

EVENT REPORT

Public Forum

What is the urgency and relationship between diabetes and fatty liver disease in Malaysia?

Kuala Lumpur | 12 December 2025



Introduction

The Galen Centre of Health and Social Policy, with the support of Boehringer Ingelheim, convened a Public Forum on 12 December 2025 to discuss the link between diabetes and fatty liver disease in Malaysia.

This public forum focused on the growing burden of metabolic dysfunction associated with steatotic liver disease (MASLD) in Malaysia and its close relationship with diabetes and broader cardio-renal-metabolic risk. The discussion drew together clinical, patient, and public-health perspectives to examine disease awareness, screening approaches, patient experience, and opportunities for prevention.

Objective

- To increase awareness of MASLD as a major metabolic and public-health issue in Malaysia.
- To highlight the interrelationship between fatty liver disease, diabetes, cardiovascular disease, and kidney disease.
- To identify practical strategies for early detection, patient-centred care, and population-level prevention.

Key messages

- Metabolically-dysfunction-associated steatotic liver disease (MASLD) is highly prevalent in Malaysia and closely intertwined with diabetes, obesity, cardiovascular disease, and chronic kidney disease.
- Early fibrosis screening, especially in people with type 2 diabetes, can help identify liver damage before severe complications emerge.
- Lifestyle change remains the foundation of prevention and treatment, but stronger public awareness and better integrated care pathways are urgently needed.



Executive Summary

Speakers emphasised that MASLD is no longer a niche liver condition but a common metabolic disorder with major implications for diabetes, cardiovascular health, and long-term healthcare costs. The discussion highlighted Malaysia's high prevalence of obesity and diabetes, the substantial proportion of people living with fatty liver disease, and the risk that patients remain asymptomatic until advanced fibrosis, cirrhosis, or liver cancer develops.

The experts underscored the value of integrating simple fibrosis risk assessment tools, such as FIB-4, into routine diabetes care, improving communication with patients, and reinforcing lifestyle interventions as the first-line response. The forum also stressed the importance of stronger public awareness, coordinated care pathways, and support (e.g. navigators) for patients and caregivers managing advanced disease.

Disease Definition and Pathophysiology

Speakers noted that the 2023 shift from non-alcoholic fatty liver disease to metabolic dysfunction-associated steatotic liver disease (MASLD) better reflects the condition's metabolic origins and may improve patient understanding.

This change emphasises what the disease is rather than what it is not, improving patient understanding. The Asia Pacific group led this proposal in 2020, highlighting regional leadership in disease framing. The new diagnostic criteria support better identification and management aligned with metabolic dysfunction.

Fat accumulation results from evolutionary energy storage, adapting poorly to modern diets. Excess calorie intake and sedentary lifestyles lead to fat storage in the liver and other tissues.

Insulin resistance develops as cells fail to properly absorb glucose, contributing to elevated blood sugar and the onset of diabetes. The liver converts excess blood sugar into fatty acids, which accumulate and cause fatty liver.

Fatty liver causes systemic damage through fat and cholesterol deposition, leading to cardiovascular disease. Fat deposits in blood vessels increase heart attack risk, making cardiovascular disease the leading cause of death in these patients.

Fat-induced injury affects the pancreas (worsening diabetes), heart (heart failure), and kidneys, amplifying multi-organ complications. The liver tries to burn fat (oxidation) to reduce accumulation, but this causes inflammation and scarring over time.

Fatty liver remains asymptomatic until advanced scarring and liver failure develop. Many patients first present with severe complications like liver cancer or bleeding from varices when it's too late for effective treatment.

Early stages involve liver compensating as a buffer, but progressive fat accumulation leads to irreversible damage.

The discussion centred on how excess calorie intake, sedentary lifestyles, and insulin resistance contribute to fat accumulation in the liver and other organs, driving inflammation, scarring, and wider systemic complications.

MASLD was framed as part of a broader metabolic cascade that affects the pancreas, heart, kidneys, and blood vessels, helping explain why cardiovascular disease is a leading cause of death among affected patients.

