
- **AI-enhanced diagnostics:**
  - AI-driven CHAID models are expected to refine Charcot neuro-osteoarthropathy diagnosis, highlighting erythema, edema, and plantar temperature clusters for reliable early identification
- **Continuous glucose data as cardiovascular biomarker:**
  - cWT-transformed CGM data with AI ensembles are anticipated to achieve ~0.94 accuracy and AUC in predicting ACS risk, supporting broader cardiometabolic screening applications
- **Renal function prediction:**
  - The RenoTrue ANN algorithm is expected to outperform CKD-EPI with ICC 0.87 and lower bias, improving eGFR estimation in over 11,000 diabetic datapoints

Themes from key AI / ML presentations at EASD 2025 (2/4)

- **Neuropathic pain biomarkers:**
  - ML using multimodal neuroimaging is expected to reach AUROC of up to 0.81, providing feasible but still developing biomarkers for predicting NeuP treatment responses
- **Early T2D detection with genomics:**
  - RF and SVM models integrating SNPs like rs7903146 are expected to achieve ~90% AUC in UK Biobank validation, particularly strong in adults ≤55 years
- **Predicting patient no-shows:**
  - ML models are expected to forecast diabetes appointment no-shows with an AUC of 0.78, enabling proactive scheduling for high-risk patients identified through clinical, behavioral, and WHO-5 scores
- **Non-invasive hepatic screening:**
  - Logistic regression ML models are expected to predict pancreatic steatosis with ~75% accuracy and AUC 0.76, providing affordable screening options compared with MRI/CT
- **Diabetes onset prediction:**
  - SVM algorithms integrating OGTT glucose, HbA1c, and TyG index are expected to deliver ~73% balanced accuracy in forecasting incident T2D over four years

Themes from key AI / ML presentations at EASD 2025 (3/4)

- **Mortality prediction in heart failure with diabetes:**
  - Random Forest models using 470 features are expected to stratify 5-year mortality with 85% accuracy, sensitivity 82%, and specificity 89%
- **AI in insulin therapy:**
  - AI algorithms are expected to achieve physician-level agreement (>90%) for insulin pattern detection, meal recognition, and bolus assessment in T1D multiple daily injection therapy
- **Adherence profiling:**
  - LightGBM models with SHAP clustering are expected to reach AUROC 0.86, identifying nine adherence profiles among 207,000 patients on oral anti-diabetics
- **AI for diabetic retinopathy motivation:**
  - AI-driven retinal visualization is expected to reduce HbA1c from 8.9% to 8.1% in DR patients, improving motivation and dietary adherence
- **Nocturnal hypoglycemia signatures:**
  - ML is expected to predict nocturnal hypoglycemia using glycemic variability patterns, reducing overnight events by 62% in pilot testing

Themes from key AI / ML presentations at EASD 2025 (4/4)

- **Forecasting renal decline:**
  - ML integrating proteinuria trends, HbA1c extremes, and drug exposures is expected to predict ≥30% eGFR decline with AUC 0.82
- **HIV and T2D intersection:**
  - Predictive models in sub-Saharan Africa HIV clinics are expected to identify diabetes risk with an AUC of 0.73, supporting targeted screening
- **MicroRNA-guided remission:**
  - ML integrating miRNA has-miR-502-3p with post-ISSI-2 is expected to predict sustained remission after SIIT, achieving an AUC of 0.84
- **AI in diabetic low back pain:**
  - XGBoost models are expected to distinguish diabetic vs degenerative low back pain with AUC 0.90, sensitivity 89%, specificity 92%, enabling tailored neuro-inflammatory interventions

Noteworthy AI / ML presentations at EASD 2025

Notable Presentations At EASD 2025
AI / ML (1/9)

