

BEHAVIOURAL SPECIFICS OF PATIENTS LIVING WITH METABOLIC DYSFUNCTION-ASSOCIATED STEATOTIC LIVER DISEASE (MASLD) – A KEY TO IMPROVE COMMUNICATION

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INTRODUCTION

NAFLD (now termed MASLD), is an increasing public health issue in Europe with estimations of over 25% of the EU adult population having NAFLD and 3-5% being in advanced stages of having NASH (now termed MASH) and fibrosis. ¹

Our research is the first ever looking into the detailed behavioural specifics of patients living with NAFLD by clustering them to groups of like-minded people, determined by similar lifestyle and preferences, similar value orientation and social situation, similar communication and behaviour, similar lifestyles and consumption patterns, so called Sinus-Milieus.

AIM

With these findings we aim to design more individualised communication between doctors and patients and to develop effective strategies to reach at risk populations.

METHOD

2420 anonymised questionnaires have been provided to HCPs (24 hospital and office based hepatologists) to get distributed to their diagnosed NAFLD patients.

The validated Sinus Institute methodology² has been used to perform the cohort's milieu allocation. This questionnaire was extended by a set of investigators generated questions checking for knowledge about the disease, co-morbidities and clinically relevant lifestyle pattern within the collective.

RESULTS

527 responses from 11 centres have been collected within a study duration of 18 months (22% response rate).

The cohort matches well with data from the German NAFLD registry³ and the FLAG study⁴ thereby validating these self-reported data.

| Basic Characteristics | |
|-----------------------|---------|
| Gender (female/male) | 51%/49% |
| Mean Age (years) | 55,9 |
| Mean BMI | 32,57 |
| Diabetes type II | 40% |
| Hypertension | 58% |
| Hypercholesterolemia | 54% |
| Cardiovascular events | 8% |
| Mean FIB4 | 2,07 |
| FIB4 >3,25 | 4% |

What are the Sinus-Milieus®?

The Sinus-Milieus® group people who are similar in their way of life and attitudes. Basic values are included in the analysis as well as the social situation and attitudes towards work, family, leisure time, money and consumption. They thus move the human being and the entire reference system of his living environment holistically into focus.

