# **Joint ADA/EASD Consensus Report** Management of Type 2 Diabetes

Co-Chair: John B. Buse, MD, PhD
Co-Chair: Melanie J. Davies, MB ChB, MD

American Diabetes Association.

2026 SCIENTIFIC SESSIONS

## Disclosure

# Photography Prohibited

PLEASE DO NOT take photos of this presentation. We will invite feedback on this presentation online.

American Diabetes Association.
2026 SCIENTIFIC SESSIONS

# Agenda

- Introduction, Methods, and the Rationale, Importance, and Context of Glucose-Lowering Treatment

  **Melanie J. Davies, MB ChB, MD**

- Interventions and Approaches to Type 2 Diabetes Treatment

  **Vanita R. Aroda, MD**

- Personalized Approach to Treatment Based on Individual Characteristics and Associated Long-Term Conditions

  **Jennifer Green, MD**

- Putting It All Together: Strategies for Implementation

  **Chantal Mathieu, MD, PhD**

- Key Knowledge Gaps

  **John B. Buse, MD, PhD**

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# Introduction, Methods, and the Rationale, Importance, and Context of Glucose-Lowering Treatment

**Melanie J. Davies, MB ChB, MD**

- Professor of Diabetes Medicine
- University of Leicester UK and Honorary Consultant  Diabetologist University Hospitals of Leicester NHS Trust

American Diabetes Association. EASD European Association for the Study of Diabetes

# Disclosures of Interest

- **Advisory Panel:** Abbvie, Amgen, AstraZeneca, Biomea Fusion, Boehringer Ingelheim, Carmot/Roche, Daewoong Pharmaceutical, EktaH, GSK, Regeneron, Sanofi-Aventis, Zealand Pharma, Innovent Bio
- **Consultant:** Boehringer Ingelheim, Eli Lilly and Company, Novo Nordisk, Sanofi-Aventis, Kailera
- **Research Support:** AstraZeneca, Boehringer Ingelheim, Novo Nordisk
- **Speaker's Bureau:** AstraZeneca, Boehringer Ingelheim, Eli Lilly and Company, Novo Nordisk, Sanofi-Aventis, Zuellig Pharma, Obesity Alliance
- **Employee:** None
- **Stocks/Shareholder:** none in any device or pharmaceutical company

# Methods

- Writing group of 15 selected by ADA and EASD
- Ensure diversity and regional representation
- Spectrum of disclosures of interest, with an emphasis on those with limited disclosures

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**Co-Chair:**
Melanie J. Davies MB ChB, MD
University of Leicester, UK

**Co-Chair:**
John B. Buse, MD, PhD
UNC School of Medicine, USA

## The Rationale

Melanie J. Davies MB ChB, MD
University of Leicester, UK

John B. Buse, MD, PhD
UNC School of Medicine, USA

## Personalized Approach

Apostolos Tsapas, MD, PhD, MSc
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Jennifer Green, MD
Duke University, Durham, USA

Francesco Giorgino, MD. PhD
University of Bari Aldo Moro, Italy

## Therapeutic Options

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Mandeep Bajaj, MD, PhD
Baylor College of Medicine, Houston, USA

Tsvetalina Tankova, MD, DSC
Medical University, Sofia, Bulgaria

Peter Rossing, MD
Steno Diabetes Center Copenhagen, Denmark

## Strategies for Implementation

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Nisa Maruthur, MD, MHS
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Sylvia Rosas, MD, MSCE
Joslin Diabetes Center, Boston, USA

Pinar Topsever, MD
Acıbadem Mehmet Ali Aydınlar University, Istanbul, Türkiye

Nuha El Sayed, MD, PhD
Brigham & Women's Hospital, Boston, USA

## Support Across Groups

Rita Kalyani, MD, MHS
Johns Hopkins Medicine, Baltimore, USA; ADA

# Methods

- Two-day in-person meeting in February 2026, Amsterdam
- Teleconferences every 1-4 weeks, April 2025 to present
- Co-chairs and 4 sets of section authors
- Evidence review informed the content

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# Amsterdam February 2026

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# Methods

- The writing group accepted the 2022 edition of this consensus report as a starting point for the evidence search.
- To identify newer evidence, a search was conducted on PubMed for randomized clinical trials (RCTs), systematic reviews, and meta-analyses published in English between May 01, 2022, and December 31, 2026.
- Eligible publications examined the effectiveness or safety of pharmacologic or non-pharmacologic interventions in adults with type 2 diabetes mellitus.
- Reference lists were scanned in eligible reports to identify additional articles relevant to the subject.
- Details on the keywords and the search strategy will be reported in a Supplementary Appendix.
- Papers were grouped according to subject; the authors reviewed this new evidence to inform the consensus recommendations.

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# Literature Review

## Search Strategy (PubMed)

#1) 1 AND 2 NOT (3 OR 4 OR 5 OR 6 OR 7) AND (8 OR 9) NOT (10 OR 11 OR 12)
#2) 13 AND 14 AND (15 OR 16 OR 17)
#1 OR #2

| Categories | String | # |
|---|---|---|
| **Population** | Diabetes[Title/Abstract] | 1 |
| | Type 2[Title/Abstract] | 2 |
| | Animal*[Title/Abstract] | 3 |
| | Mice[Title] | 4 |
| | Mouse[Title] | 5 |
| | Rat*[Title] | 6 |
| | Comment*[Title] | 7 |
| **Design/Intervention** | Random*[Title/Abstract] | 8 |
| | Trial*[Title/Abstract] | 9 |
| | Review[ptyp] | 10 |
| | Pharmacodynamic*[Title] | 11 |
| | Pharmacokinetic*[Title] | 12 |

| Categories | String | # |
|---|---|---|
| **Population** | Diabetes[Title/Abstract] | 13 |
| | Type 2[Title/Abstract] | 14 |
| **Design/Intervention** | Meta[Title] | 15 |
| | Indirect[Title] | 16 |
| | Mixed[Title] | 17 |

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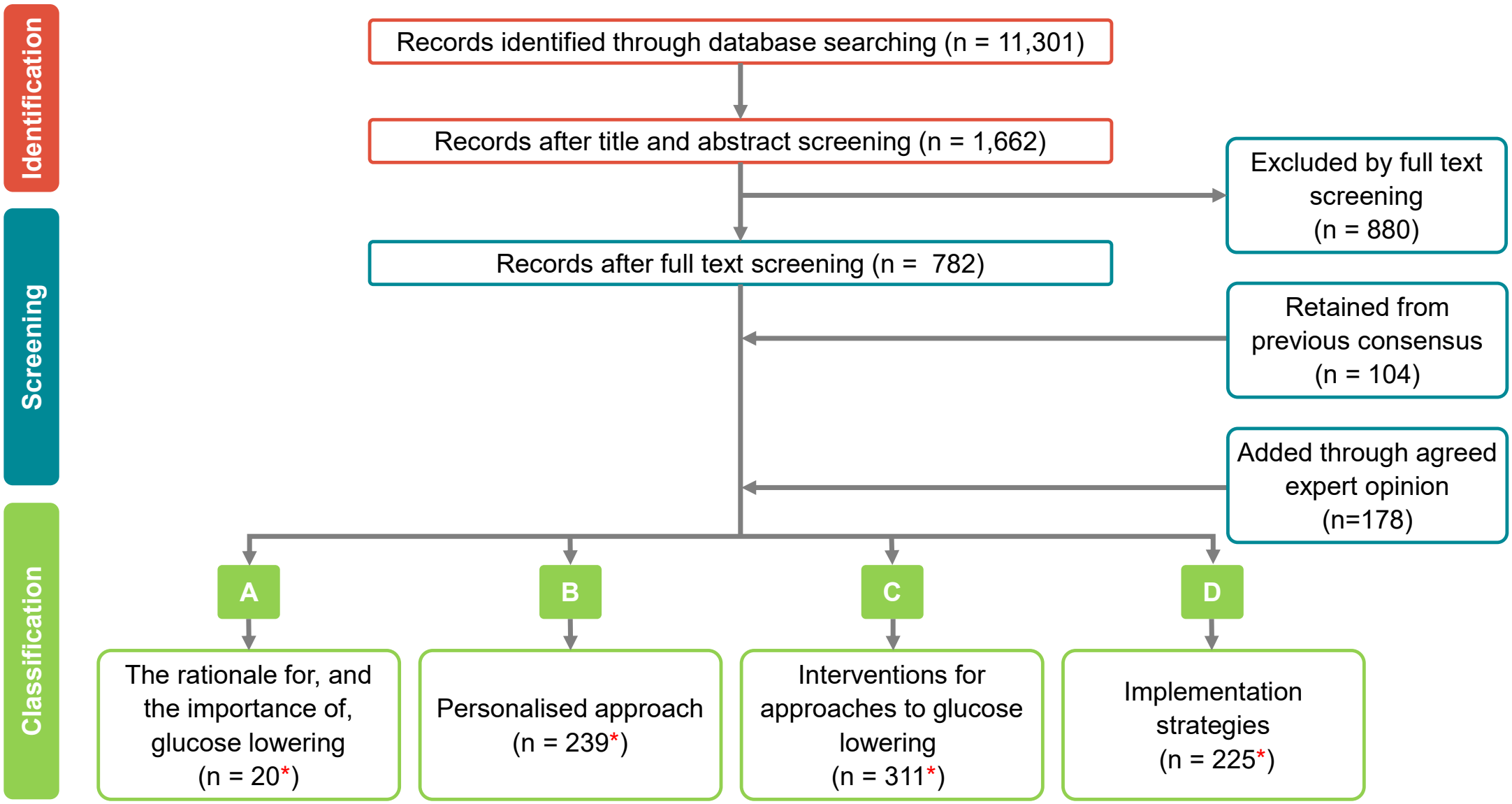


*some articles belong to more than one category, hence why the sum is greater than 782.

## Review Process

- *Diabetologia* editors will suggest independent reviewers
- ADA's Professional Practice Committee
- EASD's Committee of Clinical Affairs
- We invite feedback on this presentation
- All reviewers' comments will be evaluated by the writing team and will inform a revised draft which will be submitted for publication to *Diabetes Care* and *Diabetologia*
- The final consensus will be presented at EASD Milan in October 2026

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# How you can contribute to the review process

## You can take a photo of this slide

- After Scientific Sessions, the slides will be posted and a webpage will go onto the DiabetesPro webpage with a link to the form for you to submit comments
- The website will be https://professional.diabetes.org/clinical-support/ada-easd-consensus-statement-management-hyperglycemia-type-2-diabetes?auHash=M8gC3JkQdgDM8GiRVyZ2yWqebLua2IuL7q9JIBBkz_8
- Comments will be accepted until 11:59 pm ET, Tuesday, June 16th, 2026

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## Key points to emphasise

- This update has broadened the focus from the management of hyperglycaemia to the holistic management of type 2 diabetes and its risk of associated multiple long-term conditions.
- Earlier use, potentially from diagnosis, of SGLT2i or/and GLP-1-based therapies to offer organ protection and improve long term outcomes in type 2 diabetes is advocated.
- Earlier combination use of SGLT2i and GLP-1-based therapies should be considered in people with concomitant cardiovascular disease, chronic kidney disease, and heart failure.
- The ability to transform outcomes for people living with type 2 diabetes is within our grasp through consistent, equitable, and systematic implementation of strategies and therapies already available.

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## Figure 1: A Holistic Anticipatory Integrated Care Approach Addressing Type 2 Diabetes and its Associated Long-Term Conditions




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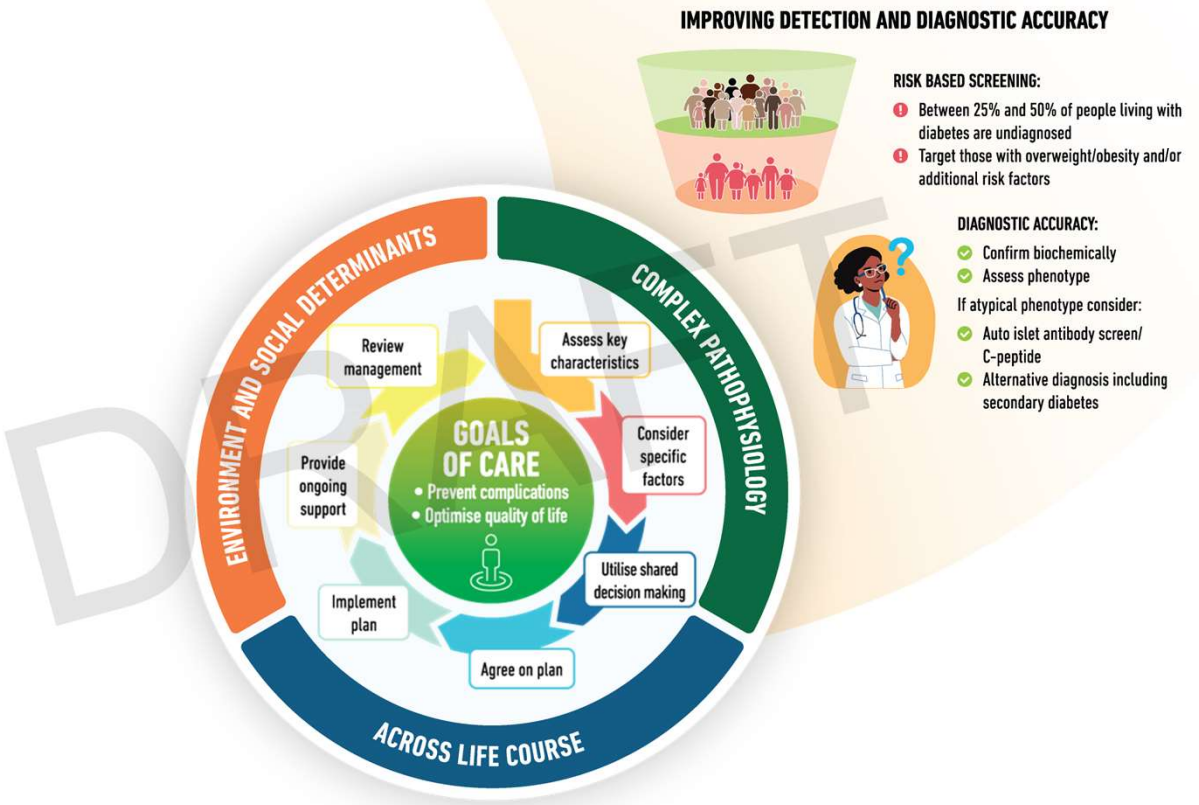




