**Appendix A**

Table A1. Symptom prevalence and COVID-19 positive proportion by centers of inclusion

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Nantes | Angers | Clermont-Fd. | Nancy | Total | p-value |  |
| **Patients, Total\*** | **201 (22.9)** | **238 (27.1)** | **159 (18.1)** | **280 (31.9)** | **878 (100)** |  |  |
| Symptomatic | 93 (46.3) | 93 (39.1) | 51 (32.1) | 45 (16.1) | 282 (32.1) | <0.001 |  |
| Asymptomatic | 108 (53.7) | 145 (60.9) | 108 (67.9) | 235 (83.9) | 596 (67.9) |  |  |
| COVID- | 187 (93.0) | 218 (91.6) | 149 (93.7) | 254 (90.7) | 808 (92.0) | 0.657 |  |
| COVID+ | 14 (7.0) | 20 (8.4) | 10 (6.3) | 26 (9.3) | 70 (8.0) |  |  |
| Age Median (Range) | 61 (34–85) | 63 (28–89) | 64 (23–91) | 63 (18–88) | 62 (18–91) | 0.345 |  |
| **HCWs, Total\*** | **307 (32.7)** | **240 (25.5)** | **344 (36.6)** | **49 (5.2)** | **940 (100)** |  |  |
| Symptomatic | 168 (54.7) | 107 (44.6) | 190 (55.2) | 20 (40.8) | 485 (51.6) | 0.018 |  |
| Asymptomatic | 139 (45.3) | 133 (55.4) | 154 (44.8) | 29 (59.2) | 455 (48.4) |  |  |
| COVID- | 271 (88.3) | 228 (95.0) | 310 (90.1) | 42 (85.7) | 851 (90.5) | 0.032 |  |
| COVID+ | 36 (11.7) | 12 (5.0) | 34 (9.9) | 7 (14.3) | 89 (9.5) |  |  |
| Age Median (Range) | 40 (19–63) | 40 (22–64) | 41 (19–66) | 46 (26–60) | 40 (19–66) | 0.155 |  |

\*N (Horizontal %) for Total, n (Vertical %) for others

Table A2. Model validation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Stratified subpopulations** | **N** | **Sensitivity** | **Specificity** | **Accuracy** | **C-statistic** |
| **Patient Model** |  |  |  |  |  |
| Original dataset | 878 | 0.1571 | 0.9950 | 0.9282 | 0.7027 |
| 75% dataset | 662 | 0.1455 | 0.9951 | 0.9245 | 0.6725 |
| 25% dataset | 216 | 0.4667 | 0.9851 | 0.9491 | 0.7511 |
| Nantes+Angers | 439 | 0.2059 | 0.9951 | 0.9339 | 0.7352 |
| Clermont-F.+Nancy | 439 | 0.1389 | 0.9950 | 0.9248 | 0.6964 |
| Man only | 275 | 0.1429 | 1.0000 | 0.9540 | 0.7121 |
| Woman only | 603 | 0.1786 | 0.9945 | 0.9187 | 0.7150 |
| Age <= median (62 yrs.) | 440 | 0.1579 | 0.9950 | 0.9227 | 0.7255 |
| Age > median (62 yrs.) | 438 | 0.2188 | 0.9951 | 0.9384 | 0.6817 |
| Brest cancer | 371 | 0.1389 | 0.9940 | 0.9111 | 0.6802 |
| Other cancers | 440 | 0.2000 | 0.9976 | 0.9432 | 0.7292 |
| Metastatic | 443 | 0.1875 | 0.9975 | 0.9376 | 0.7472 |
| Non-metastatic | 346 | 0.1786 | 0.9969 | 0.9306 | 0.6684 |
| Chemotherapy | 462 | 0.2162 | 0.9929 | 0.9307 | 0.7184 |
| Immunotherapy 1 | 109\* | 0.1000 | 0.9899 | 0.9083 | 0.7773 |
| Targeted therapy | 155 | 0.3750 | 1.0000 | 0.9355 | 0.7723 |
| Hormonal therapy | 95 | 0.2857 | 0.9886 | 0.9368 | 0.6916 |
| **Healthcare Worker Model** |  |  |  |  |  |
| Original dataset | 940 | 0.5506 | 0.9824 | 0.9415 | 0.8830 |
| 75% dataset | 704 | 0.5313 | 0.9828 | 0.9418 | 0.9125 |
| 25% dataset | 236 | 0.5600 | 0.9763 | 0.9322 | 0.8209 |
| Nantes+Angers | 547 | 0.4167 | 0.9840 | 0.9342 | 0.8580 |
| Clermont-F.+Nancy | 393 | 0.6341 | 0.9858 | 0.9491 | 0.9241 |
| Man only | 177 | 0.4706 | 0.9813 | 0.9322 | 0.7989 |
| Woman only | 763 | 0.5417 | 0.9783 | 0.9371 | 0.9102 |
| Age <= median (40 yrs.) | 477 | 0.5641 | 0.9772 | 0.9434 | 0.9059 |
| Age > median (40 yrs.) | 463 | 0.5000 | 0.9806 | 0.9287 | 0.8746 |

1 Fourteen observations have been dropped

**Appendix B**

Equations for calculating the estimated probability of a positive COVID-19 test outcome

Patient model:

(1) ĝ(Anosmia=1/0, Anorexia=1/0, Fever=1/0, Headache=1/0, Rhinorrhea=1/0) = -2.97109 + 2.01222\*(1/0) + 1.33957\*(1/0) + 1.12181\*(1/0) + (-1.20212)\*(1/0) + 0.59343\*(1/0)

(2) Prob. COVID+ = eĝ/(1+ eĝ)

HCW model:

(1) ĝ(Anosmia=1/0, Dysgeusia/Ageusia=1/0, Muscle Pain=1/0, Intense Fatigue=1/0, Headache=1/0, Chest Pain=1/0) = -3.93836+1.74178\*(1/0)+1.63700\*(1/0)+0.56009\*(1/0)+0.57615\*(1/0)+0.63343\*(1/0)+0.88400\*(1/0)

(2) Prob. COVID+ = eĝ/(1+ eĝ)