

Table S1: Median age of COVID-19 hospitalized patients and population by macro-area and year. Italy 2020-2021

| Year | macro-area    | Median Age (years)       |        |            |
|------|---------------|--------------------------|--------|------------|
|      |               | Hospitalizations outcome |        | Population |
|      |               | alive                    | deaths |            |
| 2020 | Nord-west     | 67.7                     | 78.0   | 48.0       |
|      | Nord-east     | 70.4                     | 78.6   | 47.8       |
|      | Centre        | 66.2                     | 78.0   | 47.9       |
|      | South         | 61.5                     | 76.7   | 45.5       |
|      | Major Islands | 61.3                     | 77.0   | 46.4       |
|      | Overall       | 67.3                     | 78.0   | 47.2       |
| 2021 | Nord-west     | 67.6                     | 78.1   | 48.2       |
|      | Nord-east     | 68.5                     | 78.4   | 48.0       |
|      | Centre        | 62.2                     | 77.7   | 48.2       |
|      | South         | 60.9                     | 76.1   | 46.0       |
|      | Major Islands | 61.0                     | 76.8   | 46.9       |
|      | Overall       | 65.8                     | 77.7   | 47.5       |

Table S2 Population, COVID-19 hospitalization rates and percentage of hospital deaths and males by region and year. Italy 2020-2021

| macro-area    | Region                | 2020                  |                         |            |          | 2021                  |                         |            |          |
|---------------|-----------------------|-----------------------|-------------------------|------------|----------|-----------------------|-------------------------|------------|----------|
|               |                       | Patients <sup>1</sup> | hosp. rate <sup>2</sup> | deaths (%) | Male (%) | Patients <sup>1</sup> | hosp. rate <sup>2</sup> | deaths (%) | Male (%) |
| Northwest     | Piedmont              | 32,073                | 8.6                     | 27.6       | 57.2     | 28,862                | 6.8                     | 20.4       | 55.4     |
|               | Aosta Valley          | 1,063                 | 9.8                     | 24.6       | 53.0     | 1,071                 | 8.6                     | 10.0       | 50.8     |
|               | Lombardy              | 82,259                | 9.5                     | 23.8       | 58.9     | 59,871                | 6.0                     | 17.1       | 55.7     |
|               | Liguria               | 12,185                | 9.3                     | 25.5       | 55.0     | 12,465                | 8.2                     | 15.4       | 54.3     |
| Northeast     | Trentino-Alto Adige   | 6,660                 | 7.2                     | 18.0       | 56.5     | 6,906                 | 6.4                     | 13.5       | 55.6     |
|               | Veneto                | 22,505                | 5.3                     | 22.4       | 56.6     | 24,729                | 5.1                     | 18.9       | 56.6     |
|               | Friuli-Venezia Giulia | 5,608                 | 5.4                     | 22.4       | 55.1     | 9,235                 | 7.7                     | 22.2       | 56.4     |
|               | Emilia-Romagna        | 34,733                | 9.0                     | 22.1       | 53.9     | 35,188                | 7.9                     | 17.9       | 54.0     |
| Centre        | Tuscany               | 14,823                | 4.6                     | 19.3       | 54.9     | 21,403                | 5.8                     | 16.2       | 55.3     |
|               | Umbria                | 2,915                 | 3.9                     | 20.5       | 56.3     | 4,986                 | 5.8                     | 17.0       | 54.7     |
|               | Marche                | 6,163                 | 4.7                     | 26.9       | 55.8     | 8,100                 | 5.4                     | 20.1       | 55.7     |
|               | Lazio                 | 27,827                | 5.6                     | 18.4       | 55.4     | 42,116                | 7.3                     | 14.1       | 53.6     |
| South         | Abruzzo               | 5,326                 | 4.8                     | 22.8       | 58.1     | 7,343                 | 5.7                     | 17.4       | 56.3     |
|               | Molise                | 717                   | 2.8                     | 25.8       | 59.0     | 1,133                 | 3.8                     | 28.9       | 58.3     |
|               | Campania              | 12,908                | 2.6                     | 24.1       | 61.1     | 19,628                | 3.5                     | 24.6       | 55.1     |
|               | Apulia                | 12,836                | 3.8                     | 20.0       | 57.9     | 18,601                | 4.7                     | 21.0       | 57.2     |
|               | Basilicata            | 1,097                 | 2.3                     | 23.7       | 55.9     | 1,992                 | 3.7                     | 19.5       | 55.3     |
|               | Calabria              | 2,256                 | 1.4                     | 16.8       | 58.1     | 5,082                 | 2.7                     | 19.4       | 56.8     |
| Major Islands | Sicily                | 11,645                | 2.8                     | 18.1       | 54.0     | 20,432                | 4.2                     | 19.3       | 53.7     |
|               | Sardinia              | 3,301                 | 2.4                     | 19.7       | 55.7     | 4,305                 | 2.7                     | 18.9       | 54.8     |

<sup>1</sup> there are 3275 patients with foreign residence

<sup>2</sup> hospitalization rate

Table S3: Percentages of acute care, surgical treatments, and day hospital of COVID-19 hospitalization in Italy (2020-2021)

| anno | mal      | Acute | surgery | Day H. |
|------|----------|-------|---------|--------|
| 2020 | COVID-19 | 93.9  | 6.7     | 1.1    |
| 2021 | COVID-19 | 93.7  | 8.4     | 2.9    |