**Appendix.** Sensitivity analysis for inclusion of race in psoriatic arthritis (PsA) analyses.

Raw comparison of proportions of PsA in different ethnic groups

|  |  |  |  |
| --- | --- | --- | --- |
|  | **PsA (%)** | **No PsA (%)** | **Total** |
| **Caucasian** | 77/322 (23.9%) | 245/322 (76.1%) | 322 |
| **Asian** | 53/167 (31.7%) | 114/167 (68.3%) | 167 |
| **Hispanic** | 12 (27.9%) | 31 (72.1%) | 43 |
| **Other** | 33 (23.6%) | 107 (76.4%) | 140 |

Chisquared P-value: 0.2518 (Race is not significantly associated with PsA)

**Multivariable Association Model (see** **Table 2)- Comparison of original model and model with race forced in**

|  |  |  |
| --- | --- | --- |
| **Variable** | **Without race/ethnicity** | **With race/ethnicity** |
| **Odds ratio [95% CI]** | **p-value** | **Odds ratio [95% CI]** | **p-value** |
| **Intercept** | 0.05 [0.00, 0.53] | 0.015\* | 0.040 | 0.017\* |
| **Race (Caucasian as reference)** |  |  |  |  |
|  Asian |  |  | 1.09 | 0.873 |
|  Hispanic |  |  | 3.31 | 0.058 ƚ |
|  Other |  |  | 0.56 | 0.296 |
| **Nail involvement** | 3.01 [1.39, 6.66] | 0.006 \*\* | 3.19 | 0.005 \*\* |
| **HLA- C0602 positivity** | 0.33 [0.13, 0.77] | 0.013\* | 0.29 | 0.010 \* |
| **Diabetes, type 2** | 5.27 [1.21, 24.5] | 0.029\* | 4.24 | 0.060 ƚ |
| **Pustular subtype** | 6.11 [1.17, 36.8] | 0.037\* | 6.74 | 0.030\* |
| **Age of psoriasis onset** | 0.97 [0.94, 1.00] | 0.050 ƚ | 0.97 | 0.065 ƚ |
| **Smoking** | 0.29 [0.06, 1.01] | 0.076 ƚ | 0.28 | 0.072 ƚ  |
| **Skin fold involvement** | 2.09 [0.91, 4.89] | 0.085 ƚ | 2.20 | 0.074 ƚ |
| **Age** | 1.03 [1.00, 1.06] | 0.091 ƚ | 1.03 | 0.092 ƚ |
| **Severe psoriasis** | 1.92 [0.88, 4.21] | 0.101 | 2.00 | 0.093 ƚ |
| **Soles involvement** | 0.44 [0.15, 1.15] | 0.107 | 0.40 | 0.081 ƚ |
| **Plaque subtype** | 2.63 [0.86, 9.57] | 0.109 | 2.38 | 0.164 |
| **Ears involvement** | 0.54 [0.22, 1.29] | 0.166 | 0.55 | 0.187 |
| **Elbows/knees involvement** | 1.88 [0.73, 5.24] | 0.202 | 2.09 | 0.146 |
| **Hypertension** | 0.53 [0.18, 1.44] | 0.231 | 0.48 | 0.180 |
| **Inverse subtype** | 2.08 [0.51, 8.20] | 0.296 | 2.40 | 0.224 |
| **Gender** | 1.22 [0.54, 2.77] | 0.631 | 1.22 | 0.646 |
| **Body Mass Index (BMI)** | 0.99 [0.93, 1.05] | 0.703 | 0.99 | 0.774 |

**Predictive Model 1 (see Table 3)-** **Comparison between original model and model with race forced in**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Odds ratio (95% CI)** | **p-value** | **Odds ratio (95% CI)** | **p-value** |
| **Intercept** | 0.55 [0.32, 0.92] | 0.024\* | 0.44 | 0.008\*\* |
| **Race (Caucasian as reference)** |  |  |  |  |
|  Asian |  |  | 1.42 | 0.154 |
|  Hispanic |  |  | 1.58 | 0.262 |
|  Other |  |  | 1.09 | 0.739 |
| **Age of psoriasis onset** | 0.99 [0.98, 1.00] | 0.065 ƚ | 0.99 | 0.080 ƚ |
| **Gender**ǂ | 1.24 [0.83, 1.84] | 0.295 | 1.23 | 0.309 |
| **HLA-C\*06:02 positivity** | 0.45 [0.29, 0.70] | 0.0005 \*\*\* | 0.49 | 0.002\*\* |
| **HLA-B\*27** **positivity** | 0.96 [0.43, 1.99] | 0.908 | 1.01 | 0.985 |
| **Family history of psoriasis (binary)** | 1.24 [0.83, 1.87] | 0.291 | 1.31 | 0.202 |

**Predictive Model 2 (see Table 4)- Comparison between original model and model with race forced in**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Odds ratio (95% CI)** | **p-value** | **Odds ratio (95% CI)** | **p-value** |
| **Model intercept** | 0.11 [0.01, 0.87] | 0.045\* | 0.09 | 0.042\* |
| **Race (Caucasian as reference)** |  |  |  |  |
|  Asian |  |  | 1.92 | 0.280 |
|  Hispanic |  |  | 2.99 | 0.183 |
|  Other |  |  | 0.53 | 0.340 |
| **Age of psoriasis onset** | 0.96 [0.92, 0.99]  | 0.017\* | 0.96 | 0.021\* |
| **Gender**ǂ | 2.56 [0.93, 7.40] | 0.072 ƚ | 2.77 | 0.060 ƚ |
| **HLA-C\*06:02 positivity** | 0.60 [0.20, 1.64] | 0.327 | 0.62 | 0.387 |
| **Ear involvement** | 0.35 [0.10, 1.06] | 0.067 ƚ  | 0.39 | 0.106 |
| **Nail involvement** | 3.92 [1.5, 10.8] | 0.006\*\* | 3.71 | 0.011\* |
| **Cardiovascular disease** | 15.48 [0.84, 610] | 0.084 ƚ  | 21.73 | 0.065 ƚ |
| **Diabetes, type 2** | 9.91 [1.35, 82.4] | 0.025\* | 5.61 | 0.106 ƚ |
| **Hypertriglyceridemia** | 0.03 [0.00, 0.48] | 0.035\* | 0.04 | 0.068 ƚ |
| **Plaque subtype** | 4.25 [0.94, 26.4] | 0.082 ƚ | 4.01 | 0.104 |
| **Inverse subtype** | 5.26 [1.01, 23.0] | 0.051 ƚ | 8.71 | 0.020 \* |
| **Pustular subtype** | 4.77 [0.57, 47.4] | 0.157 | 2.75 | 0.384 |
| **Severe psoriasis** | 2.03 [0.77, 5.44] | 0.154 | 1.90 | 0.209 |