



## Characteristics of COVID-19 patients dying in Italy Report based on available data on March 20<sup>th</sup>, 2020

### 1. Sample

The present report describes characteristics of 3200 COVID-19 patients dying in Italy.\* Geographic distribution across the 19 regions and 2 autonomous provinces of Trento and Bozen is presented in the table below. Data are update to March 20<sup>th</sup>, 2020.

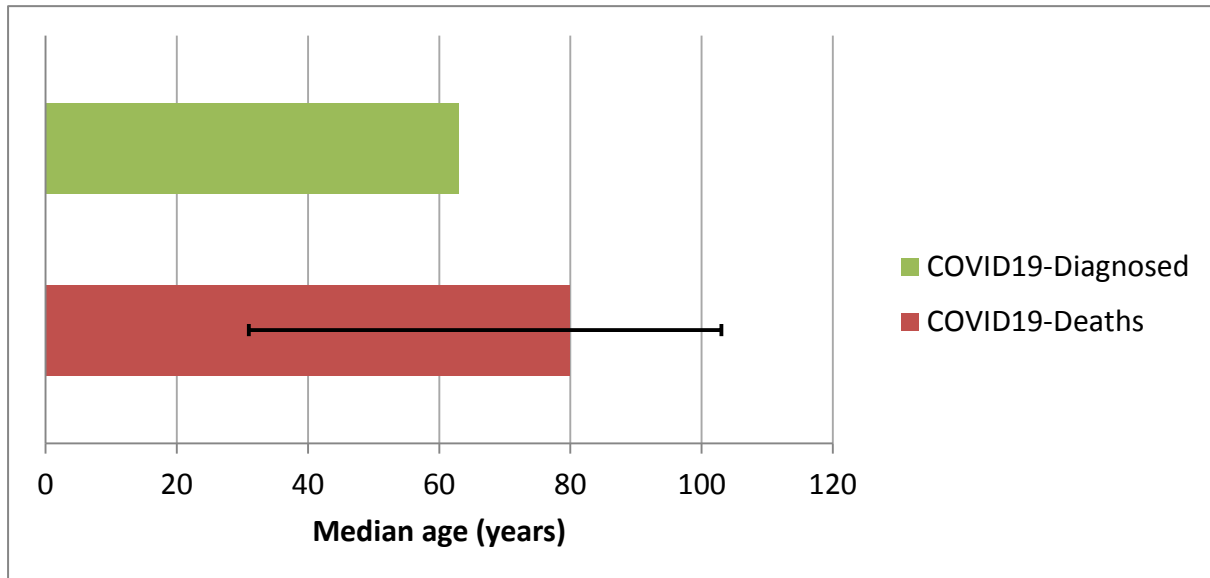
| REGIONS               | N           | %            |
|-----------------------|-------------|--------------|
| Abruzzo               | 7           | 0.2          |
| Bolzano               | 14          | 0.4          |
| Calabria              | 1           | 0.0          |
| Campania              | 17          | 0.5          |
| Emilia-Romagna        | 524         | 16.4         |
| Friuli-Venezia Giulia | 35          | 1.1          |
| Lazio                 | 31          | 1.0          |
| Liguria               | 90          | 2.8          |
| Lombardia             | 2175        | 68.0         |
| Marche                | 36          | 1.1          |
| Molise                | 3           | 0.1          |
| Piemonte              | 69          | 2.2          |
| Puglia                | 27          | 0.8          |
| Sardegna              | 2           | 0.1          |
| Sicilia               | 3           | 0.1          |
| Toscana               | 14          | 0.4          |
| Trento                | 12          | 0.4          |
| Umbria                | 4           | 0.1          |
| Veneto                | 136         | 4.3          |
| <b>Total</b>          | <b>3200</b> | <b>100.0</b> |

\* COVID-19 related deaths presented in this report are those occurring in patients who test positive for SARSCoV-2 RT by PCR, independently from pre-existing diseases.