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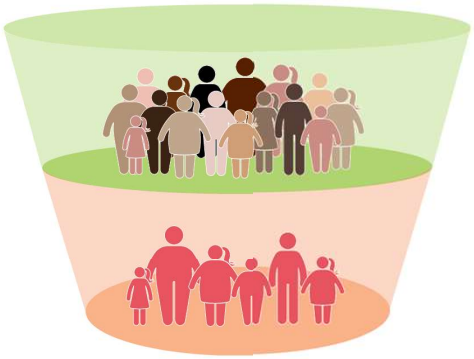
# Improving detection and diagnostic accuracy



**RISK BASED SCREENING:**

- Between 25% and 50% of people living with diabetes are undiagnosed
- Target those with overweight/ obesity and/or additional risk factors

**DIAGNOSTIC ACCURACY:**

- Confirm biochemically
- Assess phenotype

If atypical phenotype consider:

- Auto islet antibody screen/ C-peptide
- Alternative diagnosis including secondary diabetes



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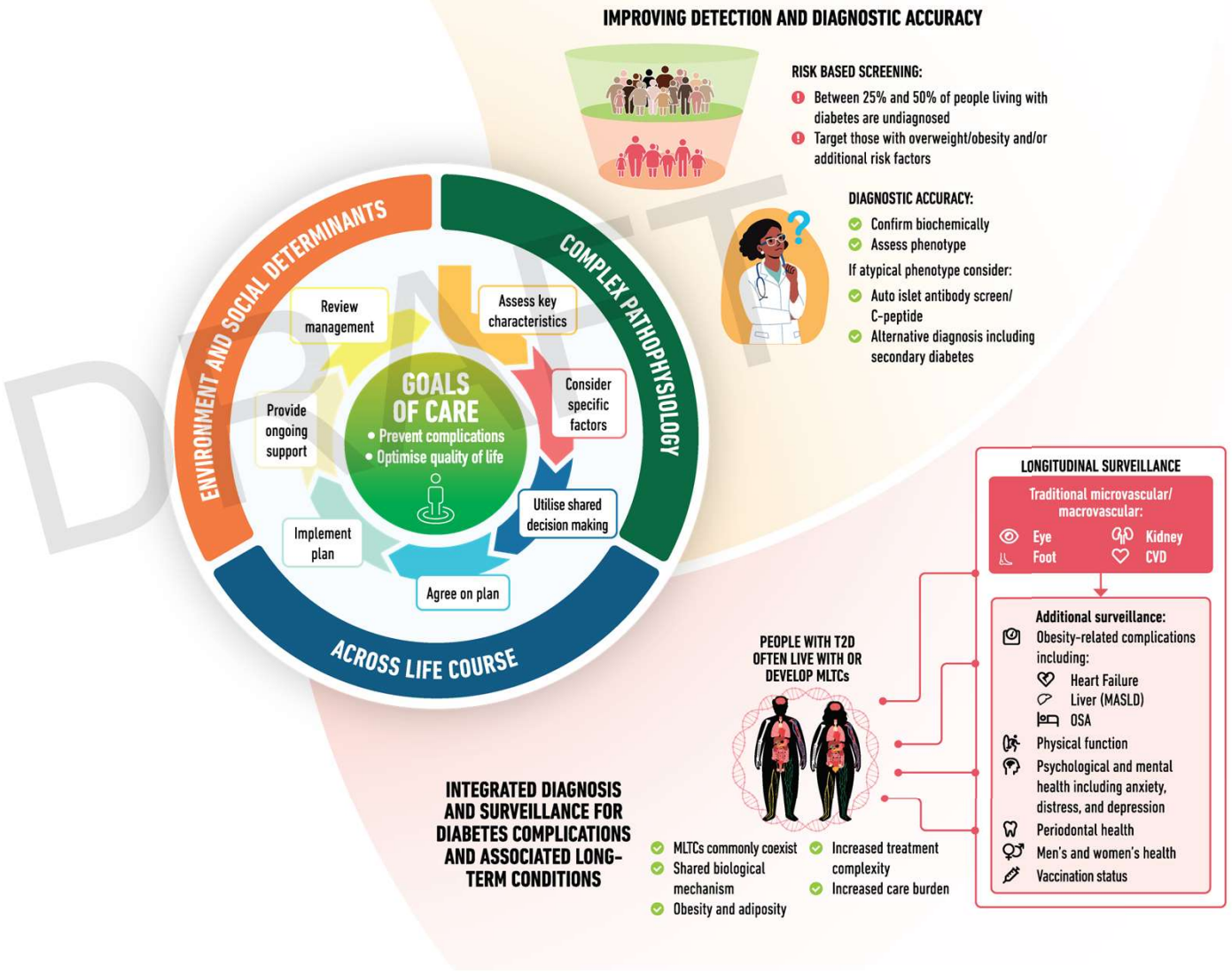
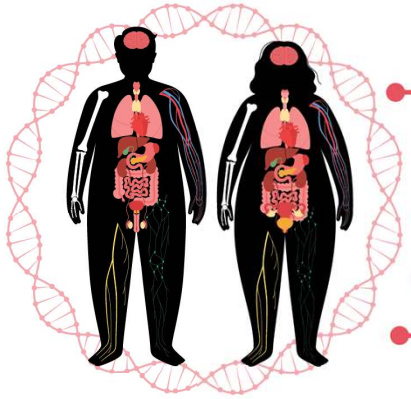


# Integrated diagnosis and surveillance for diabetes complications and associated long-term conditions

**PEOPLE WITH T2D OFTEN LIVE WITH OR DEVELOP MLTCs**



- MLTCs commonly coexist
- Shared biological mechanism
- Obesity and adiposity
- Increased treatment complexity
- Increased care burden

**LONGITUDINAL SURVEILLANCE**

**Traditional microvascular/macrovascular:**

Eye · Foot · Kidney · CVD

**Additional surveillance:**

- Obesity-related complications including:
  - Heart Failure
  - Liver (MASLD)
  - OSA
- Physical function
- Psychological and mental health including anxiety, distress, and depression
- Periodontal health
- Men's and women's health
- Vaccination status



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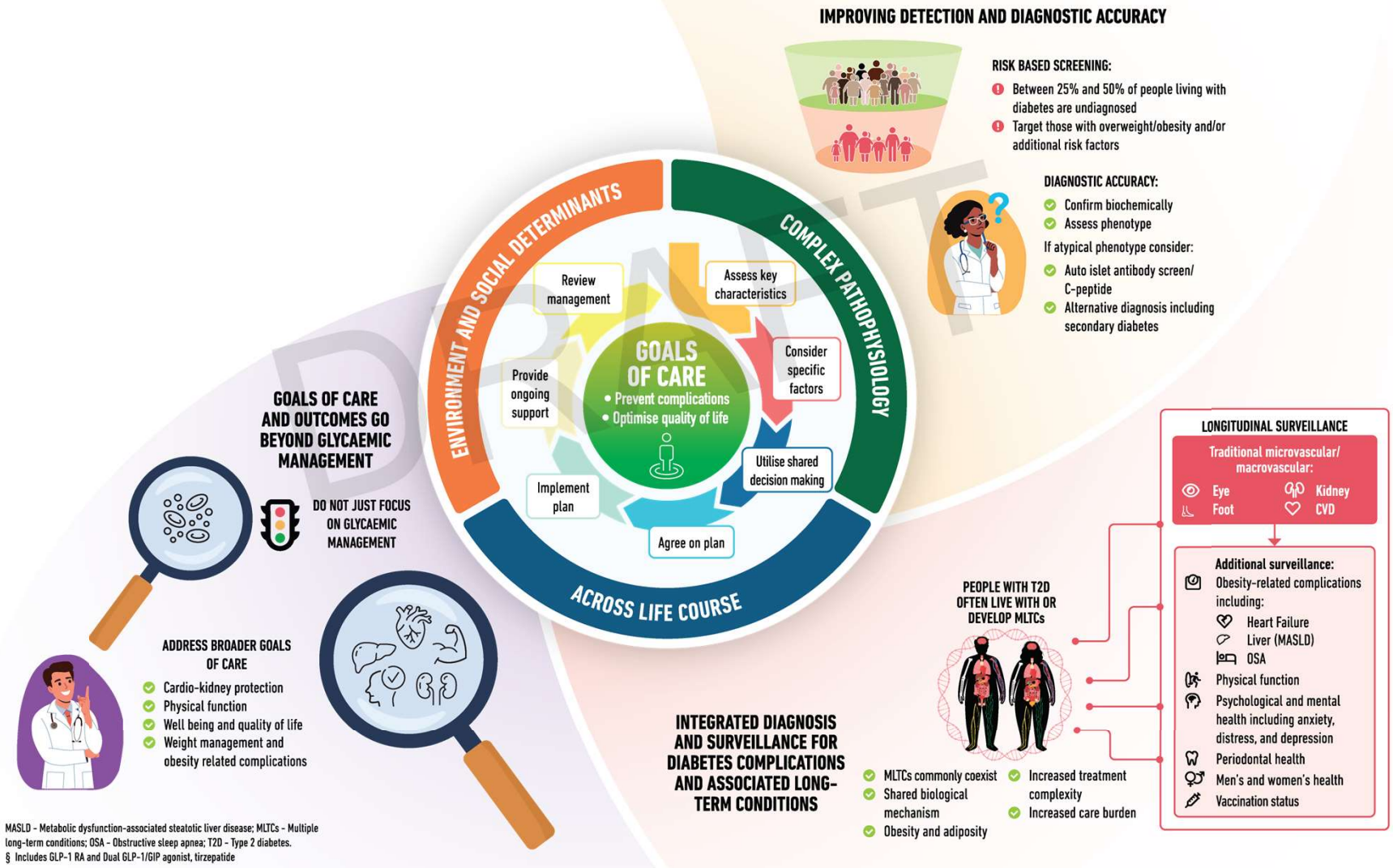


MASLD - Metabolic dysfunction-associated steatotic liver disease; MLTCs - Multiple long-term conditions; OSA - Obstructive sleep apnea; T2D - Type 2 diabetes.
§ Includes GLP-1 RA and Dual GLP-1/GIP agonist, tirzepatide

# Goals of care and outcomes go beyond glycaemic management

**DO NOT JUST FOCUS ON GLYCAEMIC MANAGEMENT**

**ADDRESS BROADER GOALS OF CARE**

- Cardio-kidney protection
- Physical function
- Well being and quality of life
- Weight management and obesity related complications



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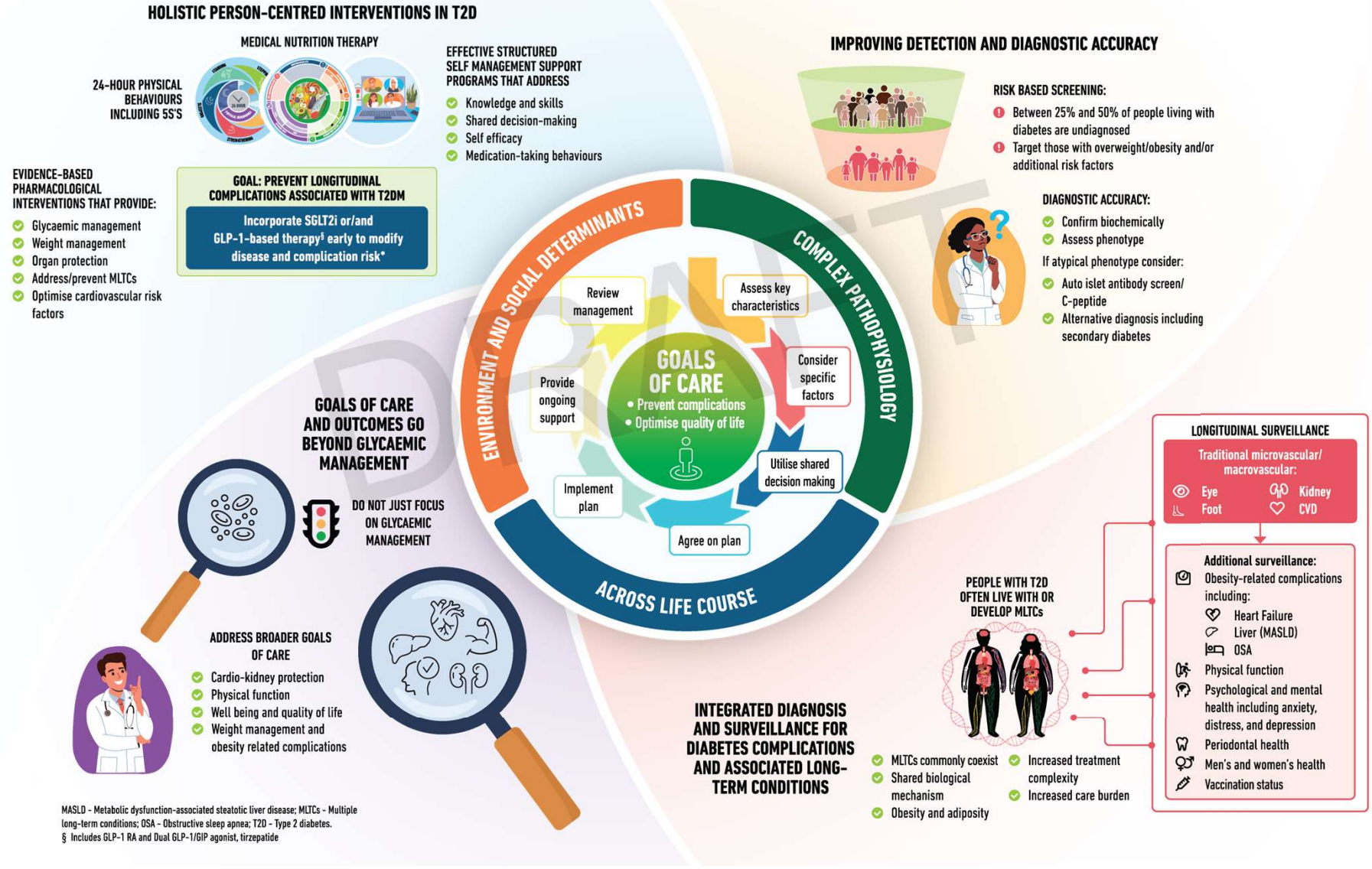