Short Characteristics of the most relevant Sinus-Milieus®

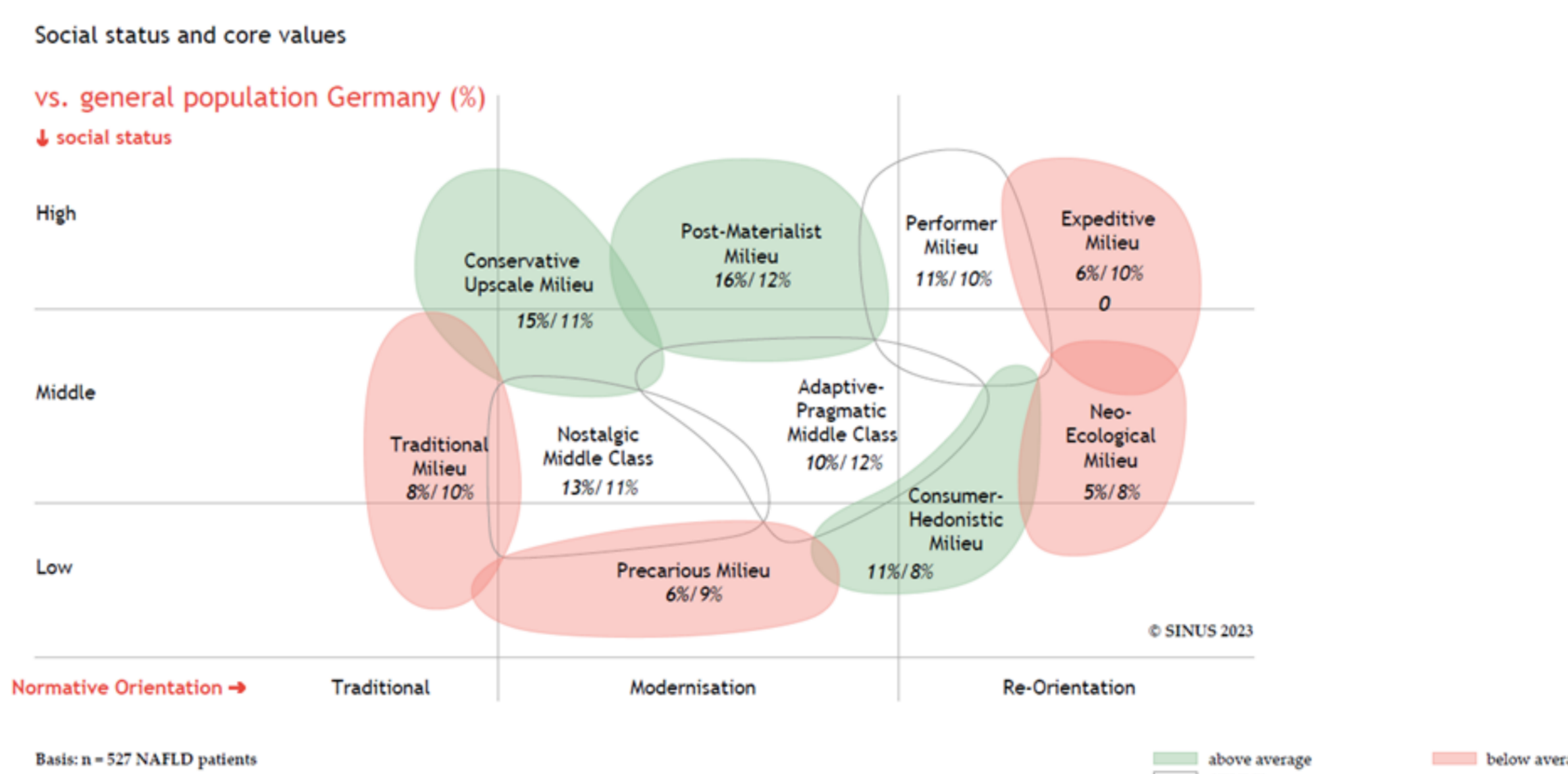
Consumer-Hedonistic: The (lower) middle focused on consumption and entertainment; having fun in the here and now; Self-image as a cool lifestyle mainstream; strong need for recognition; professional adaptation vs. leisure escapism; increasingly annoyed by the dictates of sustainability and political correctness

Post-Materialist: Committed, sovereign educational elite with post-material roots: self-determination and development as well as an orientation towards the common good; advocate for post-growth, sustainability, non-discrimination and diversity; Self-image as a social corrective

Conservative-Upscale: The old structurally conservative elite: classic ethics of responsibility and success as well as claims to exclusivity and status; desire for order and balance; Self-image as a rock in the surf of postmodern arbitrariness; Erosion of social leadership

Precarious: The lower class striving for orientation and participation: belonging and keeping up with the standard of living of the broad middle - but increasing social disadvantages and exclusions; feeling of being left behind, bitterness and resentment; Self-image as a robust perseverant