Date	Title	Author	Summary
16 Sep 2025	Learning from the clinic and artificial intelligence: a possible predictive model for clinical suspicion of Charcot neuro-osteoarthropathy in the acute phase	F. Giangreco	• **Introduction**: Discrepancy exists between clinical suspicion and MRI-confirmed active Charcot neuro-osteoarthropathy (CNO). AI prediction models may refine diagnostic accuracy. • **Methodology**: Retrospective study (n=40, 2024). Clinical features—oedema, erythema, pain, temperature differences, prior CNO—were correlated with MRI findings. A Random Forest decision tree using Exhaustive CHAID identified predictive hierarchies. • **Results:** MRI confirmed CNO in 15/40 (37.5%). Significant predictor: erythema (p=0.004). Decision tree ranked predictors: oedema (p=0.026), erythema (p=0.026), prior CNO (p=0.049), plantar temperature >1°C (p=0.003). • **Conclusions :** AI-driven CHAID identified a robust clinical cluster—oedema, erythema, prior CNO, plantar temperature difference—enhancing diagnostic reliability for active CNO.
16 Sep 2025	Machine learning of bird's eye images produced by continuous wavelet transform may predict a signal of glucose change in adverse coronary events	Y. Nakamura	• **Introduction**: CGM provides granular glucose data but lacks predictive use; cWT with AI may enhance cardiovascular risk detection. • **Methodology**: ACS patients (n=74) and controls (n=73) underwent 3-day CGM. Data were transformed via cWT into images, segmented into 19 zones, and analyzed with a neural-network ensemble using 177 variables. • **Results:** AI achieved 0.94 accuracy and AUC. Key predictors included casual glucose (1.54%), GA (−1.25%), HbA1c (0.68%), and scalogram peak minima (1.18%), mainly in low-frequency zones • **Conclusions:** cWT-processed CGM with AI reliably predicted ACS, supporting its potential as a novel diagnostic tool.

Notable Presentations At EASD 2025
AI / ML (2/9)

Date	Title	Author	Summary
16 Sep 2025	Renotrue: a machine learning model to better estimate glomerular filtration rate for people with diabetes	R. Kwok	• **Introduction**: Kidney function equations often underestimate mGFR in diabetes. RenoTrue, an ANN algorithm, was developed for more accurate estimation. • **Methodology**: Data from 5 cohorts (11,138 datapoints; 5,619 individuals) with direct mGFR were split into training/validation/test. RenoTrue, using age, sex, creatinine, was compared against CKD-EPI. • **Results:** RenoTrue achieved ICC 0.87, mean bias −0.57, with 39%/81% of estimates within p10/p30, outperforming CKD-EPI (ICC 0.86, bias +4.17, 33%/74%). • **Conclusions:** RenoTrue provided lower bias and higher accuracy than CKD-EPI, representing a superior eGFR estimation tool in diabetes.
17 Sep 2025	Neuroimaging biomarkers for neuropathic pain: a machine learning approach to predicting treatment response	D. Selvarajah	• **Introduction**: Neuropathic pain treatment lacks biomarkers and yields variable responses. ML with neuroimaging was explored to enable predictive, personalized pain management. • **Methodology**: Neuroimaging data (sMRI, rs-fMRI) from 132 patients were harmonized across sites. Multiple ML algorithms with Bayesian tuning were trained on Sheffield/Oxford cohorts and externally validated on OpenNeuro. • **Results:** Best models reached balanced accuracy ~0.69, AUROC up to 0.81, MCC ~0.40. External validation confirmed robustness, but placebo responder prediction failed (AUROC ~0.50). • **Conclusions:** ML-based neuroimaging biomarkers show feasibility for predicting NeuP treatment response. Larger cohorts and interpretability advances are needed for clinical translation.