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# Holistic person-centred interventions in T2D

**24-HOUR PHYSICAL BEHAVIOURS INCLUDING 5S'S**

**MEDICAL NUTRITION THERAPY**


**EFFECTIVE STRUCTURED SELF MANAGEMENT SUPPORT PROGRAMS THAT ADDRESS**

- Knowledge and skills
- Shared decision-making
- Self efficacy
- Medication-taking behaviours

**EVIDENCE-BASED PHARMACOLOGICAL INTERVENTIONS THAT PROVIDE:**

- Glycaemic management
- Weight management
- Organ protection
- Address/prevent MLTCs
- Optimise cardiovascular risk factors

**GOAL: PREVENT LONGITUDINAL COMPLICATIONS ASSOCIATED WITH T2DM**

**Incorporate SGLT2i or/and GLP-1-based therapy§ early to modify disease and complication risk***



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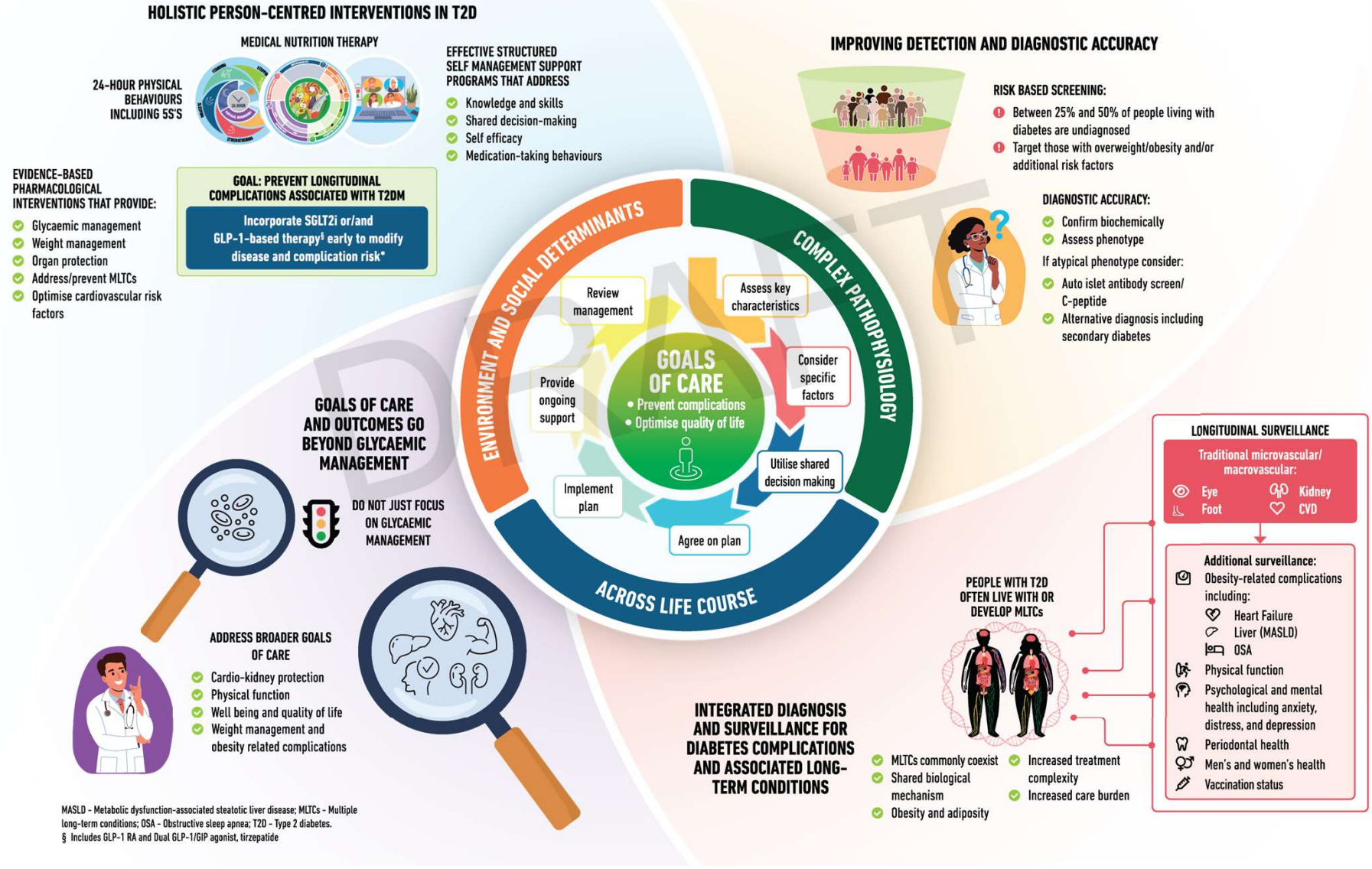


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# Interventions and Approaches to Type 2 Diabetes Treatment

**Vanita R. Aroda, MD**

- Director of Diabetes Clinical Research
- Brigham & Women's Hospital, Boston, USA

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# Disclosures of Interest

- **Institutional contracts:** Amgen, Applied Therapeutics, AstraZeneca, Biomea, Boehringer Ingelheim, Corcept, Eli Lilly, Fractyl, Kailera, Novo Nordisk, Pfizer, Recordati, Rhythm, Servier

- **Consultant:** Baim, Mediflix, Roche, Sanofi, Structure Therapeutics

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# Therapeutic Subsection

Vanita R. Aroda, MD

Tsvetalina Tankova, MD, PhD

Peter Rossing, MD, PhD


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# Medical Nutrition Therapy (MNT)

- MNT refers to personalized dietary intervention and is integral to type 2 diabetes management

- No single ratio of carbohydrate, protein, and fat intake optimal for every person with type 2 diabetes
  - *-> Tailor personalized eating patterns, emphasizing foods with demonstrated health benefits, minimizing foods shown to be harmful, and accommodating individual preferences*
  - *-> Goal of developing healthy dietary habits that are feasible and sustainable*

- Both quality and quantity of foods are crucially important

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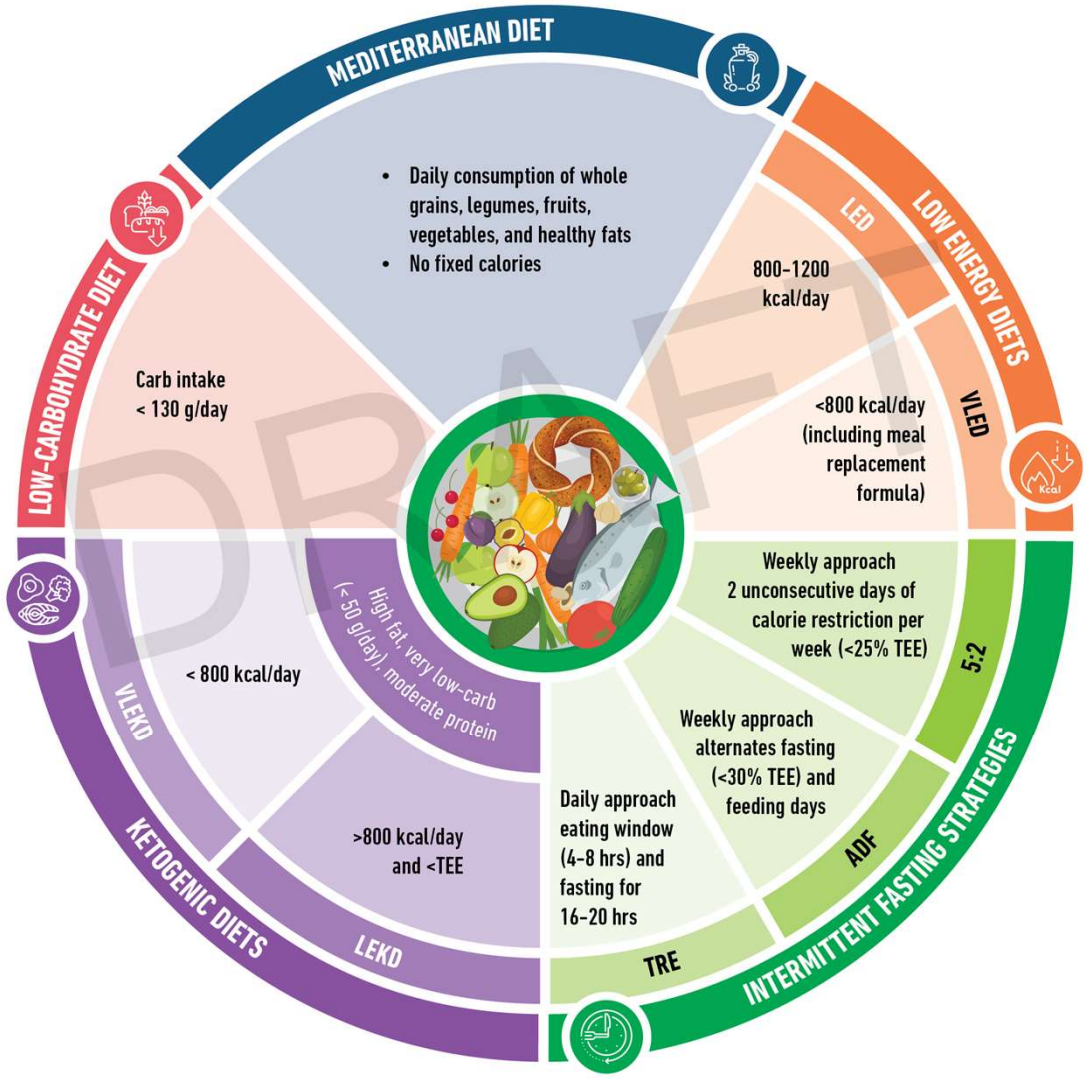
## Figure 2: A Dietary Patterns and Metabolic Effects in People Living with Type 2 Diabetes



## Figure 2: A Dietary Patterns and Metabolic Effects in People Living with Type 2 Diabetes

| | |
|---|---|
| **MEDITERRANEAN DIET** | |
| • **Mediterranean diet** | • Sustainable long-term metabolic and CV benefits, even in the absence of substantial weight loss<br>• Modulation of gut microbiota, improving insulin sensitivity, inflammation, oxidative status, overall metabolic health |
| **LOW-ENERGY DIETS** | |
| • **Low-energy diet (LED)** | • Effective strategy for weight loss and glycaemic management in T2D with obesity<br>• Can lead to T2D remission in the long term, if implemented early in disease course (DiRECT 5-year follow-up), though long-term sustainability remains a challenge |
| • **Very-low-energy diet (VLED)** | • VLED and formula meal replacement – most effective approaches for weight management in T2D in the short term<br>• VLED with total diet replacement induction phase – most effective for T2D remission, with most of the evidence restricted to 1 year or less<br>• Adherence challenges; of limited long-term sustainability; and may require medical supervision |
| **INTERMITTENT FASTING STRATEGIES** | |
| With focus on energy restriction:<br>• **5:2 fasting**<br>• **Alternate-day fasting (ADF)** | • 5:2 intermittent fasting leveraging formula meal replacement over 12-16 weeks provide greater benefit on HbA1c, weight reduction and other metabolic outcomes than oral antihyperglycemic medications or lifestyle therapy |
| With focus on timing:<br>• **Time-restricted eating (TRE)** | • Beneficial effect on HbA1c, body weight loss, lipids in the short term<br>• More effective for weight loss than calorie restriction, with similar reduction in HbA1c<br>• Adherence challenges, especially with prolonged fasting; individual variability in response |
| **KETOGENIC DIETS** | |
| • **Low-energy ketogenic diet (LEKD)**<br>• **Very-low-energy ketogenic diet (VLEKD)** | • Significant improvement in blood glucose, HbA1c, body weight, waist circumference, lipids versus non-ketogenic diets<br>• Offers rapid metabolic benefits<br>• Concerns over adherence and safety; may require medical support/supervision, particularly in patients on SGLT2 inhibitors |
| **LOW-CARBOHYDRATE DIETS (LCD)** | |
| • **Low-carbohydrate diets (LCD)** | • Beneficial effect on glucose control, insulin resistance, body weight, waist circumference, lipids, blood pressure versus control diets<br>• Decreased requirement for glucose-lowering medications over intermediate-to-long term<br>• Low-carbohydrate breakfast – significantly lower glycaemic variability and higher TIR versus a low-fat breakfast |

# Medical Nutrition Therapy and Supplements

## Consensus Recommendations

- An overall healthy eating plan that results in an energy deficit, in conjunction with medications and/or metabolic surgery as individually appropriate, should be considered to support glycaemic and weight management goals in adults with type 2 diabetes and overweight/obesity.
- MNT focused on identifying healthy dietary habits that are feasible and sustainable is recommended.
- Structured medical nutrition and lifestyle programmes should be adapted for specific cultural context.
- Achieving remission of type 2 diabetes at any time may have long-term benefits.
- Specific dietary supplements are not recommended for glycaemic management in people with type 2 diabetes.

