

## Supplementary Tables

Table S1: Fully adjusted odds ratios and 95% confidence intervals from separate logistic regression models for each test reason

| Exposure             | Category                     | Final model <sup>a</sup><br>(n=70,686) | Symptoms <sup>b</sup><br>(n=2,772 <sup>c</sup> ) | Close contacts <sup>b</sup><br>(n=3175) | Broader-defined<br>work contacts <sup>b</sup><br>(n=2,599 <sup>d</sup> ) | Routine screening <sup>b</sup><br>(n=61,764 <sup>e</sup> ) |
|----------------------|------------------------------|--|--|---|--|--|
| Job category         | Energy operations            | 0.91 (0.70, 1.20)                      | 0.94 (0.59, 1.50)                                | 0.69 (0.42, 1.13)                       | 0.34 (0.14, 0.87)  | 1.87 (1.06, 3.31)  |
|                      | Engineering                  | 0.90 (0.70, 1.17)                      | 1.08 (0.69, 1.70)                                | 0.79 (0.48, 1.28)                       | 0.27 (0.10, 0.73)  | 1.12 (0.65, 1.93)  |
|                      | External                     | 1.05 (0.82, 1.36)                      | 1.20 (0.77, 1.88)                                | 1.55 (0.96, 2.51)                       | 0.36 (0.14, 0.93)  | 0.93 (0.55, 1.59)  |
|                      | HSE & security               | 1.12 (0.78, 1.62)                      | 0.77 (0.40, 1.49)                                | 1.07 (0.56, 2.05)                       | 0.79 (0.28, 2.20)  | 1.54 (0.73, 3.24)  |
|                      | Nuclear & scientific         | 0.96 (0.68, 1.35)                      | 0.76 (0.43, 1.34)                                | 1.09 (0.56, 2.12)                       | 0.10 (0.01, 0.83)  | 1.78 (0.92, 3.45)  |
|                      | Office-based                 | 1.00 (baseline)                        | 1.00 (baseline)                                  | 1.00 (baseline)                         | 1.00 (baseline)  | 1.00 (baseline)  |
|                      | Project management           | 1.00 (0.66, 1.51)                      | 0.67 (0.33, 1.35)                                | 1.16 (0.51, 2.64)                       | 0.62 (0.17, 2.26)  | 1.75 (0.80, 3.83)  |
| Sex                  | Female                       | 0.71 (0.58, 0.86)                      | 0.50 (0.35, 0.72)                                | 0.83 (0.57, 1.22)                       | 0.86 (0.40, 1.87)  | 0.96 (0.65, 1.41)  |
| Job site             | Head Office                  | 0.70 (0.48, 1.03)                      | 0.53 (0.23, 1.20)                                | 0.58 (0.25, 1.36)                       | 0.13 (0.00, 3.69)  | 0.60 (0.32, 1.14)  |
|                      | Power station 1              | 0.58 (0.43, 0.77)                      | 0.27 (0.13, 0.56)                                | 0.25 (0.15, 0.43)                       | 0.18 (0.03, 1.25)  | 2.05 (1.17, 3.59)  |
|                      | Power station 2              | 0.38 (0.29, 0.49)                      | 0.18 (0.10, 0.34)                                | 0.19 (0.11, 0.33)                       | 0.11 (0.02, 0.65)  | 1.15 (0.71, 1.86)  |
|                      | Power station 3              | 0.90 (0.67, 1.20)                      | 0.24 (0.12, 0.46)                                | 0.86 (0.50, 1.48)                       | 0.11 (0.02, 0.71)  | 1.48 (0.85, 2.58)  |
|                      | Power station 4              | 0.42 (0.32, 0.55)                      | 0.13 (0.07, 0.25)                                | 0.19 (0.11, 0.33)                       | 0.13 (0.02, 0.78)  | 1.39 (0.86, 2.24)  |
|                      | Power station 5              | 0.97 (0.70, 1.33)                      | 0.41 (0.19, 0.89)                                | 0.51 (0.27, 0.97)                       | 0.10 (0.01, 0.78)  | 2.93 (1.72, 4.98)  |
|                      | Power station 6              | 0.22 (0.16, 0.29)                      | 0.12 (0.06, 0.24)                                | 0.20 (0.12, 0.34)                       | 0.04 (0.01, 0.28)  | 0.21 (0.12, 0.38)  |
|                      | Power station 7              | 1.00 (baseline)                        | 1.00 (baseline)                                  | 1.00 (baseline)                         | 1.00 (baseline)  | 1.00 (baseline)  |
|                      | Power station 8              | 2.05 (1.52, 2.77)                      | 1.17 (0.50, 2.75)                                | 3.90 (1.96, 7.74)                       | 0.84 (0.03, 27.46)   | 2.09 (1.24, 3.53)  |
|                      | Other                        | 0.31 (0.21, 0.44)                      | 0.13 (0.06, 0.28)                                | 0.18 (0.10, 0.34)                       | 0.00 (0.00, 0.05)  | 0.94 (0.44, 2.01)  |
| Vaccination status   | Per vaccination <sup>f</sup> | 0.97 (0.88, 1.06)                      | 0.89 (0.76, 1.06)                                | 0.86 (0.72, 1.02)                       | 0.80 (0.52, 1.22)  | 0.89 (0.75, 1.05)  |
| Vulnerability status | Vulnerable                   | 0.78 (0.63, 0.96)                      | 0.87 (0.56, 1.35)                                | 1.43 (0.99, 2.05)                       | 0.57 (0.24, 1.34)  | 0.87 (0.56, 1.35)  |
| Outage               | During outage                | 1.35 (1.12, 1.63)                      | 0.54 (0.39, 0.74)                                | 5.15 (3.44, 7.71)                       | 4.10 (1.41, 11.94)   | 0.54 (0.39, 0.74)  |
| Site risk rating     | 0/1 (lowest risk)            | 1.00 (baseline)                        | 1.00 (baseline)                                  | 1.00 (baseline)                         | 1.00 (baseline)  | 1.00 (baseline)  |
|                      | 2                            | 0.64 (0.50, 0.82)                      | 0.37 (0.23, 0.62)                                | 1.15 (0.76, 1.74)                       | 1.36 (0.40, 4.65)  | 0.37 (0.23, 0.62)  |
|                      | 3                            | 1.30 (1.00, 1.69)                      | 1.05 (0.62, 1.78)                                | 2.10 (1.36, 3.23)                       | 4.05 (1.26, 13.02)   | 1.05 (0.62, 1.78)  |
|                      | 4                            | 1.60 (1.11, 2.31)                      | 0.51 (0.24, 1.10)                                | 2.74 (1.44, 5.22)                       | 5.18 (1.11, 24.15)   | 0.51 (0.24, 1.08)  |