Notable Presentations At EASD 2025
AI / ML (3/9)

Date	Title	Author	Summary
17 Sep 202	Improving type 2 diabetes machine learning-based prediction accuracy with SNPs and younger age	P. Zalloua	• **Introduction**: Early T2D detection via ML can reduce complications. This study assessed six models with clinical and genomic data integration. • **Methodology**: RF, SVM, LDA, Logistic Regression, GBM, and DT were trained (n=3,546) and validated in UK Biobank (n=29,970). Models tested clinical, combined clinical-genomic, and age-stratified data, using precision and accuracy metrics. • **Results:** RF and SVM performed best clinically. Adding SNPs (e.g., rs7903146, rs7756992) improved accuracy, especially in ≤55 group. Validation achieved ~90% AUC, with stronger discrimination using combined datasets. • **Conclusions:** Genomics integration enhances T2D prediction, particularly in younger adults, supporting multi-dimensional risk stratification approaches.
17 Sep 202	Predicting no-shows in a Diabetes Center in North Denmark: a machine learning approach	A. Nikontovic	• **Introduction**: Missed appointments hinder diabetes care, with prior reminder interventions showing modest benefit. This study developed ML models to predict no-shows. • **Methodology**: Data from 5,302 patients (48,138 visits; 2019–2025) were analyzed. Three models combined clinical, behavioral, and patient-reported data using a Multilayer Perceptron with feature selection. • **Results:** No-shows occurred in 12.1% of visits. Type 1 diabetes patients were twice as likely to miss appointments. Model 3 achieved best performance (AUC 0.78), with predictors including weekday, prior no-shows, appointment time, diabetes type, and WHO-5 score. • **Conclusions:** Integrated data improved prediction, enabling risk-based scheduling and proactive patient engagement.

Notable Presentations At EASD 2025
AI / ML (4/9)

Date	Title	Author	Summary
17 Sep 202	Interpretable machine learning-based detection of fatty pancreas in patients with diabetes: models based on multiple machine learning with multilayer perceptrons	Y. Li	• **Introduction**: Pancreatic steatosis is linked to diabetes, metabolic syndrome, and cancer. MRI/CT quantify fat but are costly; ultrasound is affordable yet inaccurate. A predictive model using clinical markers was developed. • **Methodology**: Data from 1,630 diabetic patients (2019–2024) were analyzed, including 396 steatosis cases. Twenty demographic, metabolic, and biochemical features were tested using seven ML and one deep learning model. SHAP explained predictor contributions. • **Results:** Logistic Regression performed best (accuracy 74.6%, AUC 0.762, precision 86.8%). Key predictors: total cholesterol (inverse), sex, HDL-C, HOMA-IR, TyG index, LDL-C, BMI, HbA1c, fasting glucose. • **Conclusions:** This model offers a practical, non-invasive prediction tool. The paradoxical inverse link with cholesterol requires further investigation.
17 Sep 202	Machine learning predicts type 2 diabetes incidence using basic clinical and laboratory parameters	A. Leiherer	• **Introduction**: AI/ML can enhance T2DM prediction beyond traditional risk factors, enabling earlier intervention. • **Methodology**: An observational study analyzed 904 cardiovascular-risk patients without T2DM at baseline. Using 50 clinical, anthropometric, and biomarker variables, data were split 75:25 with oversampling. RFE identified top predictors. • **Results:** Over 4 years, 10.2% developed T2DM. SVM with linear kernel achieved balanced accuracy 73%, sensitivity 74%, specificity 71%, AUC 0.727. Top predictors: OGTT glucose, fasting glucose, HbA1c, HDL-C, TyG index. • **Conclusions:** ML enables accurate early prediction of T2DM, supporting personalized prevention and tailored interventions for at-risk individuals.

Notable Presentations At EASD 2025
AI / ML (5/9)