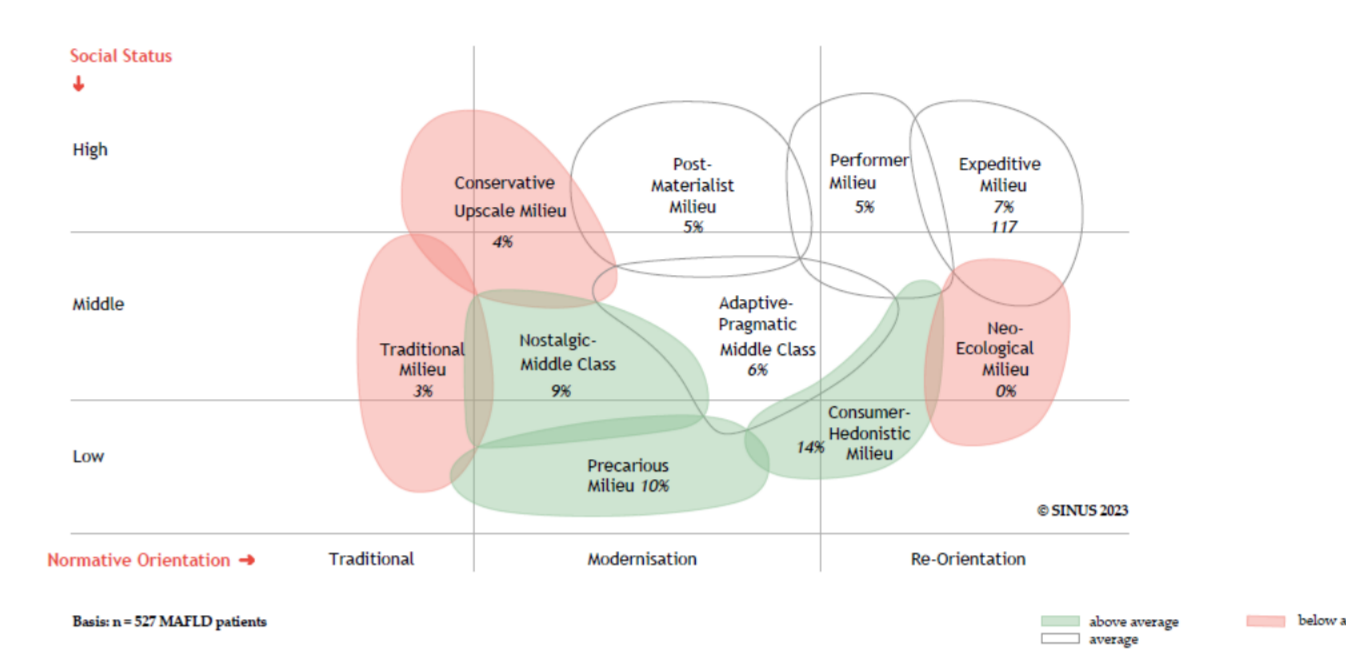
Sinus Milieus of NAFLD patients in Germany



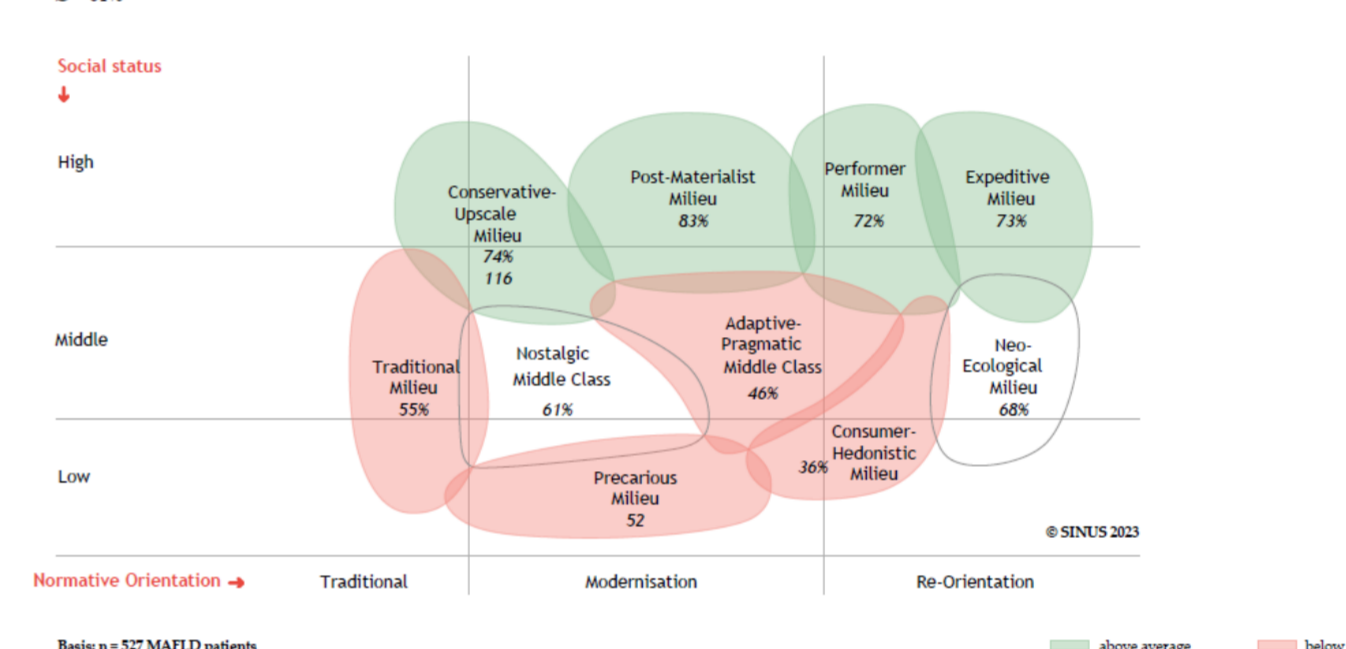
In comparison to the milieu allocation in the general population **NAFLD/MASLD are overrepresented in the Consumer-Hedonistic, Post-Materialist and Conservative-Upscale Milieu**