<sup>a</sup> adjusted for all variables in the table plus test date, test type, age and test reason; <sup>b</sup> adjusted for all variables in the table plus test date, test type, and age;

<sup>c</sup> one observation omitted; <sup>d</sup> 64 observations omitted; <sup>e</sup> 269 observations omitted; <sup>f</sup> up to fully vaccinated (2 or more vaccinations);

**Table S2: Frequency of number of tests per person in each time-period in the model**

| Number of tests per person | Q1-3 2020    | Q4 2020      | Q1 2021        | Q2 2021        | Q3 2021        | Q4 2021        | Q1 2022        | Q2-3 2022     | Overall        |
|----------------------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|---------------|----------------|
| 1                          | 220<br>(84%) | 911<br>(59%) | 2,228<br>(37%) | 1,504<br>(24%) | 1,641<br>(41%) | 1,401<br>(63%) | 1,500<br>(92%) | 557<br>(100%) | 2,551<br>(24%) |
| 2                          | 39<br>(15%)  | 492<br>(32%) | 940<br>(15%)   | 833<br>(13%)   | 671<br>(17%)   | 420<br>(19%)   | 129<br>(8%)    | 1<br>(0%)     | 1,403<br>(13%) |
| 3                          | 2<br>(1%)    | 79<br>(5%)   | 498<br>(8%)    | 591<br>(9%)    | 409<br>(10%)   | 169<br>(8%)    | 8<br>(0%)      |               | 932<br>(9%)    |
| 4                          |              | 39<br>(3%)   | 321<br>(5%)    | 502<br>(8%)    | 348<br>(9%)    | 95<br>(4%)     | 1<br>(0%)      |               | 707<br>(7%)    |
| 5                          |              | 7<br>(0%)    | 298<br>(5%)    | 546<br>(9%)    | 307<br>(8%)    | 51<br>(2%)     |                |               | 528<br>(5%)    |
| 6                          |              | 4<br>(0%)    | 371<br>(6%)    | 667<br>(11%)   | 284<br>(7%)    | 36<br>(2%)     |                |               | 473<br>(4%)    |
| 7                          |              | 2<br>(0%)    | 370<br>(6%)    | 826<br>(13%)   | 191<br>(5%)    | 23<br>(1%)     |                |               | 408<br>(4%)    |
| 8                          |              | 1<br>(0%)    | 294<br>(5%)    | 497<br>(8%)    | 88<br>(2%)     | 12<br>(1%)     |                |               | 349<br>(3%)    |
| 9                          |              |              | 232<br>(4%)    | 142<br>(2%)    | 31<br>(1%)     | 4<br>(0%)      |                |               | 345<br>(3%)    |
| 10                         |              | 1<br>(0%)    | 202<br>(3%)    | 59<br>(1%)     | 10<br>(0%)     | 3<br>(0%)      |                |               | 336<br>(3%)    |
| 11                         |              |              | 211<br>(3%)    | 63<br>(1%)     | 4<br>(0%)      | 1<br>(0%)      |                |               | 311<br>(3%)    |
| 12                         |              |              | 86<br>(1%)     | 42<br>(1%)     | 2<br>(0%)      |                |                |               | 312<br>(3%)    |
| 13                         |              |              | 26<br>(0%)     | 19<br>(0%)     | 2<br>(0%)      |                |                |               | 314<br>(3%)    |
| 14                         |              |              | 7<br>(0%)      | 12<br>(0%)     | 1<br>(0%)      |                |                |               | 314<br>(3%)    |
| 15                         |              |              | 5<br>(0%)      | 4<br>(0%)      |                |                |                |               | 317<br>(3%)    |
| 16                         |              |              |                | 1<br>(0%)      | 1<br>(0%)      |                |                |               | 292<br>(3%)    |
| 17                         |              |              |                |                |                |                |                |               | 233<br>(2%)    |
| 18                         |              |              |                |                |                |                |                |               | 192<br>(2%)    |
| 19                         |              |              |                | 1<br>(0%)      |                |                |                |               | 134<br>(1%)    |
| 20+                        |              |              |                |                |                |                |                |               | 317<br>(3%)    |