Date	Title	Author	Summary
17 Sep 202	Machine learning identifies glypican 4 as key predictor of 5-year mortality in heart failure patients with prediabetes or diabetes	A. Leiherer	• **Introduction**: Big Data enables AI-driven risk prediction. This study applied ML to estimate 5-year mortality in heart failure patients with T2DM or prediabetes. • **Methodology**: A cohort of 290 patients was followed for 5 years (54% mortality). Using 470 variables (clinical, anthropometric, lifestyle, family history), data were preprocessed, split 75:25, and analyzed with ML via R's caret package. • **Results:** Random Forest performed best: sensitivity 82%, specificity 89%, accuracy 85%. Key predictors included clinical markers, Glypican-4, hemoglobin, and glomerular filtration rate. • **Conclusions:** ML models effectively stratify mortality risk, supporting personalized, timely interventions for diabetic/pre-diabetic heart failure patients.
17 Sep 202	Insulin and glucose events analysis: experts vs artificial intelligence	A. Tolmach	• **Introduction**: AI-driven tools can improve insulin management in T1D by detecting meals, estimating carbohydrates, and analyzing bolus patterns, potentially supporting endocrinology decision-making. • **Methodology**: A retrospective analysis included 25 T1D patients on MDI. Three endocrinologists reviewed CGM and bolus records for dose/timing adjustments, missed boluses, and injection patterns. Agreement was compared with an AI algorithm using a noninferiority t-test. • **Results:** Expert agreement: dose/timing 81%/79%, missed boluses 44%, patterns 95%/91%. AI-expert agreement: dose/timing 73%/83%, missed boluses 48%, patterns 95%/92% (non-inferior, $p<0.05$). • **Conclusions**: AI achieved physician-level agreement, demonstrating utility as a decision-support tool for insulin dosing and timing in T1D MDI therapy.

Notable Presentations At EASD 2025
AI / ML (6/9)

Date	Title	Author	Summary
17 Sep 202	Explainable AI for personalised prediction of adherence to drug therapy in people with type 2 diabetes: a nationwide retrospective cohort	M. Kasher Meron	• **Introduction**: Poor adherence to diabetes therapy limits outcomes and increases costs. This study used ML with domain-guided feature grouping to predict non-adherence. • **Methodology**: Data from 207,062 Israeli patients (2021–2022) prescribed oral anti-diabetics were analyzed. pMPR <0.8 defined poor adherence. LightGBM with SHAP explained predictors; clustering identified adherence profiles. • **Results:** AUROC was 0.86. Nine clusters emerged; three showed >80% non-adherence. Key drivers: complications/uncontrolled glucose, socioeconomic/treatment complexity, and healthcare access limitations. • **Conclusions:** ML with SHAP clustering revealed distinct adherence profiles, supporting personalized and system-level interventions to improve diabetes therapy adherence.
17 Sep 202	The impact of retinal screening with artificial intelligence and visualisation on patient motivation and metabolic outcomes in diabetes care	L. Ilavska	• **Introduction**: Diabetic retinopathy is a major cause of vision loss. Real-time fundus imaging during consultations was tested as a motivational tool to improve self-management. • **Methodology**: Seventy T1D patients underwent fundus imaging with AI-based DR detection. Retinal images were reviewed with counseling. HbA1c, CGM-TIR, and motivation/adherence questionnaires were assessed at baseline and follow-up. • **Results:** DR was found in 40%. Viewing retinal images significantly improved motivation and dietary adherence. HbA1c in DR patients declined from 8.9% to 8.1% (p=0.015). Motivation improvement correlated with HbA1c reduction (r=−0.42). • **Conclusions:** Retinal visualization enhances engagement, improves glycemic control, and may be a cost-effective strategy for DR prevention.

Notable Presentations At EASD 2025
AI / ML (7/9)

