**Evidence of Diagnostic Value of Ferritin in Patients with COVID-19**

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# Ferritin levels in severe vs. non-severe groups

## **Supplementary Table 1.** Studies included in severe vs. non-severe comparison

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Study** | **Country** | **Study design** | **Severe** | **Non-severe** |
| **No.** | **Age** | **Sex, male** | **No.** | **Age** | **Sex, male** |
| Cai Q. et al. 2020 (1) | China | Retrospective study | 58 | 61.8 ± 2.9 | 39 (67.2%) | 240 | 42.5 ± 4.2 | 106 (44.2%) |
| Chen G. et al. 2020 (2) | China | Retrospective study | 11 | 61.1 ± 2.8 | 10 (90.9%) | 10 | 50.7 ± 3.8 | 7 (70.0%) |
| Chen R. et al. 2020 (3) | China  | Retrospective study | 203 | 61 ± 13.7 | 131 (64.5%) | 345 | 67.3 ± 12.1 | 182 (52.8%) |
| Cugno M. et al. 2020 (4) | Italy | Retrospective study | 14 | NS | NS | 17 | NS | NS |
| Dahan S. et al. 2020 (5) | Israel | Cross-sectional study | 10 | NS | NS | 29 | NS | NS |
| Ghweil AA. et al. 2020 (6) | Egypt | Retrospective study | 30 | 62.6±10.1 | 20 (66.7%) | 36 | 55.5 ±10.1 | 28 (77.8%) |
| Guirao JJ. et al. 2020 (7) | Spain | Cohort study | 6 | 64.5 ± 2.3 | 5(83.3%) | 44 | 63.4 ± 4.5 | 36 (81.8%) |
| Gunder R. et al. 2020 (8) | Turkey | Retrospective study | 50 | 62.2 ± 11.9 | 33 (66.0%) | 172 | 47.7 ±16.1 | 99 (57.6%) |
| Huang H. et al. 2020 (9) | China | Retrospective study | 21 | 61.4± 16.4 | 12 (57.1%) | 43 | 41.2 ±15.7 | 25 (58.1%) |
| Itelman E. et al. 2020 (10) | Izrael | Retrospective study | 26 | 61 ± 14 | 21 (80.8%) | 136 | 49.2 ±21.0 | 84 (61.8%) |
| Liu J. et al. 2020 (11) | China | Retrospective study  | 13 | 59.7 ± 10.1 | 7 (53.8%) | 27 | 43.2 ±12.3 | 8 (29.6%) |
| Liu T. et al. 2020 (12) | China | Retrospective study | 69 | 56.3 ± 17 | 33 (47.8%) | 11 | 36.5 ± 9.3 | 1 (9.1%) |
| Popov GT. et al. 2020 (13) | Bulgaria | Retrospective study | 43 | 63.0 ± 12.8 | 33 (76.8%) | 95 | 48.3 ±15.7 | 54 (56.9%) |
| Qin C. et al. 2020 (14) | China | Retrospective study | 286 | 60.5 ± 3 | 155 (54.2%) | 166 | 52.3 ± 3.5 | 80 (48.2%) |
| Shah Y. et al. 2020 (15) | UK | Retrospective study | 10 | 60.5 ± 6.4 | 5 (50.0%) | 20  | 57.5 ± 3.5 | 12 (60.0%) |
| Sun Y. et al. 2020 (16) | China | Retrospective study | 19 | 59.4 ± 13.7 | NS | 44 | 42.3 ±20.6 | NS |
| Wang F. et al. 2020 (17) | China | Retrospective study | 35 | 61.3 ± 12.2 | NS | 30 | 52.2 ±12.4 | NS |
| Xu X. et al. 2020 (18) | China | Retrospective study | 41 | 63.2 ± 14.5 | 15 (31.9%) | 47 | 52.5 ±14.6 | 21 (44.7%) |
| Xu Y. et al. 2020 (19) | China | Retrospective multi-center case series | 25 | 67.8 ± 6.1 | 13 (52.0%) | 44 | 48.5 ± 6.9 | 22 (50.0%) |
| Zeng Z. et al. 2020 (20) | China | Retrospective study | 224 | 62.7 ± 4.8 | 121 (54.0%) | 93 | 58.1 ± 3.8 | 41 (44.1%) |

Legend: NS = Not specifield;

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# Ferritin levels in ICU vs. non-ICU groups



**Supplementary Figure 1.** Forest plot of ferritin levels in ICU vs. non-ICU group. The center of each square represents the weighted mean difference for individual trials, and the corresponding horizontal line stands for a 95% confidence interval. The diamonds represent pooled results.

