Appendix. Additional material online.

Table 5 (additional material). Summary of protocolized specific treatments for COVID-19 ICU patients (usual therapy is not showed, as is antibiotic treatments guided by antibiogram in the case of coinfections).

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| *Respiratory infection without pneumonia, patient with comorbidities (protocol 1):*  Azithromycin or clarithromycin 500 mg/24h po\* (5 days)  Hydroxychloroquine 400 mg/12h po (1 day), followed by 200 mg/12h po (4 days)  Enoxaparin 60-80 mg/24h sc  *Respiratory infection with pneumonia (irrespective of age, and comorbidities):*  Protocol 1 plus  Methyl-prednisolone 250 mg/24 (1 day), followed by methyl-prednisolone 40 mg/12h (4 days)  *If interstitial pneumonitis with respiratory insufficiency or mechanical ventilation or organ failure (shock or SOFA >=3) or SIRS criteria or D-dimer > 1500, add (protocol 2):*  Remdesivir 200 mg/24h iv (1 day) followed 100 mg (2-10 days)  plus (if inflammatory markers are persistently increased)  Tocilizumab 400-600 mg (1 dose; 2 doses in 48h if there is no clinical improvement)  *If no improvement add (protocol 3):*  Anakinra 200 mg/24h sc, followed by 100 mg/24h sc, if no improvement (2-5 days)  *If D-dimer >2000\*\* add:*  Enoxaparin 1.5 mg/kg/24h sc or bemiparin 115 UI/kg/24h (if contraindication fondaparinux 2.5 mg/24h sc)  *All patients:*  Aminoglucosidic drugs should be avoided  Ceftriaxone 2g/24h iv (5-7 days); if allergy change by levofloxacin 500 mg/12h (or linezolid 600 mg/12h)  *plus*  Azithromycin or clarithromycin  Hydroxychloroquine  Vitamin C# 1.5g/6h  Tiamine# 200mg/12h  In patients under previous oral anticoagulant: change to LMWH in therapeutic ranges (10,000 UI/24h, 150 UI/kg/24h or 100 UI/kg/12h depending on the drug).  Statins: atorvastatin 40 mg/24h or pravastatin 80 mg/24h po  \*\* or fibrinogen >5 g/L or ISTH score>=4 or clinical suspicion of PTE or platelet count > 50,000 microL.  #Mandatory if procalcitonin>2 ng/ml (plus actocortin 200 mg/24h iv; and if patients were under steroid therapy)  *If nosocomial pneumonia is suspected add:*  Tygecyclin 100 mg/12h iv plus levofloxacin 500 mg/12h iv (or colistin 4mU 1 dose, followed by 2mU/8h iv).  Lopinavir/ritonavir and alpha-interferon were withdrawn for protocols at the end of March.  *If there are lopinavir-ritonavir gastrointestinal intolerance or drug shortages add:*  Darunavir-cobicistat 800/150 mg/24 h po (14 days) |

iv: intravenous; po: per os or by nasogastric tube in intubated patients or unable to swallow\*; sc: subcutaneous route. PTE: pulmonary thromboembolism.

Table 6 (additional material). General epidemiologic data from Spain.

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| General numbers by 05/24/20  1) Cases (by PCR): 235772 (124845 needing admission to the hospital); ICU admissions: 11477; deceased: 28752  2) Basic instantaneous reproductive number: 5.11 by 02/29/20; 3.47 by 03/10/20  Duplication time (by 03/26/20, epidemic peak point)  3) ICU admissions (3 timecuts): 4 by 03/01/20; 6065 by 03/29/20; 11454 by 05/20/20  4) Lethality\*:  Spain 14.3%, Italy 12.2%, USA 6.0%, Brazil 6.3%, Mexico 10.9%  5) Mortality rate per 100,000, by 05/20-24/20:  Spain 0.06%, USA 0.02%, UK 0.05%, Italy 0.05%, Brazil 0.01%, Russia 0.002% |

PCR: polymerase chain reaction. ICU: intensive care unit.

\*Data of lethality could be strictly not comparable because it proceeded from different information sources (https://www.mscbs.gob.es/en/profesionales/saludPublica/ccayes/alertasActual/nCov-China/documentos/Actualizacion\_115\_COVID-19.pdf).

Table 7 (additional material). Local data from the Consorcio Hospital General Universitario de Valencia (CHGUV), Valencia, Spain. The COVID-19 specific data are by 04/14/20.

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| The CHGUV is a tertiary care, 450 beds, general hospital. The population in the allocated health care area (public system) is of more than 364.000 (and serves around 1,000,000 people for several surgical especialities).  Total cumulated COVID-19 cases in the area of coverage: 763 (82 health care workers affected)  Number of hospital beds dedicated to COVID-19 patients (isolation): 171  Number COVID-ICU beds: 47  Number of no-COVID-ICU beds: 10  The usual fully equipped ICU beds is 37 |

Data correspond with the pandemic peak.

Figures (additional material online).

Figure 1. Plain chest X ray (patient 5). Bilateral interstitial infiltrates (posteroanterior and lateral projections).

Figure 2. Plain chest X ray (patient 5). Bilateral lung opacities. Tracheostomy tube. Right peripherally inserted central venous catheter.

Figure 3. Plain chest X ray (patient 5). Right lung opacities, left massive pneumothorax (before chest tube insertion), right internal jugular vein catheter.

Figure 4. Plain chest X ray (patient 5). Bilateral severe consolidation, bilateral pneumothoraces, mediastinal widening, left jugular vein catheter, thoracic tubes (both sides), subcutaneous emphysema, staples in the left sutured chest (thoracotomy, see text for explanations).

Figure 5. Plain chest X ray (patient 6). Bilateral lung reticular opacities.

Figure 6. Computed tomography (patient 6). A. Bilateral lung condensations and some interstitial infiltration. B. Bilateral lung condensations and bilateral pleural effusion, mainly in the left hemithorax.

Figure 7. Plain chest X ray (patient 6). Bilateral opacities and consolidations. Right pleural effusion. Left internal jugular vein catheter.