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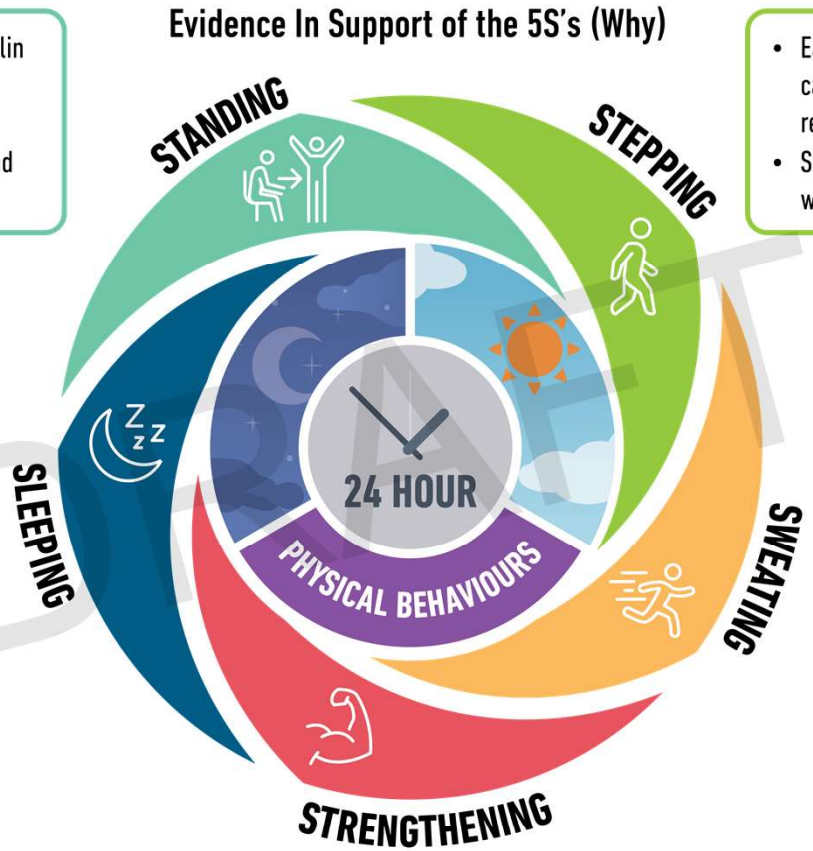
## Figure 3a: 24-Hour Physical Behaviours (The 5S's) in Type 2 Diabetes Management

- Prolonged sitting is associated with higher glucose and insulin resistance.
- Regularly interrupting sitting (e.g., every 30 minutes), particularly after meals, is associated with lower glucose and reduces insulin residence.

- Each additional 500–1000 step/day is associated with lower all cause and cardiovascular mortality, exhibiting a dose response relationship.
- Step counts in the range of ~6,000–~10,000/day are associated with a clinically meaningful lower cardiometabolic risk.*




- Short (<6 h) and long (>8 h) sleep duration is associated with higher HbA1c.
- Sleep hygiene and treatment of insomnia (e.g., CBTi) are associated with clinically meaningful reductions in HbA1c.
- Sleep quantity, quality and timing, including insomnia and irregular sleep, influence metabolic health.

- Aerobic exercise improves HbA1c (~0.5-0.7%), with greater reductions observed at higher volumes of moderate-to-vigorous activity.
- HIIT is associated with improvements in insulin sensitivity, HbA1c (~0.6-0.8%) and cardiorespiratory fitness.
- Combined aerobic and resistance training produces the largest improvements in HbA1c (~0.7-0.9%)and cardiometabolic health.

- Resistance training reduces HbA1c by ~0.4–0.5% and improves lean mass, insulin sensitivity, and functional capacity.
- Lean mass preservation is important across the type 2 diabetes spectrum, particularly with accelerated ageing, weight loss and pharmacotherapy (e.g., GLP-1-based therapy[§]).
- Adjunctive flexibility, balance and stability training (e.g., stretching, yoga, balance work) supports mobility and fall-risk reduction.

# Figure 3b: The 5S's: Prescribing Combined 24-Hour Behaviours in those Living with Type 2 Diabetes

**OVERVIEW:**

**While general recommendations are for ≥150 min/week moderate-to-vigorous-intensity aerobic activity over ≥3 days, resistance exercise 2–3x/week, minimising sedentary time, and progress gradually based on tolerance, specific recommendations can be tailored to the individual.**

**"24-hour behaviours can be combined to match ability and preference, benefitting all people living with type 2 diabetes. When prescribing these behaviours, think of it like writing a medication prescription (e.g., who, what, dose and timing)".**

## WHAT?:
### *Behavioural components across the 24-hour day*

- **Standing –** Time spent sitting or reclining with low energy expenditure.
- **Stepping –** All walking and step-based movement accumulated across the day.
- **Sweating –** Moderate-to-vigorous aerobic activity that increases heart rate and breathing.
- **Strengthening –** Activities that build or main muscle strength, power and physical function.
- **Sleeping –** Sleep, including its duration, quality and timing.

## WHO?: *Applies to all, with examples of where additional tailoring may be beneficial*

- Predominantly sedentary daily routines, and/or difficulty standing for long periods **(Standing)**.
- Very low habitual physical activity **(Stepping)** to increase cardiorespiratory fitness.
- Low cardiorespiratory fitness **(Sweating)**.
- Reduced muscle strength and/or impaired balance or stability, including frail older adults, those at risk of falls, or individuals initiating GLP-1-based therapy[§] **(Strengthening)**.
- Short sleep, insomnia, irregular schedules, OSA **(Sleeping)**.

## WHERE?: *Everyday settings*

- **Home –** Standing breaks, short walks, sit-to-stand, floor-based exercises.
- **Gym –** Aerobic equipment, resistance machine, free weights.
- **Garden –** Digging, lifting, carrying.
- **Office –** Walking meetings, standing breaks, stairs.
- **Park** – Brisk walking, circuits, outdoor gym equipment.
- **Neighbourhood –** Walking to the local shops, post-meal walks, outdoor benches for sit-to-stands.

## HOW MUCH AND WHEN?:
### *Dose and timing – components can be combined and tailored*

- **Standing –** Minimise prolonged sitting and interrupt sitting time regularly across the day, particularly after meals.
- **Stepping –** Gradually increase steps from baseline by 500–1000/day, accumulated across the day. Indicative targets: ~6000-8000 steps/day (older adults) and ~8000-10000 steps/day (younger adults).
- **Sweating –** Work towards ≥150 min/week of moderate-to-vigorous activity or 75 min/week of vigorous/interval training, typically over 3–5 days per week, with no more than 2 consecutive days without activity.
- **Strengthening –** Include strengthening or functional activities targeting all major muscle groups on 2-3 days per week, progressed gradually and tailored to ability.
- **Sleeping –** Aim for ~7-8 hours per night of good quality sleep with consistent timing.

# Physical Activity Behaviours

## Consensus Recommendations

- The 5S's – increasing Standing, increasing Stepping, incorporating Sweating (aerobic) physical activity and Strengthening (resistance exercise) and ensuring adequate quality, quantity and timing of Sleep, are fundamental to glycaemic management and holistic care in type 2 diabetes.
- Counsel and support adults with type 2 diabetes to progressively increase physical activity volume and intensity beyond minimum thresholds when feasible and safe, given the dose-related benefits on glycaemia, cardiometabolic outcomes, and overall wellbeing.
- A combination of aerobic and resistance/strength activity, aiming for a minimum of 150 minutes per week of moderate-to-vigorous-intensity aerobic activity (or 75 minutes vigorous) accumulated over ≥3 days per week, with sessions typically lasting ~30 minutes is recommended.
- Resistance exercise should be included 2-3 times per week, with intensity and progression adjusted according to individual tolerance and functional capacity.
- Resistance exercise should be encouraged during weight loss interventions to help preserve skeletal muscle mass and strength.
- Alongside regular structured exercise, reductions in sedentary time, increases in daily movement and optimisation of sleep should be recognised and supported.

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# Cardio-Kidney-Protective Glucose-Lowering Medications:

## SGLT2 Inhibitors

| | Efficacy | Hypoglycaemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| **SGLT2 Inhibitors** | Intermediate to high | No | Loss (intermediate) | Benefit: canagliflozin, empagliflozin | Benefit: canagliflozin, dapagliflozin, empagliflozin, ertugliflozin | Benefit: canagliflozin, dapagliflozin, empagliflozin | • See labels for dose considerations for kidney function of individual agents<br>• Glucose-lowering effect is lower for SGLT2 inhibitors at lower eGFR | Unknown | Oral | High | • DKA risk, rare in T2DM: discontinue, evaluate and treat promptly if suspected; be aware of predisposing risk factors and clinical presentation (including euglycaemic DKA); discontinue before scheduled surgery (e.g., 3-4 days), during critical illness, or during prolonged fasting to mitigate potential risk<br>• Increased risk of genital mycotic infections, mitigate risk with genital hygiene and avoid use in high-risk individuals<br>• Necrotising fasciitis of the perineum (Fournier's gangrene), rare reports: institute prompt treatment if suspected<br>• Attention to volume status, blood pressure; adjust other volume-contracting agents as applicable |

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## GLP-1 Receptor Agonists

| | Efficacy | Hypoglycaemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| GLP-1 RAs | High to very high | No | Loss (intermediate to very high) | Benefit: dulaglutide, liraglutide, semaglutide (SQ)<br>Neutral: exenatide once weekly, lixisenatide | Benefit: semaglutide (SQ) | Benefit for kidney endpoints in CVOTs, driven by albuminuria outcomes: dulaglutide, liraglutide, semaglutide (SQ)<br>Benefit: DKD progression semaglutide (SQ) | • See labels for dose considerations for kidney function of individual agents<br>• No dose adjustment for dulaglutide, liraglutide, semaglutide<br>• Monitor kidney function when initiating or escalating doses in patients with kidney impairment reporting severe adverse GI reactions | Benefit: semaglutide (SQ) | SQ; oral (semaglutide) | High | • Risk of thyroid C-cell tumours in rodents; human relevance not determined (liraglutide, dulaglutide, exenatide extended release, semaglutide)<br>• Counsel patients on potential for GI side effects and their typically temporary nature; provide guidance on dietary modifications to mitigate GI side effects [reduction in meal size, mindful eating practices (e.g. stop eating once full), decreasing intake of high-fat or spicy food]; consider slower dose titration for patients experiencing GI challenges<br>• Pancreatitis has been reported in clinical trials but causality has not been established. Discontinue if pancreatitis is suspected<br>• Evaluate for gallbladder disease if cholelithiasis or cholecystitis are suspected<br>• Diabetic retinopathy: close monitoring of retinopathy in those at high risk (older individuals and long duration of T2D>10 Years)<br>• Nonarteritic anterior ischemic optic neuropathy reported (rare incidence) : monitor for NAION during eye examinations<br>• Impact on drug absorption: orally administered drug absorption may be impaired during dose titration |

## Dual GLP/GIP Agonist

| | Efficacy | Hypoglycaemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| **Dual** GLP-1/GIP agonist | Very high | No | Loss (very high) | Benefit: tirzepatide | Benefit: tirzepatide | Benefit for kidney endpoints in CVOTs: tirzepatide | • See label for dose considerations for kidney function<br>• No dose adjustment<br>• Monitor kidney function when initiating or escalating doses in patients with kidney impairment reporting severe adverse GI reactions | Potential benefit | SQ | High | • Risk of thyroid C-cell tumours in rodents; human relevance not determined<br>• Counsel patients on potential for GI side effects and their typically temporary nature; provide guidance on dietary modifications to mitigate GI side effects [reduction in meal size, mindful eating practices (e.g. stop eating once full), decreasing intake of high-fat or spicy food]; consider slower dose titration for patients experiencing GI challenges<br>• Pancreatitis has been reported in clinical trials but causality has not been established. Discontinue if pancreatitis is suspected<br>• Evaluate for gallbladder disease if cholelithiasis or cholecystitis are suspected<br>• Diabetic retinopathy: close monitoring of retinopathy in those at high risk (older individuals and long duration of T2D >10 Years) |

# Metformin

| | Efficacy | Hypogly-caemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| **Metformin** | High | No | Neutral (potential for modest loss) | Potential benefit | Neutral | Neutral | • Contraindicated with eGFR <30 ml/min per 1.73 $m^2$ | Neutral | Oral | Low | • GI side effects common; to mitigate GI side effects, consider slow dose titration, extended-release formulations and administration with food<br>• Potential for vitamin $B_{12}$ deficiency; monitor at regular intervals and replace as appropriate |

# Sulfonylureas

| | Efficacy | Hypogly-caemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| **Sulfonylureas (2nd Generation)** | High | Yes | Gain | Neutral | Neutral | Neutral | • Glyburide: generally not recommended in chronic kidney disease<br>• Glipizide and glimepiride: initiate conservatively to avoid hypoglycaemia | Unknown | Oral | Low | • FDA Special Warning on increased risk of CV mortality based on studies of an older sulfonylurea (tolbutamide); glimepiride shown to be CV safe (see text)<br>• Use with caution in persons at risk for hypoglycaemia |

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# DPP-4 Inhibitors

| | Efficacy | Hypoglycaemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| DPP-4 Inhibitors | Intermediate | No | Neutral | Neutral | Neutral (potential risk, saxagliptin) | Neutral | • Dose adjustment required based on kidney function (sitagliptin, saxagliptin, alogliptin); can be used in kidney impairment<br>• No dose adjustment required for linagliptin | Unknown | Oral | High | • Pancreatitis has been reported in clinical trials but causality has not been established. Discontinue if pancreatitis is suspected<br>• Joint pain<br>• Bullous pemphigoid (postmarketing): discontinue if suspected |

# Thiazolidinediones

| | Efficacy | Hypoglycaemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| Thiazolidinediones | High | No | Gain | Potential benefit: pioglitazone | Increased risk | Neutral | • No dose adjustment required<br>• Generally not recommended in kidney impairment due to potential for fluid retention | Potential benefit | Oral | Low | • Congestive heart failure (pioglitazone, rosiglitazone)<br>• Fluid retention (oedema; heart failure)<br>• Benefit in MASH<br>• Risk of bone fractures<br>• Weight gain: consider lower doses to mitigate weight gain and oedema |

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# Insulin

| | | Efficacy | Hypoglycaemia | Weight change | Effects on CV outcomes | | Effects on kidney outcomes | | Effects on MASH outcomes | Oral/SQ | Cost | Clinical considerations |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Effect on MACE | HF | Progression of DKD | Dosing/use considerations* | | | | |
| **Insulin** | **Human** | High to very high | Yes | Gain | Neutral | Neutral | Neutral | • Lower insulin doses required with a decrease in eGFR; titrate per clinical response | Unknown | SQ; inhaled | Low (SQ) | • Injection site reactions<br>• Higher risk of hypoglycaemia with human insulin (NPH or premixed formulations) vs analogues<br>• Risk of hypoglycemia and duration of activity increases with severity of impaired kidney function. |
| | **Analogues** | | | | | | | | | SQ | High | |

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# Metabolic Surgery

## Consensus Recommendation

- Metabolic Surgery could be considered for people with type 2 diabetes and a BMI ≥30 kg/m$^2$ (or ≥27.5 kg/m$^2$ for people of Asian ancestry) and should be considered for people with a BMI ≥35 kg/m$^2$ (or ≥32.5 kg/m$^2$ for people of Asian ancestry).

