**Supplementary** **File 3. Development of algorithm.**

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| *Software used*: SPSS statistics (version 27); Microsoft Excel and Microsoft Solver Excel plug-in.**Method**1. 2020 data set (*n* = 273) screened for outliers. Excluded data:
* ALT >221 UL/L (*n* = 3)
* HbA1c >140 mmol/mol (*n* = 1)
* Total for algorithm training data ***n* = 269**
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| 1. A ‘fitting the risk model’ was adopted for this algorithm.
2. Binary logistic regression analysis was used to find the predicted probability and group membership of the three predictor variables: ALT, BMI, and HbA1c. The dependent variable used was ≥ F2 (≥ 8.2 kPa).
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| 1. The regression analysis output was plotted on a graph (**Fig. 1**).
2. The aim was to develop an equation that replicated the regression analysis on the graph, using ALT, BMI, and HbA1c.
3. We arrived at the following equation:

((patient ALT score – ALT y-intercept)\*ALT multiplierΦ)+ ((patient BMI score – BMI y-intercept)\* BMI multiplierΦ)+ ((patient HbA1c score – HbA1c y-intercept)\*HbA1c multiplierΦ)Φmultiplier comes from Excel Solver analysis of the training data set.1. The y-intercept of the best fit lines from the training data: ALT, BMI, and HbA1c was calculated (**Fig. 2**).
2. Excel Solver computed the multiplier for each of the three variables.
3. The missing values were added to the algorithm: ((patient ALT score – 28.826)\*0.002638)+ ((patient BMI score – 23.291)\* 0.02152)+((patient HbA1c score – 28.462)\*0.009975).
4. The algorithm was applied to the complete training data set (*n* = 269).
5. The results of the algorithm were plotted on the graph (**Fig. 1)** for comparison with the logistic regression output.
 | **Fig. 1.** Comparison of the predicted probability of group membership for ≥ F2 using the calculated regression analysis and the ALBA algorithm**Fig. 2.** y-intercept of the best fits lines for ALT, BMI, and HbA1c

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| ALT, alanine transaminase; HbA1c, glycated hemoglobin; BMI, body mass index; F2, moderate fibrosis; kPa, kilopascals.**References**Guidance from the following literature was used to help with constructing our algorithm:Davies MJ, Gray LJ, Ahrabian D, *et al*. A community-based primary prevention program for type 2 diabetes mellitus integrating identification and lifestyle intervention for prevention: a cluster randomized controlled trial. Southampton (UK): NIHR Journals Library; 2017 Jan. Program Grants for Applied Research, No. 5.2. Chapter 3, Developing the risk score. Available from: https://www.ncbi.nlm.nih.gov/books/NBK409312/Kebede Deribe, Lyndsey Florence, Abebe Kelemework, Tigist Getaneh, Girmay Tsegay, Jorge Cano, Emanuele Giorgi, Melanie J Newport, Gail Davey, Developing and validating a clinical algorithm for the diagnosis of podoconiosis, Transactions of The Royal Society of Tropical Medicine and Hygiene, Volume 114, Issue 12, December 2020, Pages 916–925, https://doi.org/10.1093/trstmh/traa074Chava L Ramspek, Kitty J Jager, Friedo W Dekker, Carmine Zoccali, Merel van Diepen, External validation of prognostic models: what, why, how, when and where?, Clinical Kidney Journal, Volume 14, Issue 1, January 2021, Pages 49–58, https://doi.org/10.1093/ckj/sfaa188 |