**Supplemental Table 1:** Comparisons of the AUC for allergic and non-allergic asthma in the CCAAPS and IOW cohorts

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   | **CCAAPS** |  |  | **IOW** |   |   |
|   | Allergic asthmaAUC | Nonallergic asthmaAUC | P value | Allergic asthmaAUC | Nonallergic asthma AUC | P value |
| PARS | 0.82 | 0.71 | 0.08 | 0.87 | 0.74 | 0.0004 |
| mAPI | 0.69 | 0.62 | 0.27 | 0.68 | 0.6 | 0.03 |
| Loose API index | 0.71 | 0.63 | 0.23 | 0.74 | 0.64 | 0.015 |
| Stringent API index | 0.64 | 0.61 | 0.59 | 0.66 | 0.62 | 0.24 |

**Supplemental Table 2:** Comparisons of the AUC for allergic vs non-asthma in the CCAAPS and IOW cohorts

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| --- |
| **CCAAPS** |
|   | Allergic asthma vs. non-asthma | Nonallergic asthma vs. non-asthma |
|   | AUC | P value | AUC | P value |
| PARS | 0.82 | NA | 0.71 | NA |
| mAPI | 0.69 | 0.0007 | 0.62 | 0.23 |
| Loose index API | 0.71 | 0.004 | 0.63 | 0.32 |
| Stringent index API | 0.64 | 3E-6 | 0.61 | 0.18 |
| **IOW** |
|   | Allergic asthma vs. non-asthma | Nonallergic asthma vs. non-asthma |
|   | AUC | P value | AUC | P value |
| PARS | 0.87 | NA | 0.74 | NA |
| mAPI | 0.68 | 4E-9 | 0.6 | 0.001 |
| Loose index API | 0.74 | 7E-5 | 0.64 | 0.04 |
| Stringent index API | 0.66 | 1E-10 | 0.62 | 0.008 |