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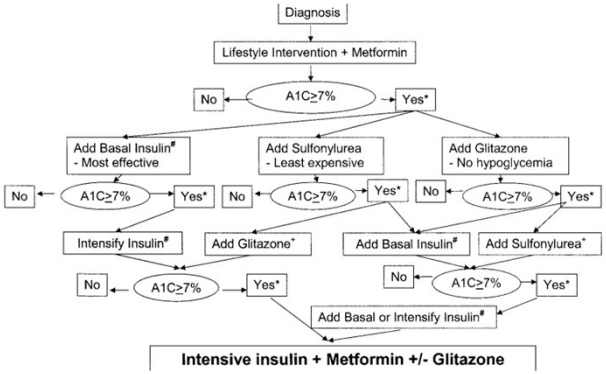
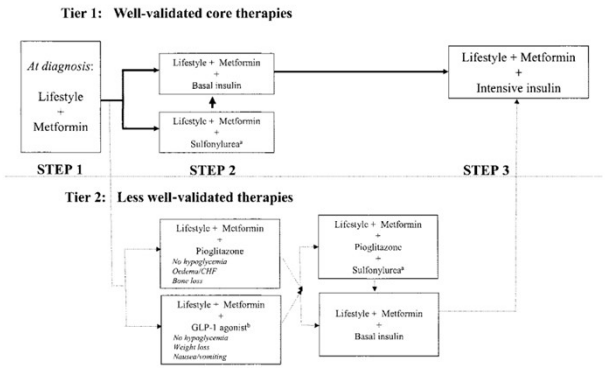
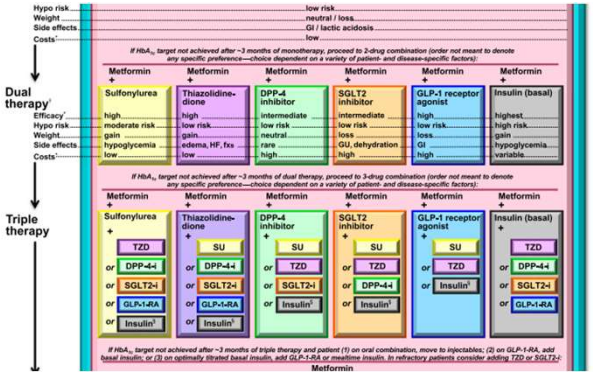
# Evolution of Diabetes Care Guidance: 2006-2012




**2006:**

Lifestyle + metformin; “primary goal of achieving and maintaining glucose levels as close to the nondiabetic range as possible.”

**2009:**

Emergence of ‘less validated’ therapies; ‘paucity of high-quality’ comparative research.

**2012:**

Medication menu and Medication profiles


Nathan DB, Buse JB et al; Diabetes Care; 29:1963-1972; 2006
Nathan DM, Buse JB et al; Diabetes Care. 2009; 32(1):193-203
Inzucchi SE …Buse JB et al; Diabetes Care 2012; 35:1364-1379.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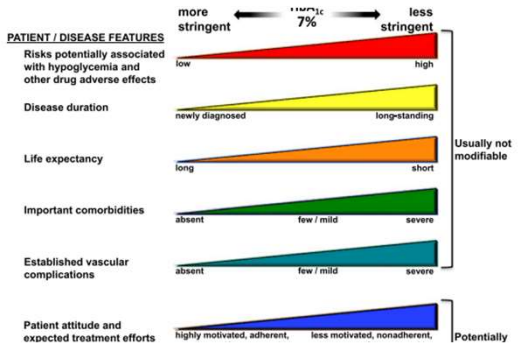
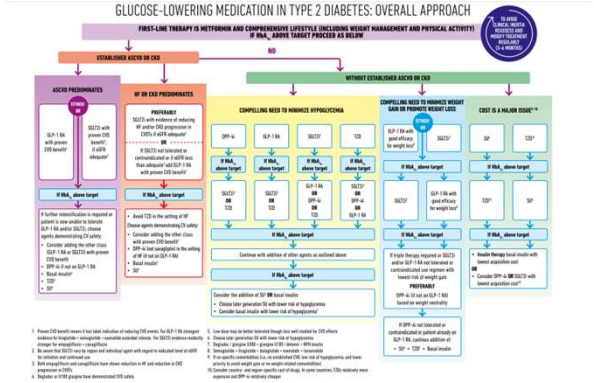
# Evolution of Diabetes Guidance 2012-2022: The Individual at the Center





## 2012:

Patient characteristics impact treatment goals

## 2018:

Cardiovascular Outcome era differentiates approaches; ability to impact outcomes

## 2022:

Holistic Approach, person-centered goals, recognizing vast principles of care, diabetes, weight management, longitudinal outcomes


Inzucchi SE …Buse JB et al; Diabetes Care 2012; 35:1364-1379.
Davies MJ…Buse JB. Diabetes Care 2018; 41: 2669–2701.
Davies MJ, Aroda VR, Collins BS, Gabbay RA, Green J, Maruthur NM, Rosas SE, Del Prato S, Mathieu C, Mingrone G, Rossing P, Tankova T, Tsapas A, Buse JB. Diabetes Care 2022; 45: 2753–2786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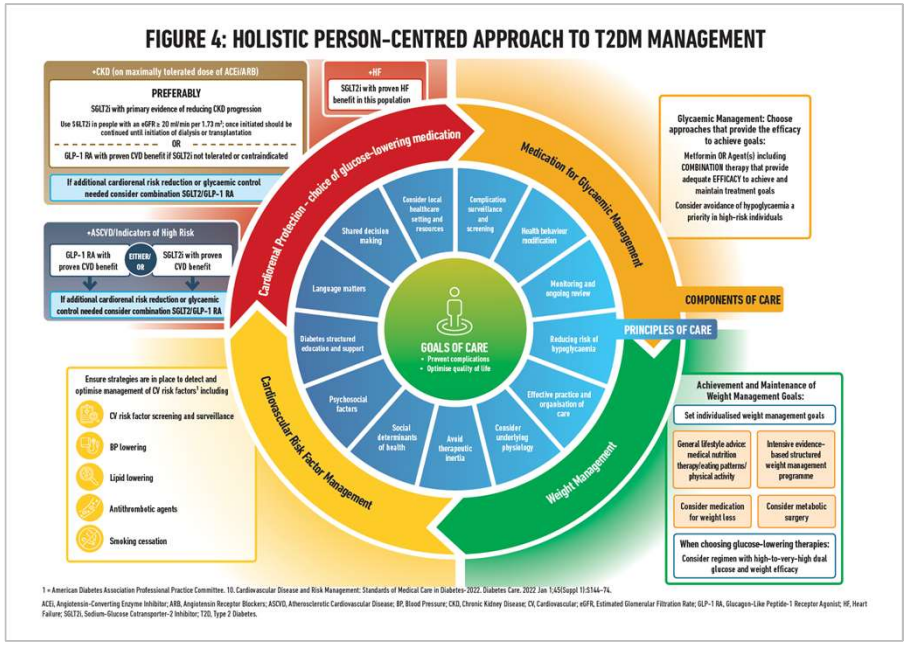
# Holistic Care 2022->2026




- Lifecourse, Longitudinal View
- Foundational, Integrated Lifestyle and Healthy Behaviors
- Prevention of Complications and Multiple Long-Term Conditions
- Healthspan

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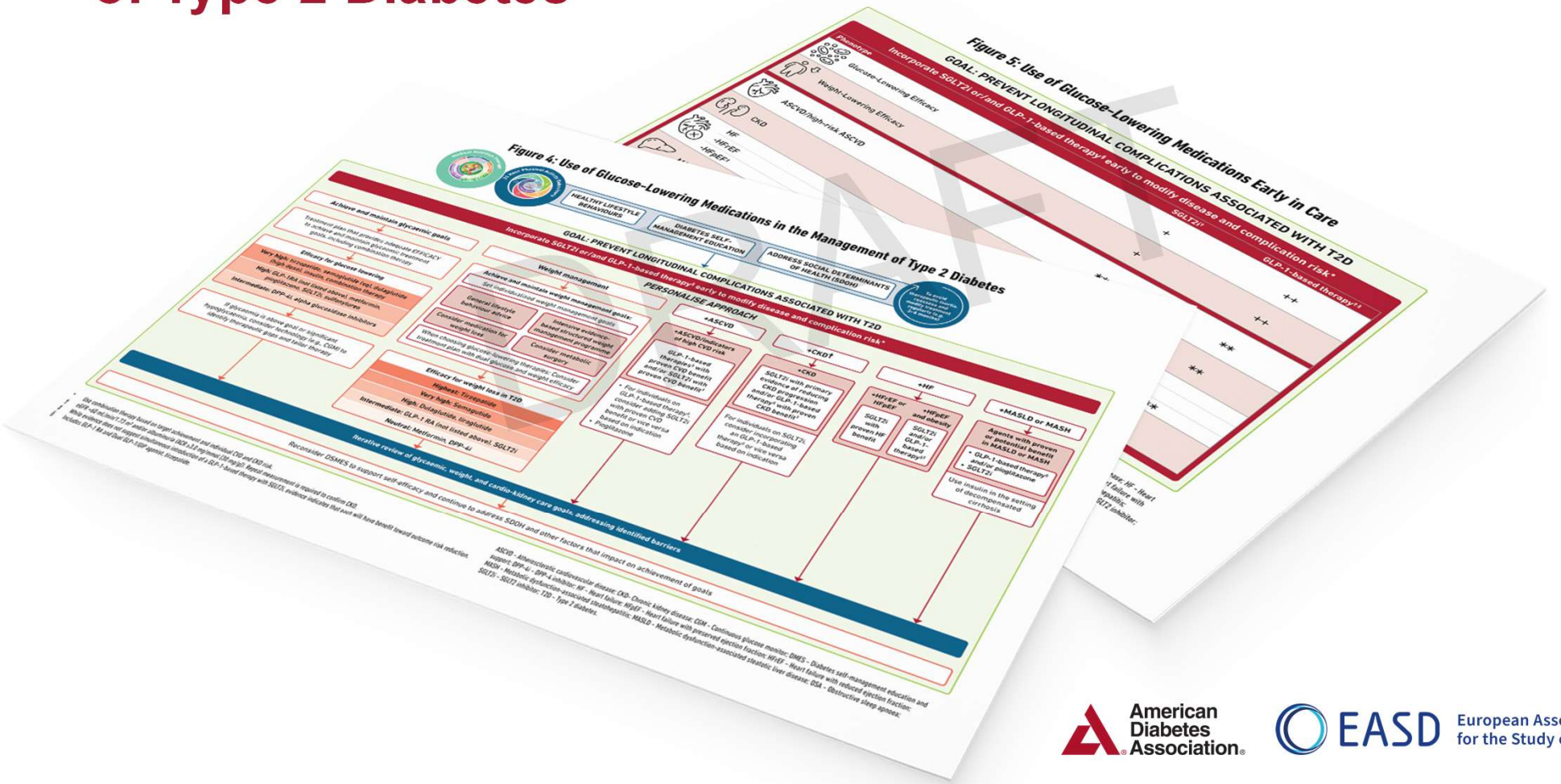
# Use of Glucose-Lowering Medications in the Management of Type 2 Diabetes

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# Agenda

- Introduction, Methods, and the Rationale, Importance, and Context of Glucose-Lowering Treatment

  **Melanie J. Davies, MB ChB, MD**

- Interventions and Approaches to Type 2 Diabetes Treatment

  **Vanita R. Aroda, MD**

- Personalized Approach to Treatment Based on Individual Characteristics and Associated Long-Term Conditions

  **Jennifer Green, MD**

- Putting It All Together: Strategies for Implementation

  **Chantal Mathieu, MD, PhD**

- Key Knowledge Gaps

  **John B. Buse, MD, PhD**

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# Personalized Approach to Treatment Based on Individual Characteristics and Associated Long-Term Conditions

**Jennifer Green, MD**

- Professor of Medicine
- Division of Endocrinology, Duke Clinical Research Institute, Duke University School of Medicine, Durham, North Carolina

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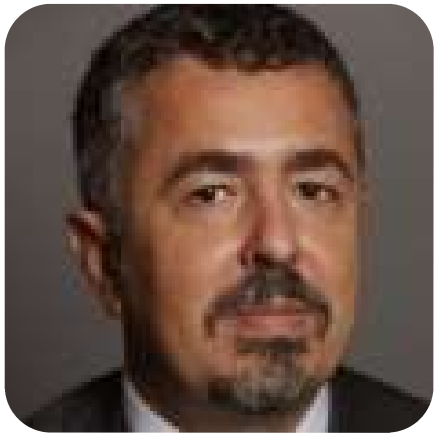
# Disclosures of Interest

