**Caries Risk Prediction models in medical healthcare setting**

Table 3. Evaluation of medical CRA models predicting caries risk at 3 years

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Adjusted N** | **AUC (95%CI)** | **Cut-off** | **Sensitivity** | **Specificity** | **Accuracy§** | **Pseudo R2** |
| *Model II-A: All lesions (ICDAS codes 2-6)* | | | | | | | |
| Model II-A\* | 312 | 0.79 (0.74-0.84) | 0.44 | 71 | 71 | 71 | 0.24 |
| Model II-A-a\*\* | 251 | 0.86 (0.81-0.90) | 0.44 | 77 | 76 | 76 | 0.33 |
| *Model II-B: Moderate-extensive lesions (ICDAS codes 3-6)* | | | | | | | |
| Model II-B\* | 312 | 0.79 (0.73-0.85) | 0.25 | 72 | 72 | 72 | 0.20 |
| Model II-B-a\*\* | 251 | 0.86 (0.81-0.91) | 0.26 | 78 | 78 | 78 | 0.31 |

\*Risk predictors (22) in Model II-A/B: ***Prenatal factors:*** Ethnicity, household income, maternal educational levels, maternal occupation, father educational levels, parity status, history of chronic maternal illness, prenatal tobacco smoke exposure; ***Post-natal factors:*** Parental belief for cause of tooth decay (24 months), mother’s brushing frequency (24 months), child’s pre-existing medical condition (6 months), frequency of in between meal sweet snacks (24 months), duration of pacifier use (in months), duration of breastfeeding (in months), maternal regular dental check-up (24 months), child’s brushing frequency (24 months), number of teeth (12 months), sharing feeding/drinking utensils, night-time bottle feeding (24 months), child’s age for first tooth eruption (in months), dry mouth (18 months), previous dental visit (24 months).

*§Accuracy calculated as [(sensitivity x prevalence of outcome) + (specificity x non-prevalence of outcome)/100].*

\*\*Model II-A-a/B-a: Upon addition of “year-2 anterior caries lesions” as a covariate into Model II-A/B, significant improvement was demonstrated in the model performance (both P<0.05).