Selected Sub Populations

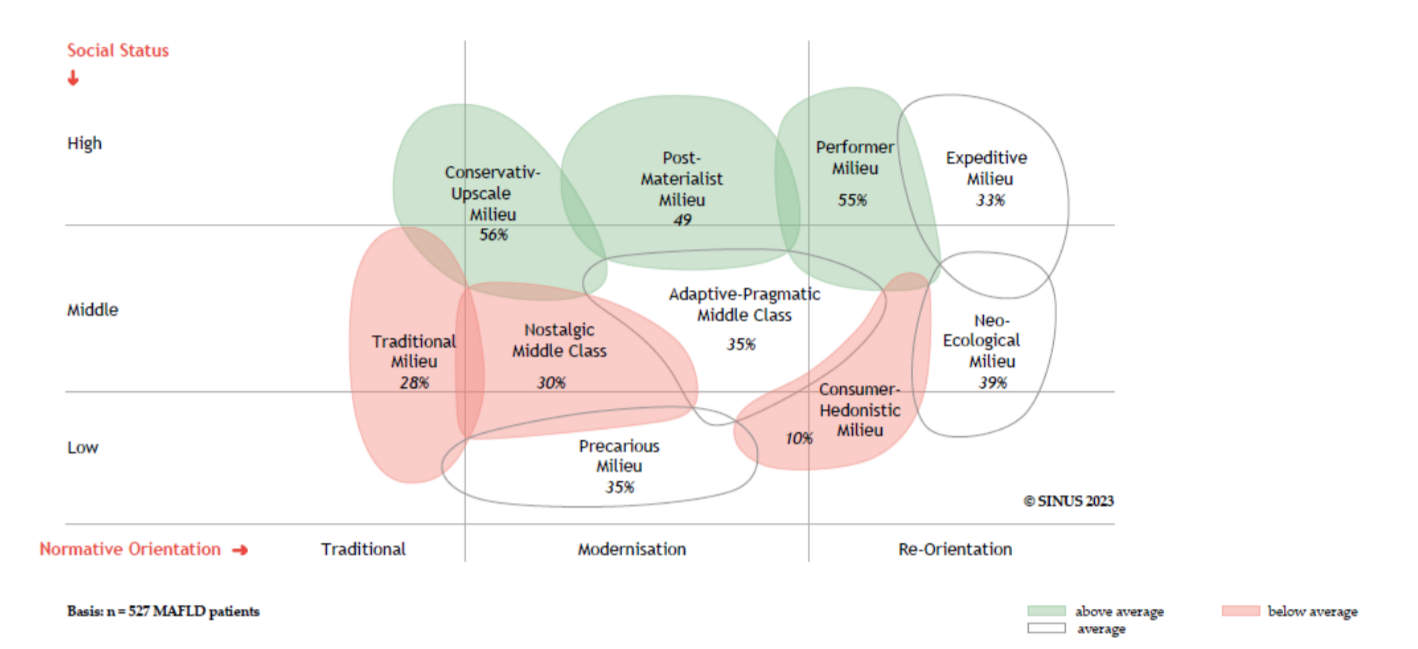
Daily alcohol consumption (>20g women/>30g men)