- Consultant: Aqua, AstraZeneca, Bayer, Boehringer Ingelheim, Fractyl, vTv, Lilly, Novo Nordisk, Roche, Sparrow, Vertex, Zealand

- Research support: Boehringer Ingelheim, Cour, GentiBio, Merck, Metsera

# Personalized Approach Subsection

Jennifer Green,
MD



Apostolos Tsapas,
MD, PhD, MSc

Francesco Giorgino,
MD. PhD

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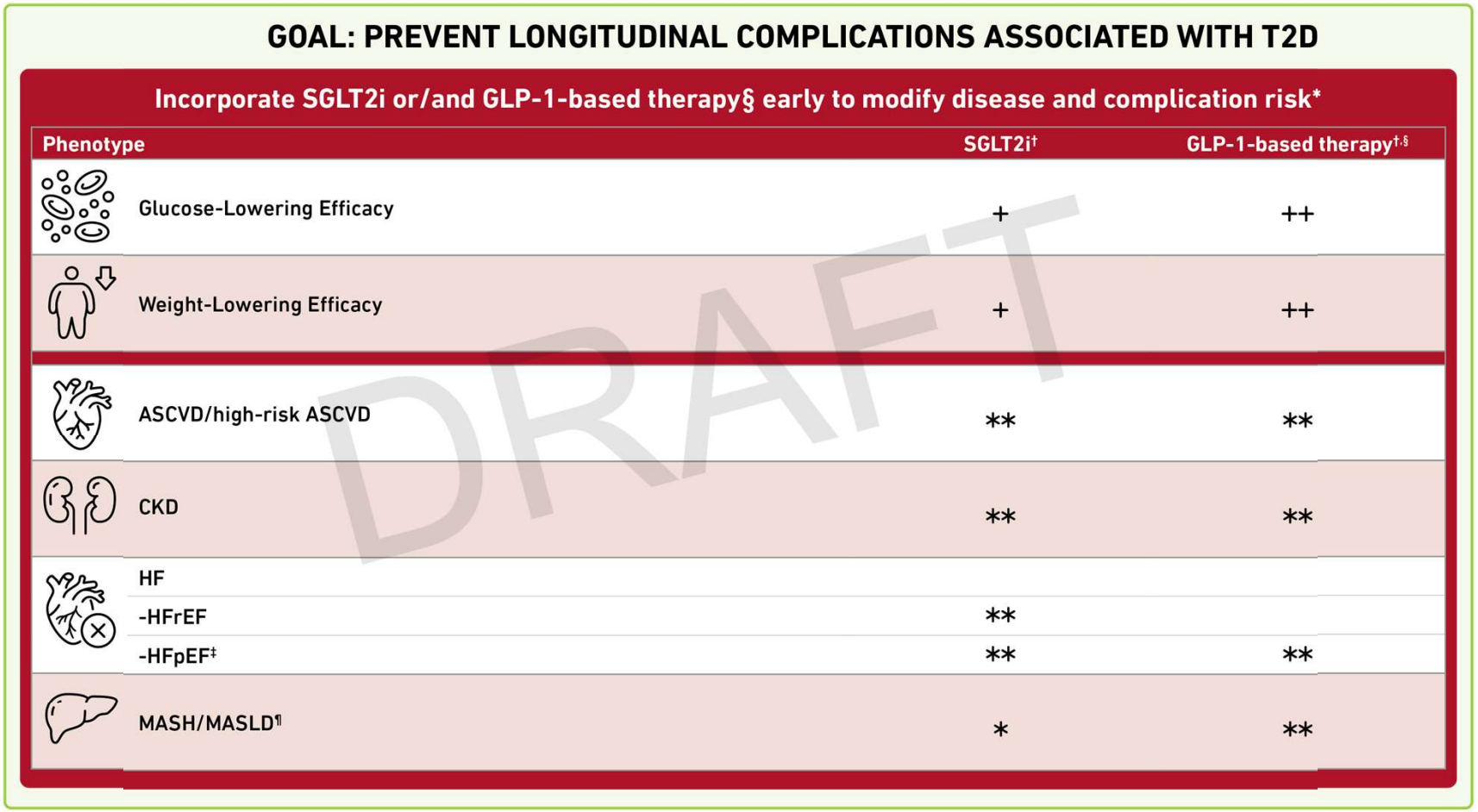
# Figure 5: Use of Glucose-Lowering Medications Early in Care




**: Outcomes evidence; *: Improvement in markers
++: Highest efficacy; +: High efficacy

* Use combination therapy based on target achievement and individual CVD and CKD risk.
¶ Pioglitazone may be considered.
† Where evidence and/or label indicate (Table 1)
‡ Trials of GLP-1-based therapies only included participants with a BMI ≥30kg/m$^2$
§ Includes GLP-1 RA and Dual GLP-1/GIP agonist, tirzepatide

# Established ASCVD and Heart Failure (1/2)

## Consensus Recommendations

- **Both SGLT2 inhibitors and GLP-1-based therapy confer cardiovascular benefits** independent of metformin and **should be first line therapeutic considerations** individualised based on baseline absolute cardio-kidney risk and time horizon.

- **In people with established CVD, GLP-1-based therapies with proven benefit should be used to reduce MACE and all-cause mortality, or an SGLT2 inhibitor with proven benefit should be used to reduce MACE, HF, and all-cause mortality and to improve kidney outcomes**.

- As benefits may be additive, **combination therapy with SGLT2 inhibitors and GLP-1-based therapy could be considered in those at high risk for CVD or with established CVD or kidney disease** irrespective of HbA1c levels.

- In people with PAD, semaglutide can be used to improve symptoms.

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# Established ASCVD and Heart Failure (2/2)

## Consensus Recommendations

- **In people with HF**, **SGLT2 inhibitors** should be used to improve HF and kidney outcomes.
- **In people with obesity and HFpEF**, **semaglutide or tirzepatide** should be used to improve HF symptoms and outcomes.
- **In people with HFpEF/HF with mildly reduced ejection fraction**, a **non-steroidal MRA** with proven benefit should be used to improve HF and mortality.
- To reduce progression of CKD and CVD **in type 2 diabetes with albuminuria, addition of a non-steroidal MRA** with proven benefit is recommended when eGFR>25 ml/min/1.73m$^2$.

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# Multiple CV Risk Factors

## Consensus Recommendations

- In individuals **without established CVD but with multiple cardiovascular risk factors** (e.g., age ≥55 years, obesity, hypertension, smoking, dyslipidaemia, or albuminuria), a **GLP-1-based therapy with proven benefit could be used to reduce MACE and improve kidney outcomes, or an SGLT2 inhibitor with proven benefit could be used to reduce MACE and HF and improve kidney outcomes**.

- The level of certainty in this recommendation is lower for this subgroup, because some CVOTs recruited exclusively people with established CVD, and fewer events were recorded among those with cardiovascular risk factors only in trials that enrolled both subgroups. In addition, definitions of risk factors were not identical across CVOTs, but generally comprised age ≥55 years plus two or more additional risk factors, including obesity, hypertension, smoking, dyslipidaemia, or albuminuria. Furthermore, in terms of absolute effects, cardiovascular benefits of GLP-1 RAs and SGLT2 inhibitors were less pronounced in people with three or more cardiovascular risk factors than in those with established CVD.

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## Atrial Arrhythmias

### Consensus Recommendation

- In people **at high risk for atrial arrhythmias, semaglutide or SGLT2 inhibitors** with proven benefit could be considered to reduce AF risk.

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# Chronic Kidney Disease

## Consensus Recommendations

- In people **with CKD, an SGLT2 inhibitor with proven benefit should be initiated** to improve kidney and HF outcomes and reduce MACE and should be continued until kidney replacement therapy is indicated.

- In people **with CKD, GLP-1-based therapy with proven benefit should be initiated** to improve kidney and HF outcomes and reduce MACE. Semaglutide is indicated to reduce the risk of CKD progression.

- In people **with CKD and UACR >3.0 mg/mmol (>30 mg/g), a non-steroidal MRA** with proven benefit should be used to improve kidney and HF outcomes.

- **SGLT2 inhibitors should form the foundation for HF/CKD protection**, **GLP-1-based therapies** could be added for incremental MACE and kidney benefit plus weight/metabolic control, and **finerenone** could be added, particularly in albuminuric CKD to further reduce cardio-kidney events.

- **Early combination therapy** should be considered in people with **concomitant CVD, CKD, and HF**.

- Choice among individual SGLT2 inhibitors and GLP-1-based therapy should be based on country-specific indications and evidence on efficacy, safety, and outcome benefits, considering within-class heterogeneity.

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# MASLD and MASH

## Consensus Recommendations

- For people with diabetes and MASLD, **weight reduction should be a primary therapeutic target**, and **lifestyle modification is foundational**. Physical activity should be encouraged. Multiple nutritional approaches have beneficial effect, but the MD has strongest evidence of benefit.

- For people with **obesity, type 2 diabetes and MASLD, a GLP-1-based therapy** with proven benefit should be used.

- For people with **diabetes and biopsy-proven MASH, a GLP-1-based therapy** with proven benefit should be preferred. **Pioglitazone or tirzepatide** could also be used.

- **Combination regimens with pioglitazone and GLP-1-based therapy** should be considered for enhanced effect, while treatment with other glucose lowering agents can be continued as indicated.

- Specifically for people with **decompensated cirrhosis, insulin is the preferred agent**. For patients with **moderate (stage F2) or advanced (stage F3) liver fibrosis**, referral to a hepatologist should be coordinated to consider **treatment with a thyroid hormone receptor-β agonist**.

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# GLP-1-Based Therapies and SGLT2 Inhibitors in Lower-Risk Populations

## Consensus Recommendation

- **Treatment decisions should be individualized based** on baseline absolute cardio-kidney risk and time horizon, as absolute benefit is substantially greater in people at higher cardio-kidney risk.

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# Younger People with Diabetes

## Consensus Recommendations

- **Early-onset type 2 diabetes is associated with faster glycaemic deterioration and earlier onset of complications**, thus **early deployment of SGLT2 inhibitors and GLP-1-based therapies**, either alone or in combination, should be prioritised.
- Earlier use of GLP-1-based therapy or SGLT2 inhibitors must be accompanied by explicit **counselling in women of reproductive potential** regarding contraception and avoidance of exposure to medications that may adversely affect a foetus.

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# Race and Ethnicity

## Consensus Recommendation

- Selection of medications to improve cardiovascular and kidney outcomes should not differ by race or ethnicity.

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## Sex Differences

### Consensus Recommendations

- Selection of medications to improve cardiovascular and kidney outcomes **should not differ by sex**. However, it is important to counsel women of reproductive potential regarding contraception and avoidance of exposure to medications that may adversely affect a foetus.

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# Obstructive Sleep Apnoea

## Consensus Recommendation

- For people with **obesity, type 2 diabetes and OSA, tirzepatide or a GLP-1 RA with proven benefit** could be prioritised.

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# Cognitive Decline

## Consensus Recommendation

- There is not yet evidence to support preferred use of any glucose lowering agents on cognitive outcomes. Hence, selection of glucose lowering therapy should prioritise safety and simplicity.

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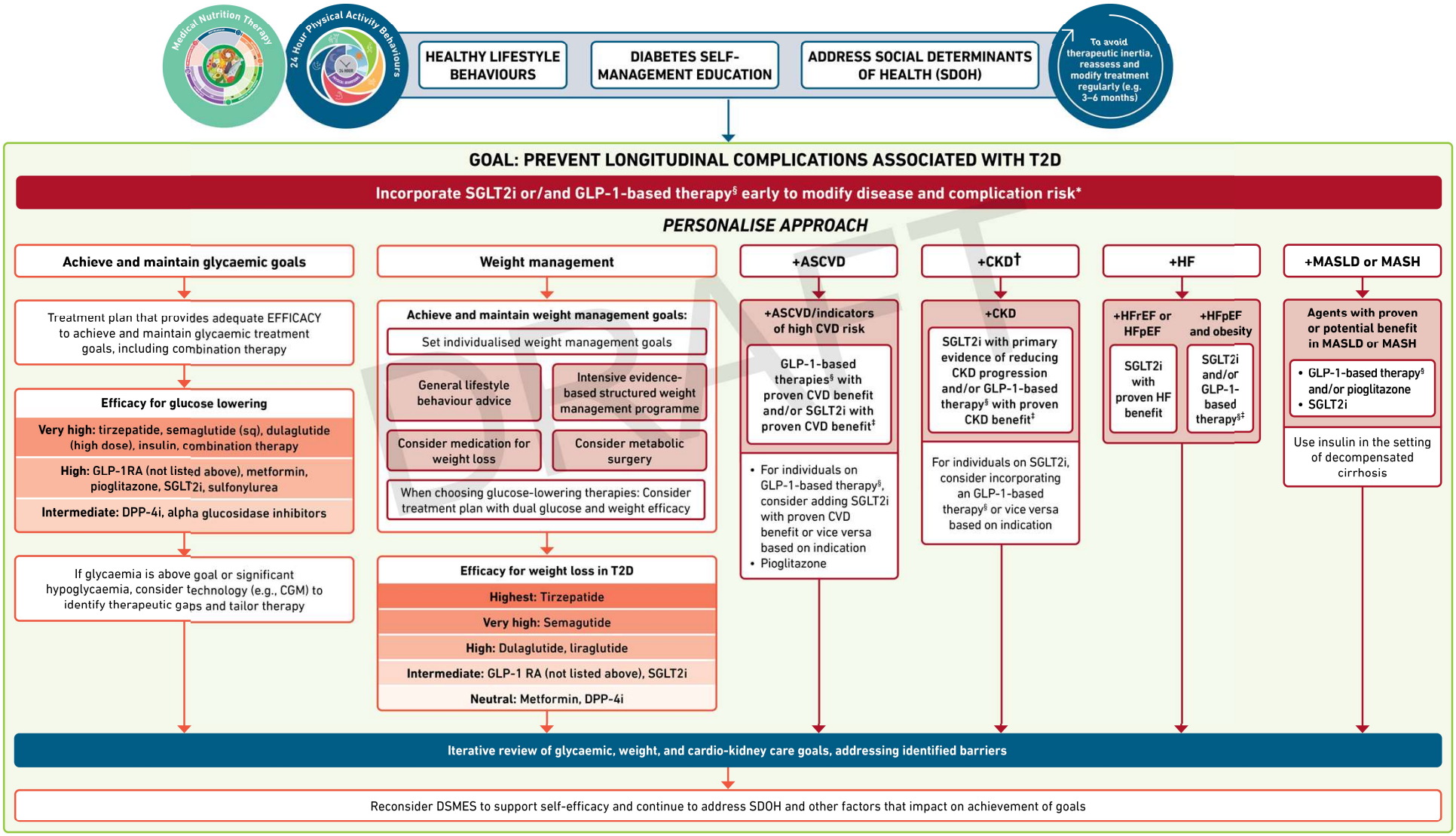
# Figure 4: Use of Glucose-Lowering Medications in the Management of Type 2 Diabetes



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  **Chantal Mathieu, MD, PhD**

- Key Knowledge Gaps

  **John B. Buse, MD, PhD**

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# Putting It All Together: Strategies for Implementation

**Chantal Mathieu, MD, PhD**

- KU Leuven, Leuven, Belgium

**Pinar Topsever, MD**

- Acıbadem Mehmet Ali Aydınlar University, Istanbul, Türkiye

**Nisa Maruthur, MD, MHS**

- University of Maryland, Baltimore, USA.