## **Supplementary Table 2.** Studies included in ICU vs. non-ICU comparison

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Study** | **Country** | **Study design** | **ICU group** | **Non-ICU group** |
| **No.** | **Age** | **Sex, male** | **No.** | **Age** | **Sex, male** |
| Aloisio E. et al. 2020 (1) | Italy | Retrospective study | 47 | 63.8 ± 3.7 | 41 (87.2%) | 380 | 67 ± 4.5 | 252 (66.3%) |
| El Aidaoui K. et al. 2020 (2) | Marroco | Retrospective observational study | 45 | 64.8 ± 4.9 | 35 (77.9%) | 89 | 42.3 ± 7.8 | 38 (42.7%) |
| Guirao JJ. Et al. 2020 (3) | Spain | Cohort study | 8 | 62.1 ± 2.8 | 7 (87.5%) | 42 | 63.8 ± 1.8 | 34 (80.9%) |
| Liu Sp et al. 2020 (4) | China | Retrospective study | 41 | 63 ± 15 | 28 (71.8%) | 214 | 61 ± 11.3 | 108 (50.9%) |
| Maeda T. et al. 2020 (5) | USA | Retrospective study | 57 | 67 ± 5.2 | 31 (54.4%) | 167 | 64.5 ± 4.3 | 96 (57.5%) |

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# Ferritin levels in death vs. survival groups



**Supplementary Figure 2.** Forest plot of ferritin levels in death vs. survival group. The center of each square represents the weighted mean difference for individual trials, and the corresponding horizontal line stands for a 95% confidence interval. The diamonds represent pooled results.

## **Supplementary Table 3.** Studies included in death vs. survival comparison

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Study** | **Country** | **Study design** | **Death group** | **Survival group** |
| **No.** | **Age** | **Sex, male** | **No.** | **Age** | **Sex, male** |
| Aloisio E. et al. 2020 (1) | Italy | Retrospective study | 89 | 73.3 ± 2.2 | 70 (78.7%) | 338 | 58.3 ± 3.5 | 223 (65.9%) |
| Asghar MS. et al. 2020 | Pakistan | Retrospective observational multicenter study | 101 | 61.0 ± 11.6 | 66 (65.3%) | 263 | 49.3 ±16.1 | 66 (25.1%) |
| Bonetti G. et al. 2020 | Italy | Cohort study | 70 | 76.1 ± 5.7 | 45 (64.3%) | 74 | 62.5 ± 3.3 | 51 (68.9%) |
| Chen R. et al. 2020 | China | Retrospective study | 103 | 66.9 ± 12.1 | 69 (67.0%) | 445 | 53.5 ±13.9 | 244 (54.8%) |
| Covino M. et al. 2020 | Italy | Single-center retrospective observational study | 23 | 84.8 ± 0.8 | 12 (52.2%) | 46 | 84.5 ± 2.3 | 25 (54.3%) |
| Garcia PDW. et al. 2020 | Multi-country | Prospective observational cohort study | 97 | 70.5 ± 2.7 | 69 (71.1%) | 301 | 62 ± 2.7 | 231 (76.7%) |
| Guirao JJ. et al. 2020 | Spain | Cohort study | 14 | 69.0 ± 3.1 | 11 (78.6%) | 36 | 61.4 ± 1.7 | 30 (83.3%) |
| Laguna-Goya R. et al. 2020 | Spain | Prospective cohort study | 36 | 64.8 ± 4.3 | 25 (69.4%) | 465 | 51.5 ± 2.3 | 292 (62.9%) |
| Li Q. et al. 2020 | China | Retrospective study | 26 | 67.3 ± 3.8 | 20 (76.9%) | 296 | 49.3 ± 4.5 | 147 (49.8%) |
| Lohse et al. 2020 | France | Retrospective study | 10 | 80 ± 10.1 | NS | 24 | 73.1 ±11.1 | NS |
| Ronderos Botero DM. et al. 2020 | USA | Retrospective study | 25 | 62.4±12.7 | 20 (80.0%) | 132 | 50.6±17.1 | 89 (67.4%) |
| Ruan Q. et al. 2020 | China | Retrospective study | 68 | 57.5 ± 19.0 | 49 (72.1%) | 82 | 56.2 ±10.7 | 53 (64.6%) |
| Zhou F. et al. 2020 | China | Retrospective multicenter cohort study | 54 | 69.3 ± 3.8 | 38 (70.4%) | 137 | 51.8 ± 2.2 | 81 (59.1%) |

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