Date	Title	Author	Summary
18 Sep 2025	Personalised risk stratification for nocturnal hypoglycaemia: a novel machine learning approach using CGM glycaemic signatures	A. Saxena	• **Introduction**: Nocturnal hypoglycemia is a persistent risk. This study developed explainable ML models to identify individualized glycemic signatures predicting overnight events. • **Methodology**: CGM data (1,072 patient-days; 134 patients) were analyzed for 42 pre-sleep features. A personalized ML model was trained and validated via cross-validation and an independent cohort. • **Results:** Four predictive signatures emerged: rapid descent (>2 mg/dL/min, 91%), post-prandial variability (CV>28%, 86%), prolonged afternoon TBR (>5%, 87%), and basal oscillations (82%). Pilot use reduced nocturnal hypoglycemia by 62% (p<0.001). • **Conclusions:** Personalized glycemic signatures accurately predict risk, enabling actionable interventions and improved nocturnal safety.
18 Sep 2025	Developing a machine learning model to predict renal function decline within three years using one year longitudinal data in patients with type 2 diabetes	S. Meguro	• **Introduction**: Diabetic nephropathy is increasing; ML may forecast eGFR decline to enable timely treatment. • **Methodology**: T2D outpatients (eGFR≥45). One-year inputs, 3-year outcomes. 21,872 datasets extracted; 7,216 analyzable; 125 met ≥30% eGFR drop. Features: demographics, lab means, variability (eGFR/proteinuria), prescriptions. • **Results:** Baseline (means only) AUC 0.77. Adding variability and medication data raised AUC to 0.82. Key drivers: proteinuria trend/level, HbA1c extremes, eGFR/creatinine SD, BUN metrics, LDL-c slope, drug exposure. • **Conclusions:** ML using one-year variability plus treatment signals predicts renal decline, supporting earlier, targeted intensification.

Notable Presentations At EASD 2025
AI / ML (8/9)

Date	Title	Author	Summary
18 Sep 2025	Predicting diabetes among adults living with HIV and hypertension using a machine learning algorithm	O.J. Molefe-Baikai	• **Introduction**: Type 2 diabetes adds burden to PLWH, especially in sub-Saharan Africa. This study aimed to create a predictive ML model for diabetes among HIV+ adults with hypertension in Botswana. • **Methodology**: Baseline data from 4,655 adults across 14 HIV clinics were analyzed. MWMOTE addressed data imbalance. A binary mixed model forest was trained (80%) and tested (20%). Performance was assessed via AUC, sensitivity, and specificity. • **Results:** Diabetes prevalence was 2.9%. Key predictors: hypertension, marital status, blood pressure, and employment. Model achieved AUC 73.4%, sensitivity 96%, specificity 25.9%. • **Conclusions:** The model accurately identified diabetes cases, supporting integration of targeted screening within HIV care programs in resource-limited settings.
18 Sep 2025	A machine learning microRNA predictor for long-term remission following short-term intensive insulin therapy in newly diagnosed type 2 diabetes	S. Tang	• **Introduction**: SIIT induces remission in new T2D, but ~50% relapse. Biomarkers predicting durable response are urgently needed. • **Methodology**: Serum microRNAs were profiled (n=24) and validated (n=97). ML identified predictive candidates. Models integrating miRNA and post-ISSI-2 were built and compared against clinical-only predictors. • **Results:** Five hub miRNAs emerged; hsa-miR-502-3p was validated. Combined model (hsa-miR-502-3p + post-ISSI-2) outperformed clinical models (AUC 0.837 vs. 0.769). Mechanistic studies linked hsa-miR-502-3p to β-cell stability via SUR1/ABCC8 regulation. • **Conclusions:** A novel microRNA-based model predicts SIIT response and provides mechanistic insight, enabling more personalized T2D treatment strategies.

Notable Presentations At EASD 2025
AI / ML (9/9)

Date	Title	Author	Summary
18 Sep 2025	Machine learning-based differentiation of diabetic and degenerative low back pain using clinical and radiographic biomarkers	Y. Teng	• **Introduction**: Diabetic low back pain (LBP) may reflect neuro-inflammatory processes, unlike degenerative LBP. Current assessments lack specificity. This study built an ML tool for subtype differentiation. • **Methodology**: Data from 412 patients (208 diabetic, 204 degenerative) included labs, CT fat, demographics. Six ML models were tested with stratified 10-fold CV; SHAP explained key predictors. • **Results:** XGBoost achieved best accuracy (AUC 0.904, sensitivity 89.2%, specificity 91.5%). Dominant predictors: albumin, glucose, hs-CRP, age, HDL-C, LDL-C; paraspinal fat showed moderate power. • **Conclusions:** The model accurately distinguishes LBP subtypes, guiding targeted metabolic and inflammatory interventions.

Strategic Insights and Strategy Development is our focus