**Nuha El Sayed, MD, PhD**

- Brigham & Women's Hospital, Boston, USA

**Sylvia Rosas, MD, MSCE**

- Joslin Diabetes Center, Boston, USA

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# Disclosures of Interest

CM serves or has served on the advisory panel for Novo Nordisk, Sanofi, Eli Lilly and Company, Novartis, Dexcom, Boehringer Ingelheim, Bayer, Roche, Abbott, Medtronic, Insulet, Biomea Fusion, SAB Bio, vTv Therapeutics and Vertex. Financial compensation for these activities has been received by KU Leuven; KU Leuven has received research support for CM from Dexcom, Novo Nordisk and Sanofi; CM serves or has served on the speakers bureau for Novo Nordisk, Sanofi, Eli Lilly and Company, Medtronic, Dexcom, Insulet, Abbott, Vertex and Boehringer Ingelheim. Financial compensation for these activities has been received by KU Leuven. CM is president of EUDF. All external support of EUDF is to be found on www.eudf.org .

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# General Approach to Person-Centred Care

## Consensus Recommendations

- Type 2 diabetes care should be **integrated**, with the person living with type 2 diabetes at the centre.
- Care teams should identify and address the **MLTCs** present in people living with type 2 diabetes as part of integrated diabetes care.
- Effective **communication** between all team members and the person living with type 2 diabetes should be maintained throughout care delivery.
- **Goals of treatment** should be specific, measurable, attainable, relevant, time-based, identified collaboratively, agreed upon, and revisited regularly with the person living with type 2 diabetes.

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# Health Behaviours

## Consensus Recommendations

- All individuals with type 2 diabetes should be offered **MNT** and plans should be **reassessed** regularly, paying attention to individualisation of interventions.
- The **‘5Ss’ physical behaviour principles** should be considered an essential component of type 2 diabetes management.
- People with type 2 diabetes undergoing interventions associated with significant weight loss, such as metabolic surgery or GLP-1-based therapies, should receive **guidance** on adequate protein intake and resistance exercise to help **prevent lean mass loss**.
- Goals for health behaviour interventions should be ‘**SMART**’, agreed upon collaboratively, and revisited at regular intervals.



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# Diabetes Self-Management Education and Support (DSMES)

## Consensus Recommendations

- **DSMES** should be offered to all those living with type 2 diabetes and revisited **regularly**.

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# Weight Management in the Treatment of Type 2 Diabetes

## Consensus Recommendations

- DSMES and MNT should be offered to people with type 2 diabetes to **identify and address barriers** to health behaviour change and support weight loss.
- Weight management goals should be **individualised** and agreed upon collaboratively, balancing clinical ambition with personal **feasibility**.
- In people with type 2 diabetes and overweight or obesity, use of **agents with weight-lowering effects** should be preferred as glucose-lowering therapy, and **metabolic surgery** should be considered.
- Focus on weight **maintenance** should be kept after goals are achieved.

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# Choice of Glucose-Lowering Medication

## Consensus Recommendations

- The choice of glucose-lowering agents should be **individualised** based on the clinical profile of the person living with type 2 diabetes, including the presence of overweight or obesity as well as other MLTCs, adverse effect profile of agents, individual preferences, and personal circumstances.

- In addition to **DSMES** and interventions focused on **health behaviours**, **most people** living with type 2 diabetes would benefit from **early introduction of an SGLT2 inhibitor and/or GLP-1-based therapy**, potentially from diagnosis.

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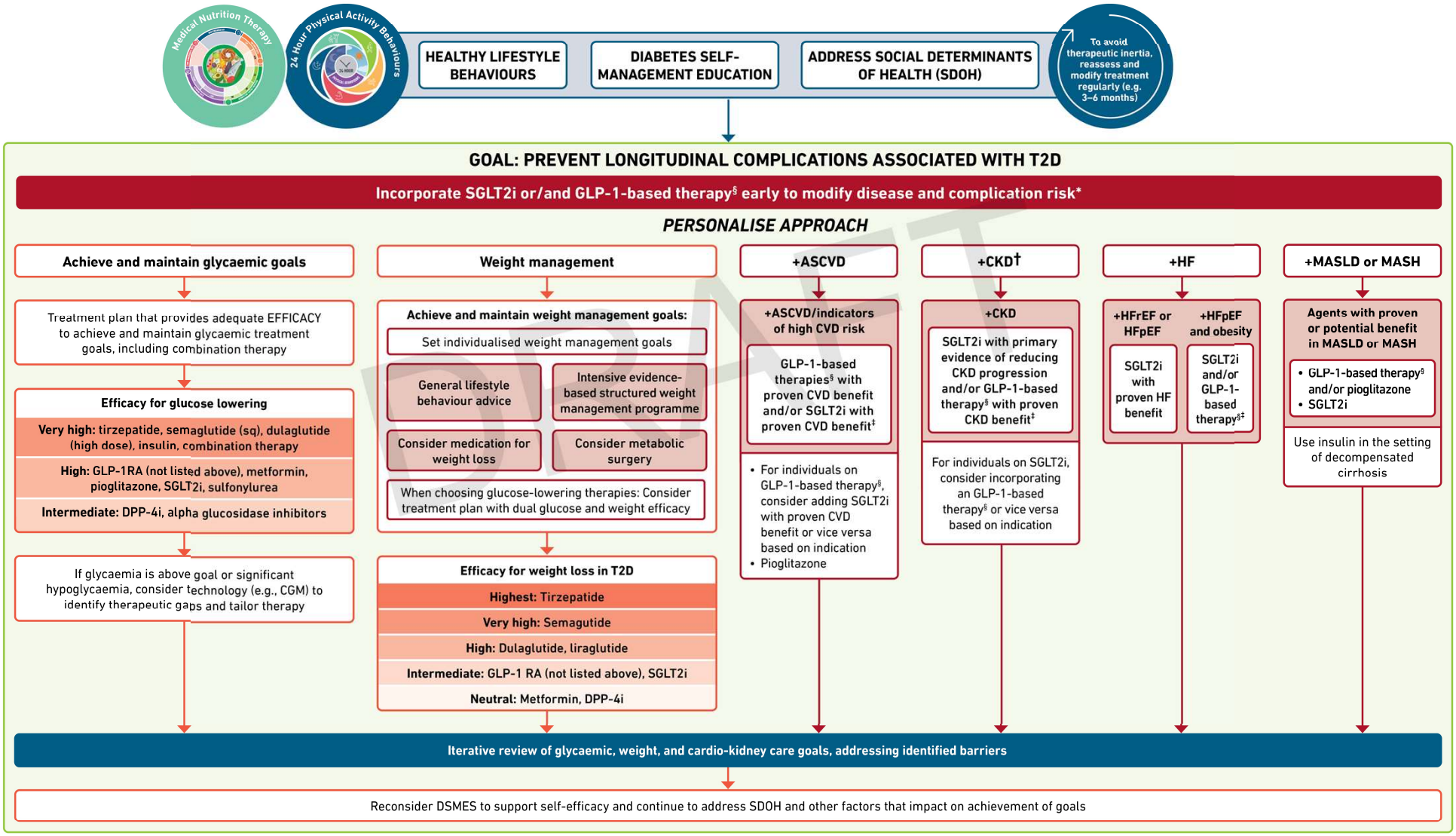
# Figure 4: Use of Glucose-Lowering Medications in the Management of Type 2 Diabetes



# Choice of Glucose-Lowering Medication

## Consensus Recommendations

- When clinically indicated, **insulin should be initiated as basal insulin only**, usually after GLP-1-based therapy, while maintaining other glucose-lowering agents, particularly cardio-kidney protective agents such as SGLT2 inhibitors. Further intensification of therapy should be individualised based on the person's clinical profile, risk, circumstances, and preferences.

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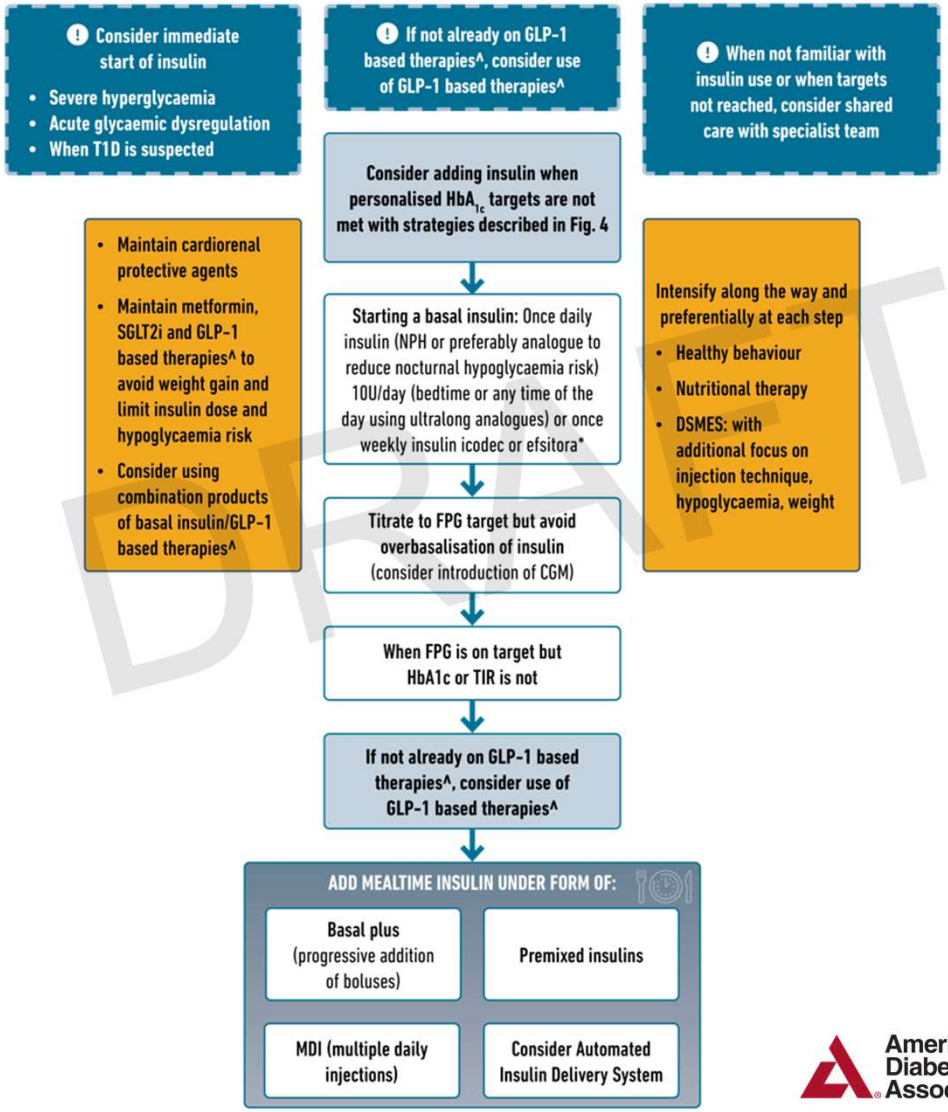
# Place of Insulin



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# Choice of Glucose-Lowering Medication

## Consensus Recommendations

- **Deintensification** of glucose-lowering therapy associated with hypoglycaemia risk (particularly sulfonylurea) should be addressed in people with frailty and type 2 diabetes.