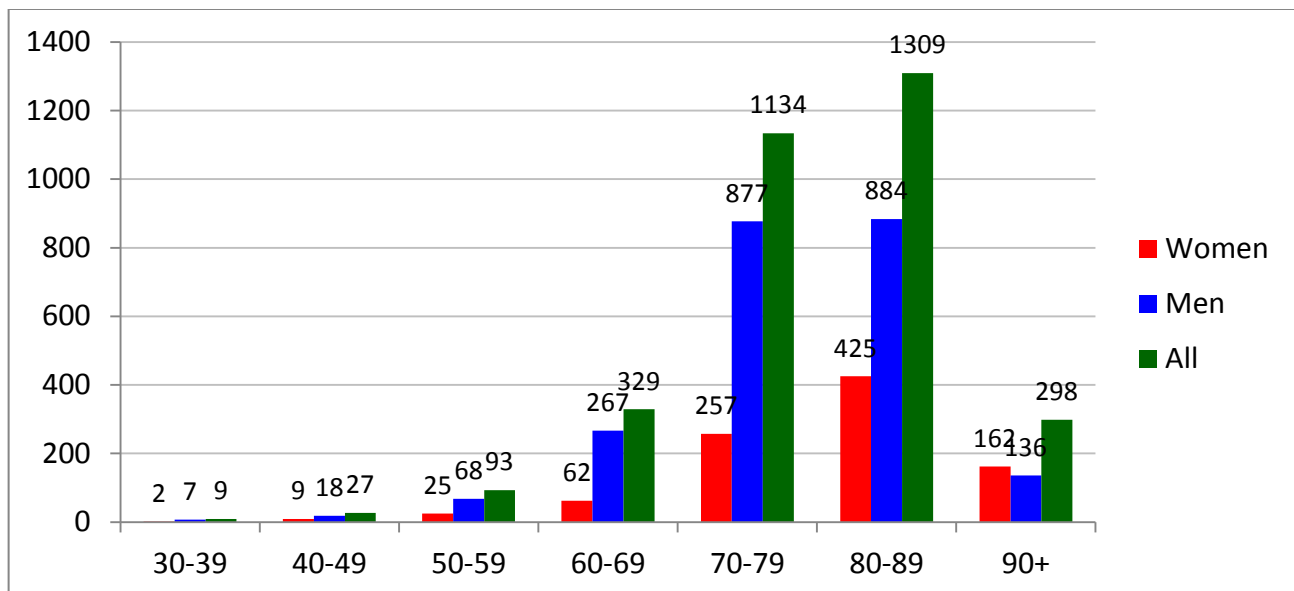
## 2. Demographics

Mean age of patients dying for COVID-2019 infection was 78.5 (median 80, range 31-103, IQR 73 -85). Women were 942 (29.4%). *Figure 1* shows that median age of patients dying for COVID-2019 infection was more than 15 years higher as compared with the national sample diagnosed with COVID-2019 infection (median age 63 years). *Figure 2* shows the absolute number of deaths by age group. Women dying for COVID-2019 infection had an older age than men (median age women 82 - median age men 79).

**Figure 1.** Median age of patients with COVID-2019 infection and COVID-19 positive deceased patients



**Figure 2.** Absolute number of deaths by age group



### 3. Pre-existing conditions

Table 1 presents most common comorbidities diagnosed before COVID-2019 infection. Data on diseases were based on chart review and was available on 481/3200 patients dying in-hospital (15.0% of the sample). Mean number of diseases was 2.7 (median 2, SD 1.6). Overall, 1.2% of the sample presented with a no comorbidities, 23.5% with a single comorbidity, 26.6% with 2, and 48.6% with 3 or more.

