

Supplemental Material 5: Fatty liver index and triglyceride glucose index calculation

Calculation of Fatty Liver Index:

Some of the blood parameters will be used to calculate a Fatty Liver index (FL) using the formula of Bedogni et al ¹, with measured values for BMI, fasting TG (mg/dL), fasting GGT (U/L) and waist circumference (cm), as follows:

$$FLI = \frac{(e^{0.953 \cdot \log_e(\text{triglycerides}) + 0.139 \cdot \text{BMI} + 0.718 \cdot \log_e(\text{ggt}) + 0.053 \cdot \text{waist circumference} - 15.745})}{(1 + e^{0.953 \cdot \log_e(\text{triglycerides}) + 0.139 \cdot \text{BMI} + 0.718 \cdot \log_e(\text{ggt}) + 0.053 \cdot \text{waist circumference} - 15.745})} * 100$$

Calculation of Triglyceride Glucose Index:

The formula of Simental-Mendía et al.² will be measured with measured fasting TG (mg/dL) and fasting glucose (mg/dL), by dividing the Ln of the TG *glucose product by 2:

$$\text{TyG index} = \text{Ln} [(\text{fasting triglycerides}) (\text{mg/dL}) \times \text{fasting glucose} (\text{mg/dL})] / 2$$

1. Bedogni, G., Bellentani, S., Miglioli, L., Masutti, F., Passalacqua, M., Castiglione, A., & Tiribelli, C. (2006). The fatty liver index: A simple and accurate predictor of hepatic steatosis in the general population. *BMC Gastroenterology*, 6(1), 33. <https://doi.org/10.1186/1471-230X-6-33>
2. Simental-Mendía, L. E., Rodríguez-Morán, M., & Guerrero-Romero, F. (2008). The product of fasting glucose and triglycerides as surrogate for identifying insulin resistance in apparently healthy subjects. *Metabolic Syndrome and Related Disorders*, 6(4), 299–304. <https://doi.org/10.1089/met.2008.0034>