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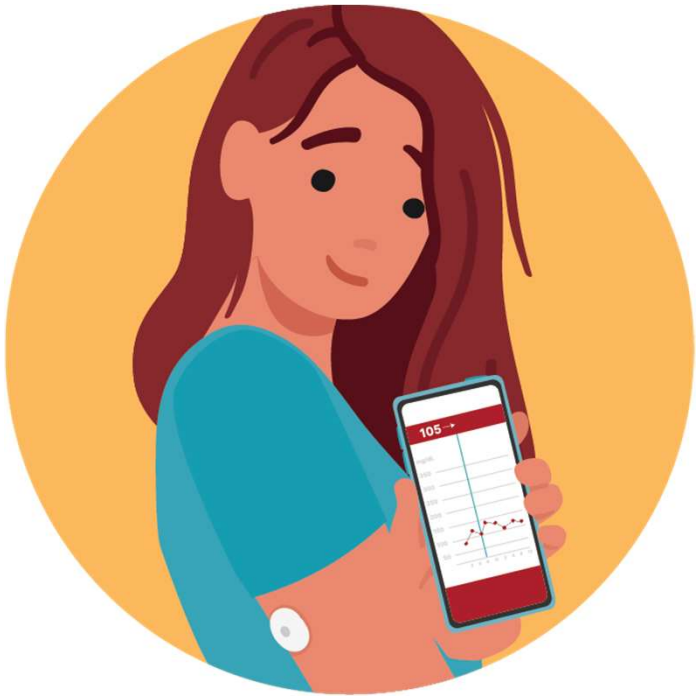
# Place of Technology

## Consensus Recommendations

- Evidence-based diabetes **technologies**, with proven benefits in people with type 2 diabetes should be considered as adjunctive tools within a comprehensive, integrated diabetes management plan and individualised based on clinical need, preference, and skill level.
- **CGM** should be considered in people living with type 2 diabetes, especially those on insulin.

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# Implementation of Evidence-Based Interventions – Importance of Organization of Care

## Consensus Recommendations

- Health care systems should be **organized** to deliver individualised diabetes care that is integrated into the daily lives of people with type 2 diabetes.
- Care for people with type 2 diabetes should be **individualised**, with explicit consideration of each person's clinical risks, personal preferences, lived context, and **SDOH**, including socioeconomic status, food security, housing stability, and access to care.
- The management plan for people with type 2 diabetes should incorporate **all MLTCs**, with treatment priorities, glycaemic targets, and pharmacologic choices informed by the overall disease burden
- Care delivery for people with type 2 diabetes should **leverage innovative models**, including digital health tools and interprofessional team-based care, to expand access and support self-management.
- Health care systems should establish mechanisms to identify and address **inequities** in the delivery of evidence-based care for people with type 2 diabetes.

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## Figure 6: A Learning Health System Framework for Quality and Outcomes in T2D

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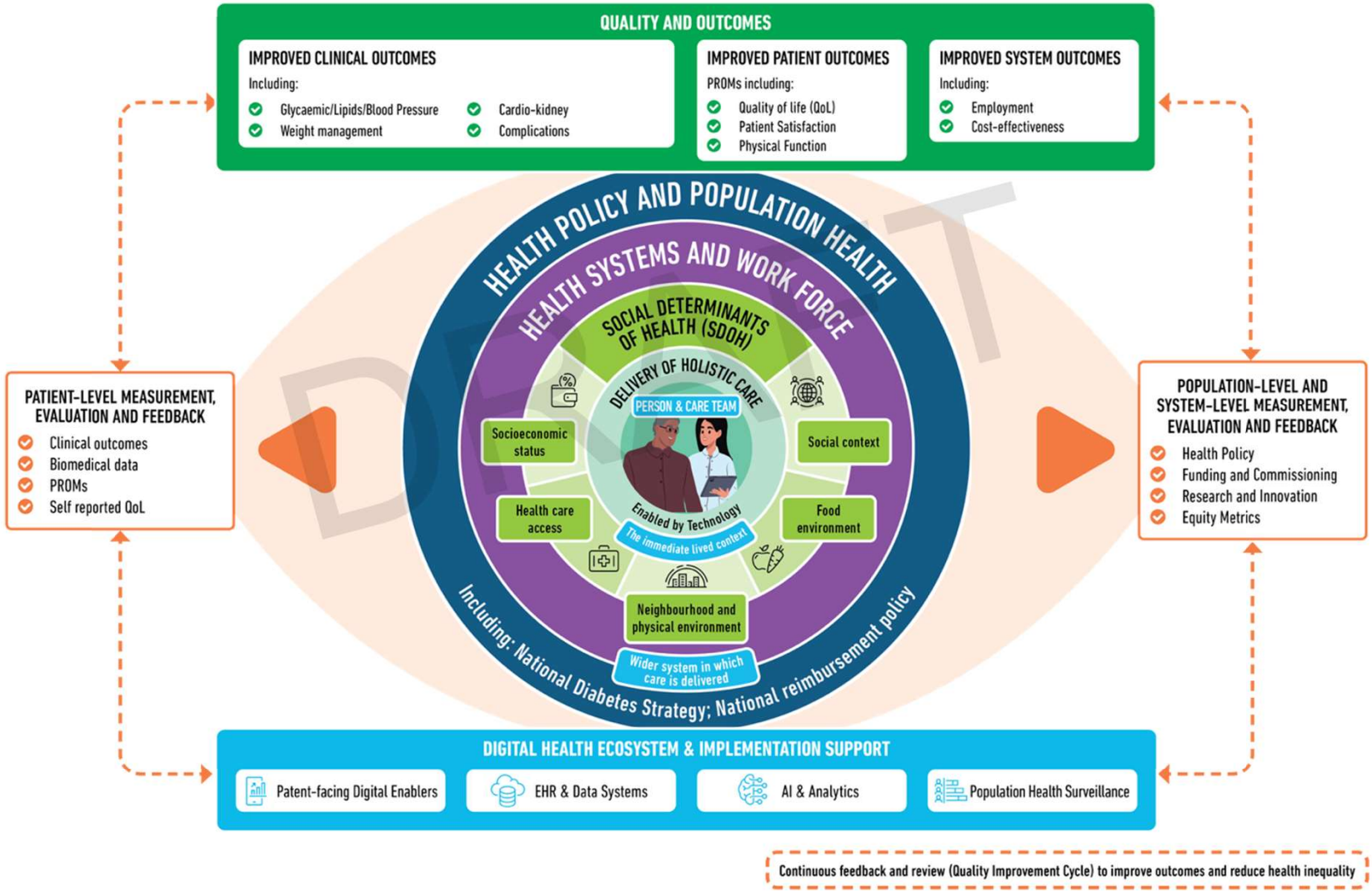


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# Agenda

- Introduction, Methods, and the Rationale, Importance, and Context of Glucose-Lowering Treatment

  **Melanie J. Davies, MB ChB, MD**

- Interventions and Approaches to Type 2 Diabetes Treatment

  **Vanita R. Aroda, MD**

- Personalized Approach to Treatment Based on Individual Characteristics and Associated Long-Term Conditions

  **Jennifer Green, MD**

- Putting It All Together: Strategies for Implementation

  **Chantal Mathieu, MD, PhD**

- Key Knowledge Gaps

  **John B. Buse, MD, PhD**

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# Key Knowledge Gaps

**John B. Buse, MD, PhD**

- Verne S. Caviness Distinguished Professor of Medicine
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# Disclosures of Interest

- **Grants/contracts:** Corcept, GentiBio, Novo Nordisk and Sparrow Pharmaceuticals
- **Consultant/advisory board:** Aardvark Therapeutics, Altimmune, Alveus Therapeutics, Amgen, Antag, Aqua Medical, AstraZeneca, Corcept Therapeutics, Eli Lilly, General Medicines Inc, Kayothera, Metsera, Novo Nordisk, Pfizer, Recordati, Roche, Sparrow Pharmaceuticals, Vertex, vTv Therapeutics, and Zealand
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# Key Knowledge Gaps (1/3)

- Consensus is emerging that early intensive therapy in type 2 diabetes is associated with sustained benefits, but trial evidence for glycaemic targets <7% are poorly developed and for CGM targets, they are essentially non-existent. We need trials to provide convincing evidence for new targets.
- Should the definition of remission be broadened to include modifications to associated long-term conditions and/or to include individuals who achieve euglycaemia while using glucose-lowering medication?
- We have burgeoning pharmacologic and technologic applications in type 2 diabetes management. How to optimally sequence them and when is enough in fact enough?
- We need better trial evidence for early intensive therapy in early-onset type 2 diabetes, particularly in youth with type 2 diabetes in whom the lifetime risk of complications is highest. Similarly, there is inadequate understanding of how and when to deintensify therapy later in life.

# Key Knowledge Gaps (2/3)

- Women's health approaches in the context of diabetes management have been understudied. A new issue is how GLP-1-based treatments should be managed in the context of pregnancy. Almost certainly, stopping them before conception will be associated with more harm than good, but diffidence in that regard currently generally drives a conservative strategy.
- How should adiposity be measured to best reflect the metabolic impact of adiposopathy and what should be targets for medical and surgical weight loss programmes?
- What are optimal lifestyle programmes to support GLP-1-based therapy, including MNT and the 5 Ss to reach weight targets and preserve muscle mass and function? Furthermore, what are the best ways of tackling accelerated ageing, considering outcomes related to whole-body health and physical function?

# Key Knowledge Gaps (3/3)

- With the emergence of increasingly effective weight loss drugs, we need to understand whether high doses of moderately effective agents are equivalent to modest doses of highly effective agents for outcomes, and also the optimum approaches for maintenance of weight loss.
- What should be the evaluation strategy for people with inadequate responses to generally effective therapies; recent studies suggest screening for hypercortisolism identifies a treatable cause in ~25%. There must be others.
- Developing a better understanding of the role of cortisol-directed therapy in type 2 diabetes is needed.
- We still do not have compelling evidence for whether GLP-1-based therapy and SGLT2 inhibitors should be routinely combined, or whether there is an optimal sequence by which they should be added.

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# How you can contribute to the review process

## You can take a photo of this slide

- After Scientific Sessions, the slides will be posted and a webpage will go onto the DiabetesPro webpage with a link to the form for you to submit comments
- The website will be https://professional.diabetes.org/clinical-support/ada-easd-consensus-statement-management-hyperglycemia-type-2-diabetes?auHash=M8gC3JkQdgDM8GiRVyZ2yWqebLua2IuL7q9JIBBkz_8
- Comments will be accepted until 11:59 pm ET, Tuesday, June 16th, 2026

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# Disclosures of Interest

| | |
|---|---|
| **Apostolos Tsapas** | AT has received support for attending meetings from Bayer, Menarini and Novo Nordisk, outside the submitted work. He also serves as chair of the EASD Guidelines Oversight Committee. |
| **Chantal Mathieu** | CM serves or has served on the advisory panel for Novo Nordisk, Sanofi, Eli Lilly and Company, Novartis, Dexcom, Boehringer Ingelheim, Bayer, Roche, Abbott, Medtronic, Insulet, Biomea Fusion, SAB Bio, vTv Therapeutics and Vertex. Financial compensation for these activities has been received by KU Leuven; KU Leuven has received research support for CM from Dexcom, Novo Nordisk and Sanofi; CM serves or has served on the speakers bureau for Novo Nordisk, Sanofi, Eli Lilly and Company, Medtronic, Dexcom, Insulet, Abbott, Vertex and Boehringer Ingelheim. Financial compensation for these activities has been received by KU Leuven. CM is president of EUDF. All external support of EUDF is to be found on www.eudf.org. |
| **Francesco Giorgino** | FG has received research support from Eli Lilly and Roce Diabetes Care, consulting fees from Eli Lilly, Novo Nordisk, and Kayothera, and serves or has served on advisory boards for AstraZeneca, Biomea, Boehringer-Ingelheim, Eli Lilly, Kayothera, Lifescan, Merck Sharp & Dohme, Medtronic, Novo Nordisk, Roche Diabetes Care, and Sanofi. FG serves or has served on boards for EASD/European Foundation for the Study of Diabetes (EFSD), and European Diabetes Forum (EUDF). He has given lectures, presentations, or educational events for AstraZeneca, Boehringer-Ingelheim, Eli Lilly, Lifescan, Merck Sharp & Dohme, Medtronic, Novo Nordisk, Roche Diabetes Care, Sanofi and has received support for medical writing and statistical analysis from Eli Lilly, Novo Nordisk, Roche Diabetes Care, and Sanofi. |
| **Jennifer Green** | JG is or has acted as a consultant for Aqua, AstraZeneca, Bayer, Boehringer Ingelheim, Fractyl, vTv, Lilly, Novo Nordisk, Roche, Sparrow, Vertex, and Zealand. She has received research support from Boehringer Ingelheim, Cour, GentiBio, Merck, and Metsera. |
| **John Buse** | JBB has received research support from Corcept, GentiBio, Novo Nordisk, and Sparrow Pharmaceuticals. He is or has acted as a paid consultant/on the advisory board for Aardvark Therapeutics, Altimmune, Alveus Therapeutics, Amgen, Antag, Aqua Medical, AstraZeneca, Corcept Therapeutics, Eli Lilly, General Medicines Inc, Kayothera, Metsera, Novo Nordisk, Pfizer, Recordati, Roche, Sparrow Pharmaceuticals, Vertex, vTv Therapeutics, and Zealand. He is an investor in Aardvark Therapeutics, Glyscend, Mellitus Health, Metsera, Pendulum Therapeutics, Praetego, and Stability Health. |
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# Disclosures of Interest

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| **Melanie Davies** | MJD has acted as a consultant/advisor and speaker for Eli Lilly, Novo Nordisk and Sanofi, as a consultant/advisor for Kailera and has attended advisory boards for AbbVie, Amgen, AstraZeneca, Biomea Fusion, Carmot/Roche, Daewoong Pharmaceutical, Sanofi, Zealand Pharma, Regeneron, GSK, Innovent Bio and EktaH and as a speaker for AstraZeneca, Boehringer Ingelheim, Obesity Alliance and Zuellig Pharma. She has received grants from AstraZeneca, Boehringer Ingelheim and Novo Nordisk. |
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| **Vanita R. Aroda** | VRA has institutional contracts with Amgen, AstraZeneca, Applied Therapeutics, Biomea, Corcept, Eli Lilly, Fractyl, Kailera, Novo Nordisk, Pfizer, Recordati, Rhythm, and Servier and is a consultant for Baim, Mediflix, Roche, Sanofi and Structure Therapeutics |


Thank you for listening and we look forward to receiving your comments

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