The new terminology helps explain what the disease is, rather than defining it by what it is not.

The renaming of fatty liver disease reflects a shift to describe its metabolic causes rather than exclusion criteria.

Epidemiology and Screening in Malaysia

Fatty liver disease is highly prevalent in Malaysia, closely linked to obesity and diabetes, necessitating targeted screening.

The forum heard that an estimated 28% to 40% of Malaysian adults may be living with fatty liver disease, with obesity and diabetes acting as major drivers. The prevalence may be underestimated due to conservative diagnostic cutoffs used in the fatty liver index.

Over 70% of Malaysian adults are overweight or obese using Asian BMI cutoffs, exacerbating metabolic risks.

Malaysia also has 20% diabetes prevalence, one of the highest globally, fuelling fatty liver rates. People with type 2 diabetes were identified as a particularly important risk group because they are more likely to develop significant fibrosis and serious complications.

Type 2 diabetes patients are at higher risk for severe liver scarring and complications, making them a primary screening group.

Malaysia included liver assessment in its 2020 Types 2 Diabetes Guidelines, a pioneering step internationally.

In 2025, the American Diabetes Association supported screening for fibrosis in diabetes and prediabetes to prevent cirrhosis.

Screening focuses on fibrosis (scarring) rather than just detecting fatty liver, as fibrosis predicts outcomes. The Fibrosis score (Fibrosis-4 or FIB-4) is a simple, accessible blood-test-based tool for initial fibrosis screening.

Screening should focus not only on fat in the liver, but on fibrosis risk and the danger of silent progression.

Scores below 1.3 reliably exclude advanced fibrosis; scores above require further evaluation by specialists. Adjusted cutoffs (e.g., 2.0 for older adults) minimise false positives in specific populations.

Routine fibrosis screening is integrated into diabetes care to detect liver damage early. Many labs now automatically report FIB-4 scores with routine blood tests.

Secondary tests, such as liver stiffness measurement via FibroScan, complement initial screening to confirm fibrosis.

Speakers highlighted fibrosis-focused screening - especially the use of FIB-4 based on routine blood tests - as a practical, scalable first step for identifying patients who need further assessment.



Patient Experience and Disease Management

- The forum included lived experience that illustrated the physical, emotional, and logistical burden of advanced liver disease, including emergency episodes, prolonged treatment, fatigue, and dependence on caregivers.
- Akhta, a patient living with liver disease, shared a severe, rare case of liver vein malformation causing cirrhosis-like symptoms without typical metabolic causes. He experienced life-threatening bleeding requiring emergency care and transfusions.
- His liver hardness was due to vascular abnormalities, not typical scarring, complicating diagnosis and treatment. Akhta underwent partial liver removal to cut off non-functioning vein masses, enabling survival with the remaining liver.
- He emphasised the importance of understanding his condition intellectually to cope emotionally. He stressed the need for patient-doctor communication to include patients in decisions and explanations.
- Support from caregivers, especially spouses, is crucial for managing daily challenges of advanced liver disease. Akhta's wife provided essential physical and emotional support during prolonged hospital stays and recovery. However, severe fatigue and physical weakness limited patient independence, necessitating attentive care.
- Patient advocates highlighted the emotional and practical impact of fatty liver complications beyond clinical symptoms. They encouraged better communication strategies and patient-centred care models.

Understanding the patient journey is essential for designing care that is clinically effective and humane.

- Caregiver support was recognized as an essential but often underappreciated component of disease management.

Lifestyle, Prevention, and Public Awareness

- Speakers emphasised that lifestyle change remains the cornerstone of prevention and treatment, to reduce fatty liver and diabetes burden in Malaysia. Weight loss, healthier diets, reduced sugar intake, and regular physical activity offer meaningful benefits.

Simple changes and sustained over time can prevent progression and, in many cases, reverse early disease.