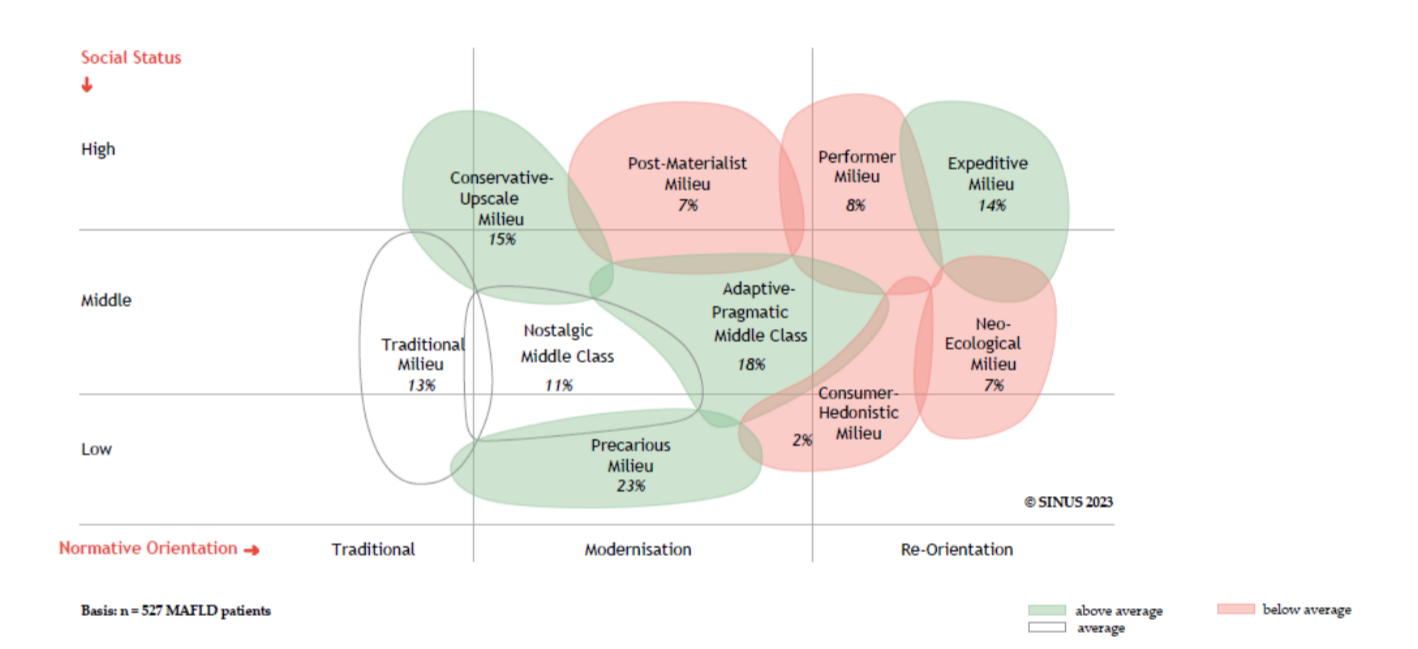
Less processed food



Physical activity >3h per week



BMI: Obesity Grade III (>40)



Findings in Sub Populations

6% of responders indicated alcohol consumption above 20g (women) and 30g (men) with an overrepresentation in the lower social class milieus, but none of them had a FIB 4 above 3,25.

39% of responders indicated physical activity of more than 3 hours per week and 64% indicated to consume less processed food. In both subgroups the upper social class milieus are overrepresented.

11% of responders reported a BMI grad III with representation across all levels of social classes.

The general knowledge of liver parameters is significantly lower compared to other liver diseases⁵ with the low social class milieus being at the lowest end. Empowered patients may be more present in the upper and middle social class milieus.

CONCLUSIONS

This is the first ever research looking into milieu related specifics of NAFLD/MASLD patients. Unexpectedly, there are all milieus represented, especially those with high affinity to health topics in the upper and middle social class.

The knowledge about milieu provides a basis for more effective communication strategies (e.g., quick milieu allocation checklists and communication tools) between doctors and NAFLD/MASLD patients, which needs to be studied further.

In addition, this new knowledge may help to design effective communication to reach at risk populations and support early detection and routing into proper clinical care.

Call to Action: The current findings provide strong evidence to bring the principles of differentiated patient communication into the scientific dialog in NAFLD/MASLD.

REFERENCES

1 **Estes C., J Hepatol 2018;** 69(4):896-90
 2 **Barth, B., Flaig, B.B., Schäuble, N., & Tautscher, M. (Hrsg.) (2018).** Praxis der Sinus-Milieus®. Gegenwart und Zukunft eines modernen Gesellschafts- und Zielgruppenmodells. Springer
 3 **Geier A et al. Z Gastroenterol 2023;** 61: 60–70
 4 **Hofmann P. et al., JHEP Reports 2020;** 2(6): 100168
 5 **Niederau, et a, Z. Gastroenterol 2006;** 44:305 317

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