Supplementary material to:

**Risk scores for metabolic dysfunction-associated fatty liver disease in pediatric obesity**

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**Supplementary table 1. List of selected scores**

|  |  |  |  |
| --- | --- | --- | --- |
| **Score** | **Developed for** | **Additionally tested in** | **Calculation** |
| **APRI** | Fibrosis (Wai, 2003) | NAFLD (Kruger, 2011; Joo, 2017) |  |
| **B-AST** | Fibrosis (Pokorska, 2017) |  |  |
| **ELF** | Fibrosis (Rosenberg, 2004) | NAFLD (Szybowska, 2015; Guha 2008) |  |
| **FIB-4** | Fibrosis (Sterling, 2006) | NAFLD (Joo, 2017) |  |
| **FLI** | NAFLD (Bedogni, 2006) | NASH (Otgonsuren, 2014), Fibrosis (Fedchuk, 2014) |  |
| **Forns-Index** | Fibrosis (Forns, 2002) |  |  |
| **GSG-Index** | NAFLD (Gaggini, 2018) |  |  |
| **HSI** | NAFLD (Lee, 2010) | Fibrosis (Fedchuk, 2014) |  |
| **M-APRI** | Fibrosis (Pokorska, 2017) |  |  |
| **M-FIB-4** | Fibrosis (Pokorska, 2017) |  |  |
| **Model by Cao** | NASH (Cao, 2013) |  |  |
| **NAFLD-LFS** | NAFLD (Kotronen, 2009) | Fibrosis (Fedchuk, 2014) | NAFLD-LFS= |
| **NFS** | Fibrosis (Angulo, 2007) | NNAFLD (Kruger, 2011; Joo, 2017), NASH (Otgonsuren, 2014) |  |
| **PNFI** | Fibrosis (Nobili, 2009) |  |  |
| **TyG** | NAFLD (Zhang, 2017) | Fibrosis (Fedchuk, 2014) |  |
| **VAI** | NAFLD (Amato, 2010) | Fibrosis (Fedchuk, 2014) | Males:  Females*:* |
| TG: triglycerides, WC: waist circumference, T2D: type 2 diabetes, MetS: metabolic syndrome | | | |

**Supplementary table 2. Sensitivity and specificity for selected indices (whole cohort)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Cut-off value** | **Sensitivity** | **Specificity** | **Youden-Index** |  |
| **Model by Cao** | -4.61 | 84% | 84% | 0.68 |  |
| **B-ASTA** | 73.94 | 74% | 72% | 0.46 |  |
| **NAFLD-LFS** | -0.05 | 90% | 72% | 0.62 |  |
| **M-APRIA** | 0.75 | 48% | 81% | 0.30 |  |
| **APRI** | 0.30 | 42% | 88% | 0.29 |  |
| **GSG-Index** | 0.40 | 45% | 94% | 0.39 |  |
| **TyG** | 8.55 | 58% | 91% | 0.49 |  |
| **FLI** | 66.10 | 74% | 56% | 0.30 |  |
| **HSI** | 42.85 | 84% | 50% | 0.34 |  |
| **PNFIA** | 9.86 | 68% | 69% | 0.36 |  |
| **VAI** | 3.48 | 71% | 63% | 0.33 |  |
| **ELF** | 8.23 | 82% | 46% | 0.28 |  |
| **Forns-Index** | -1.60 | 71% | 34% | 0.05 |  |
| **M-FIB-4A** | 0.52 | 68% | 38% | 0.05 |  |
| **FIB-4** | 0.27 | 42% | 69% | 0.11 |  |
| **NFS** | -1.24 | 6% | 100% | 0.06 |  |
| AScore developed for children | | | | | |

**Supplementary table 3. Sensitivity and specificity for selected indices (pubertal group)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Cutoff value** | **Sensitivity** | **Specificity** | **Youden-Index** |  |
| **Model by Cao** | -4.69 | 88% | 84% | 0.72 |  |
| **B-ASTA** | 130.82 | 31% | 100% | 0.31 |  |
| **NAFLD-LFS** | 2.23 | 69% | 95% | 0.63 |  |
| **M-APRIA** | 0.93 | 38% | 84% | 0.22 |  |
| **APRI** | 0.23 | 69% | 58% | 0.27 |  |
| **GSG-Index** | 0.34 | 50% | 89% | 0.39 |  |
| **TyG** | 8.55 | 56% | 95% | 0.51 |  |
| **FLI** | 66.37 | 81% | 47% | 0.29 |  |
| **HSI** | 42.85 | 88% | 37% | 0.24 |  |
| **PNFIA** | 9.86 | 75% | 74% | 0.49 |  |
| **VAI** | 7.88 | 44% | 100% | 0.44 |  |
| **ELF** | 8.22 | 81% | 68% | 0.50 |  |
| **Forns-Index** | -0.76 | 63% | 32% | -0.06 |  |
| **M-FIB-4A** | 0.41 | 88% | 5% | -0.07 |  |
| **FIB-4** | 0.45 | 6% | 95% | 0.01 |  |
| **NFS** | -1.24 | 6% | 100% | 0.06 |  |
| AScore developed for children | | | | | |