- The discussion noted that losing around 10% of body weight can reverse inflammation and improve liver-related outcomes for many patients.
- Lifestyle changes and public awareness are key to reducing fatty liver and diabetes burden in Malaysia.
- Obesity and metabolic syndrome are central drivers of fatty liver and diabetes, requiring societal action. Processed foods, artificial sugars, and poor diets contribute to insulin resistance and fatty liver.
- Elderly populations face compounded risks, including dementia linked to metabolic disorders.
- Public education is needed on diet, sleep, and exercise to combat rising disease prevalence.
- Simple lifestyle changes like early dinners, intermittent fasting, and regular walking help reduce fatty liver risk. Experts recommend at

least 150 minutes of moderate exercise per week, which can be achieved with daily 15-20-minute walks. Avoiding sugary drinks and limiting carbohydrate intake supports liver health and diabetes prevention.

- Weight loss of approximately 10% body weight can reverse fatty liver inflammation and improve scarring. Example: A 100 kg person losing 10 kg may normalise liver enzymes and reduce fibrosis.
- Early intervention in prediabetes and fatty liver can reverse disease progression. Supplements are widely used but have limited proven benefit and may carry risks.
- Most supplements are unregulated, with insufficient evidence for liver disease treatment. Patients should consult healthcare providers before starting or stopping any supplements or medications. Aware
- Participants called for stronger and more sustained public education on diet, exercise, sleep, and metabolic health, including campaigns that make risk understandable and action feel achievable.

Disease Interrelationships and Holistic Health

- Fatty liver, diabetes, and related conditions form a complex network of metabolic disorders needing integrated care.
- The forum reinforced that fatty liver disease and type 2 diabetes have a bidirectional relationship: each can worsen the other, while both raise the risk of cardiovascular and kidney complications.

A siloed approach misses the reality that metabolic diseases cluster, compound risk, and demand coordinated care.

- MASLD was discussed as one manifestation of a wider metabolic syndrome that may also be linked to coronary disease, heart failure, kidney disease, sleep apnea, reproductive disorders, and possibly neurocognitive decline.
- Participants supported a more integrated approach in primary care and specialist services so that liver risk is considered alongside routine monitoring for diabetes-related complications.
- Poorly controlled diabetes worsens fatty liver severity and complications. Fatty infiltration of the pancreas impairs insulin secretion, complicating diabetes management.
- Metabolic syndrome extends beyond liver and diabetes to include cardiovascular, kidney, and reproductive disorders.
- Conditions like coronary artery disease, heart failure, kidney disease, obstructive sleep apnea, and infertility are linked. Addressing obesity and metabolic health requires a whole-society approach involving education and policy.
- Screening for liver fibrosis complements existing diabetes monitoring protocols for eye, nerve, and kidney health.
- Primary care can integrate liver fibrosis assessment into routine diabetes care to detect complications early. This holistic approach improves patient outcomes and reduces healthcare costs in the long term.
- Public health messaging should emphasise awareness, early detection, and actionable lifestyle adjustments.
- Measurement of waist circumference and BMI using Asian cutoffs helps identify high-risk individuals.
- Government and healthcare systems must support education and accessible screening to curb disease spread.

Priority Considerations Emerging from the Forum

Priority area	Implication for action
Screening and clinical pathways	Integrate fibrosis risk assessment into diabetes and metabolic-risk care pathways, with clear referral routes for patients who need confirmatory testing or specialist review.
Public awareness	Develop clearer public messaging on MASLD, obesity, diabetes, and cardiovascular risk, using practical and non-stigmatising language.
Lifestyle intervention	Strengthening support for weight management, diet counselling, exercise promotion, and community-based prevention efforts.
Patient-centred care	Improve communication with patients and families and recognise the role of caregivers in treatment planning and long-term management.
Integrated care	Promote coordination between hepatology, endocrinology, cardiology, nephrology, and primary care to reflect the interconnected nature of metabolic disease.
Research and learning	Encourage further research into screening tools, risk stratification, patient outcomes, and links between MASLD, diabetes, and broader metabolic complications.