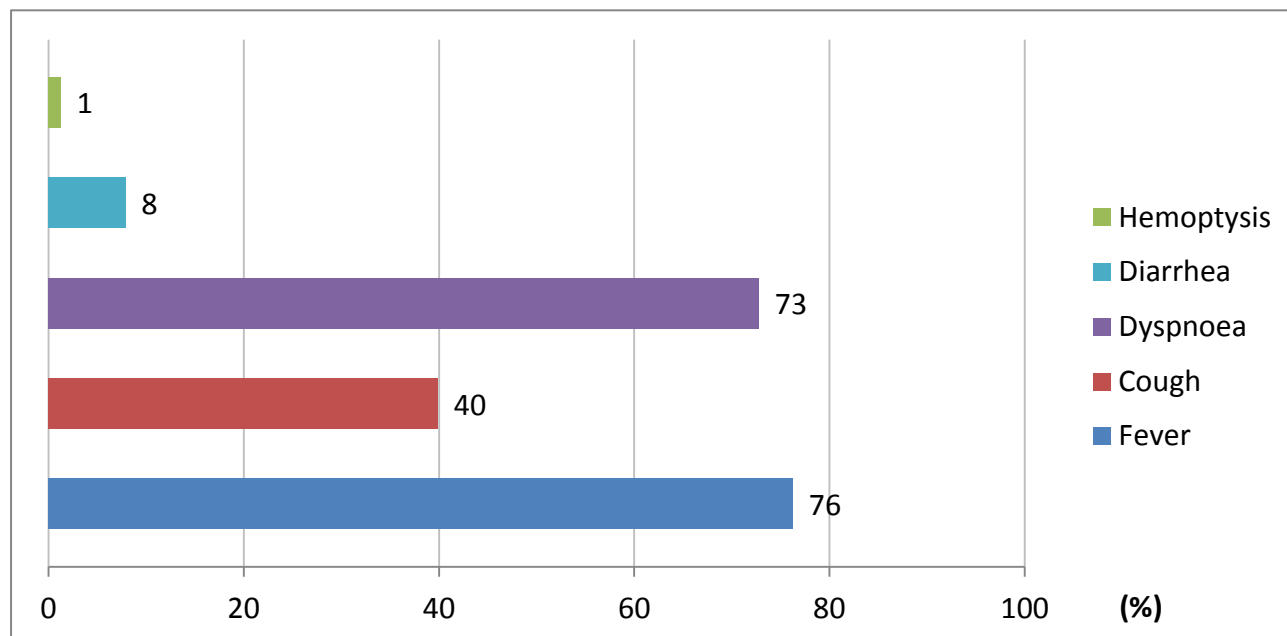
**Table 1.** Most common comorbidities observed in COVID-19 positive deceased patients

| <b>Diseases</b>                          | <b>N</b>   | <b>%</b>    |
|------------------------------------------|------------|-------------|
| <i>schemic heart disease</i>             | <i>145</i> | <i>30.1</i> |
| <i>Atrial Fibrillation</i>               | <i>106</i> | <i>22.0</i> |
| <i>Stroke</i>                            | <i>54</i>  | <i>11.2</i> |
| <i>Hypertension</i>                      | <i>355</i> | <i>73.8</i> |
| <i>Diabetes</i>                          | <i>163</i> | <i>33.9</i> |
| <i>Dementia</i>                          | <i>57</i>  | <i>11.9</i> |
| <i>COPD</i>                              | <i>66</i>  | <i>13.7</i> |
| <i>Active cancer in the past 5 years</i> | <i>94</i>  | <i>19.5</i> |
| <i>Chronic liver disease</i>             | <i>18</i>  | <i>3.7</i>  |
| <i>Chronic renal failure</i>             | <i>97</i>  | <i>20.2</i> |
| <b>Number of comorbidities</b>           |            |             |
| <i>0 comorbidities</i>                   | <i>6</i>   | <i>1.2</i>  |
| <i>1 comorbidity</i>                     | <i>113</i> | <i>23.5</i> |
| <i>2 comorbidities</i>                   | <i>128</i> | <i>26.6</i> |
| <i>3 comorbidities and over</i>          | <i>234</i> | <i>48.6</i> |

#### 4. Symptoms

Figure 3 shows symptoms most commonly observed at hospital admission. Fever and dyspnoea were the most commonly observed symptoms, while cough, diarrhoea and haemoptysis were less commonly observed. Overall, 5.7% of patients did not present any symptoms at hospital admission.

**Figure 3.** Most common symptoms observed in COVID-19 positive deceased patients



#### 5. Acute conditions

**Acute Respiratory Distress syndrome was observed in the majority of patients (96.5% of cases),** followed by acute renal failure (29.2%). Acute cardiac injury was observed in 10.4% of cases and superinfection in 8.5%.

#### 6. Treatments

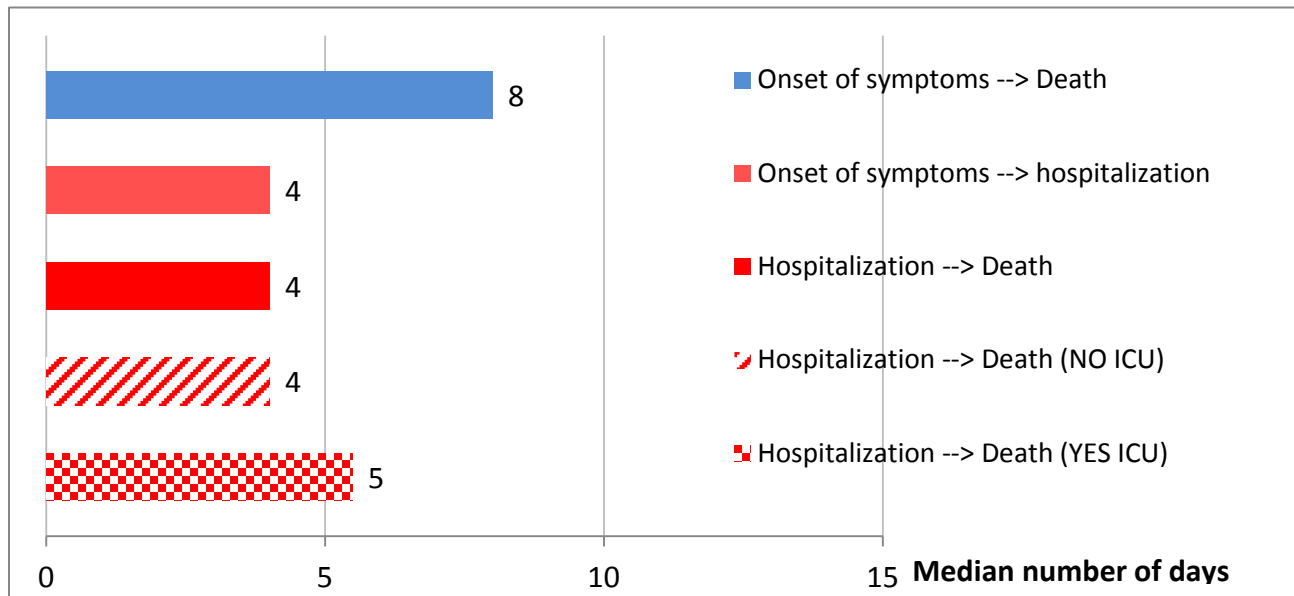
Antibiotics were used by 84% of patients during hospital stay, while less used were antivirals (54%) and corticosteroids (31%). Concomitant use of these 3 treatments was observed in 18.6% of cases.

Before hospitalization, 36% of COVID-19 positive deceased patients followed ACE-inhibitor therapy and 16% angiotensin receptor blockers-ARBs therapy. This information can be underestimated because data on drug treatment before admission were not always described in the chart.

## 7. Time-line

Figure 4 shows, for COVID-19 positive deceased patients, the median times, in days, from the onset of symptoms to death (8 days), from the onset of symptoms to hospitalization (4 days) and from hospitalization to death (4 days). The time from hospitalization to death was 1 day longer in those who were transferred to intensive care than those who were not transferred (5 days vs. 4 days).

**Figure 5.** Median hospitalization times (in days) in COVID-19 positive deceased patients



## 8. Deaths under the age of 50 years

To date (March the 20<sup>th</sup>), 36 of 3200 (1.1%) COVID-19 positive patients under the age of 50 have died. In particular, 9 of these were younger than 40 years, 8 men and 1 woman (age range between 31 and 39 years). For 2 patients under the age of 40 years, no clinical information is available; the remaining 7 had serious pre-existing pathologies (cardiovascular, renal, psychiatric pathologies, diabetes, obesity).

**This report was produced by COVID-19 Surveillance Group**

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