S3 Table. Prevalence of severe disease in risk groups and prevalence of risk factor in patients with severe COVID-19 during hospitalization (Dec 2019-May 2020)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Author, year | Male sex, % (n/N) | Age≥60% (n/N) | Smoking history (SH), % (n/N) | Hypertension (HTN), % (n/N) | Diabetes mellitus (DM),% (n/N) | Cardiovascular disease (CVD),% (n/N) | Chronic Obstructive Pulmonary Disease (COPD),% (n/N) | Chronic Kidney Disease (CKD), % (n/N) | Chronic liver disease, % (n/N) |
|  | Severe disease in male/Total male | Severe disease in male/Total Severe disease | Severe disease in >60/Total>60  | Severe disease in >60/Total Severe disease | Severe disease in SH/Total SH | Severe disease in SH/Total Severe disease | Severe disease in HTN/Total HTN | Severe disease in HTN/Total Severe disease | Severe disease in DM/Total DM | Severe disease in DM/Total Severe disease | Severe disease in CVD/Total CVD | Severe disease in CVD/Total CVD | Severe disease in COPD/Total COPD | Severe disease in COPD /Total COPD | Severe disease in CKD/Total CKD | Severe disease in CKD/Total CKD | Severe disease in CLD/Total CLD | Severe disease in CLD/Total CLD |
| Aggarwal S et al., 2020 | 42(5/12) | 63(5/8) |  |  | 0(0/0) | 0(0/8) | 33(3/9) | 38(3/8) | 40(2/5) | 25(2/8) | 71(5/7) | 63(5/8) | 50(1/2) | 13(1/8) | 50(3/6) | 38(3/8) |  |  |
| Cao J et al., 2020 | 0(0/126) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CDC (USA), 2020 |  |  | 32(232/715) | 55(232/424) | 36(38/105) | 8(38/457) |  |  | 67(148/399) | 32(148/457) | 35(132/374) | 29(132/457) | 38(94/246) | 21(94/457) | 37(56/151) | 12(56/457) | 44(7/16) | 2(7/457) |
| Chen G et al., 2020 | 59(10/17) | 91(10/11) | 67(10/15) | 91(10/11) |  |  | 80(4/5) | 36(4/11) | 67(2/3) | 18(2/11) |  |  |  |  |  |  |  |  |
| Chen Q et al., 2020 | 29(23/79) | 53(23/43) |  |  | 20(3/15) | 7(3/43) | 43(9/21) | 21(9/43) | 50(7/14) | 16(7/43) | 100(1/1) | 2(1/43) | 0(0/6) | 0(0/43) | 33(1/3) | 2(1/43) | 67(4/6) | 9(4/43) |
| Chen T et al., 2020 | 84(49/58) | 66(49/74) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Feng Y et al., 2020 | 30(81/271) | 65(81/124) | 38(45/118) | 36(45/124) | 39(17/44) | 14(17/124) | 64(72/113) | 58(72/124) | 35(17/49) | 14(17/124) | 45(17/38) | 14(17/124) | 64(14/22) | 11(14/124) | 50(2/4) | 2(2/124) |  |  |
| Ferguson J et al., 2020 | 34(13/38) | 62(13/21) |  |  | 35(6/17) | 29(6/21) | 42(11/26) | 52(11/21) | 50(10/20) | 48(10/21) | 29(2/7) | 10(2/21) | 30(3/10) | 14(3/21) | 22(2/9) | 10(2/21) |  |  |
| Gold J et al., 2020 |  |  | 41(48/117) | 56(48/86) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Goyal S et al., 2020 | 39(92/238) | 71(92/130) |  |  | 30(6/20) | 5(6/130) | 36(70/197) | 54(70/130) | 36(36/99) | 28(36/130) | 46(25/54) | 19(25/130) | 35(7/20) | 5(7/130) |  |  |  |  |
| Guan W et al., 2020 | 16(100/637) | 58(100/173) | 29(44/153) | 27(44/163) | 24(38/158) | 22(38/172) | 25(41/165) | 24(41/173) | 35(28/81) | 16(28/173) | 37(10/27) | 6(10/173) | 50(6/12) | 3(6/173) | 38(3/8) | 4(3/67) | 4(1/23) | 1(1/173) |
| Guan Wei-Jie, 2020 (ERJ) |  |  |  |  |  |  | 20(53/269) | 40(53/131) | 10(13/130) | 10(13/131) | 22(13/59) | 10(13/131) | 50(12/24) | 9(12/131) | 29(6/21) | 5(6/131) | 11(3/28) | 2(3/131) |
| Hu L et al., 2020 | 55(91/166) | 53(91/172) | 70(78/111) | 45(78/172) | 68(26/38) | 15(26/172) | 63(66/105) | 38(66/172) | 70(33/47) | 19(33/172) | 80(33/41) | 19(33/172) | 100(6/6) | 3(6/172) | 43(3/7) | 2(3/172) | 40(2/5) | 1(2/172) |
| Huang C et al., 2020 | 37(11/30) | 85(11/13) |  |  | 0(0/3) | 0(0/13) | 33(2/6) | 15(2/13) | 13(1/8) | 8(1/13) | 50(3/6) | 23(3/13) |  |  |  |  |  |  |
| Li X et al., 2020 | 55(153/279) | 57(153/169) | 64(135/210) | 50(135/269) | 55(51/92) | 19(51/265) | 63(104/166) | 39(104/269) | 63(52/83) | 19(52/269) | 82(28/34) | 10(28/269) | 76(13/17) | 5(13/269) | 60(6/10) | 2(6/269) |  |  |
| Liu W et al., 2020 | 18(7/39) | 64(7/11) |  |  | 60(3/5) | 27(3/11) | 25(2/8) | 18(2/11) | 40(2/5) | 18(2/11) | 50(1/2) | 9(1/11) |  |  |  |  |  |  |
| Richardson S et al., 2020 |  |  | 18(200/1095) | 54(200/373) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Shi Y et al., 2020 | 14(36/259) | 73(36/49) |  |  | 15(6/40) | 12(6/49) | 26(26/99) | 53(26/49) | 24(7/29) | 18(7/40) | 36(4/11) | 10(4/40) |  |  | 29(2/7) | 5(2/40) | 9(2/22) | 5(2/40) |
| Sun L et al., 2020 | 26(8/31) | 53(8/15) | 80(8/10) | 53(8/15) |  |  | 75(6/8) | 40(6/15) | 40(2/5) | 13(2/15) | 100(1/1) | 7(1/15) |  |  | 100(1/1) | 7(1/15) | 67(2/3) | 13(2/15) |
| Tian S et al., 2020 | 20(26/127) | 57(26/46) | 42(20/48) | 43(20/46) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wan S et al., 2020 | 29(21/72) | 53(21/40) |  |  | 11(1/9) | 3(1/40) | 31(4/13) | 10(4/40) | 75(9/12) | 23(9/40) | 86(6/7) | 15(6/40) |  |  |  |  | 50(1/2) | 3(1/40) |
| Wang D et al., 2020 | 29(22/75) | 61(22/36) |  |  |  |  | 49(21/43) | 58(21/36) | 57(8/14) | 22(8/36) | 45(9/20) | 25(9/36) | 75(3/4) | 8(3/36) | 50(2/4) | 6(2/36) | 0(0/4) | 0(0/36) |
| Wang R et al., 2020 | 23(16/71) | 64(16/25) |  |  | 44(7/16) | 28(7/25) |  |  |  |  |  |  |  |  |  |  |  |  |
| Wang Z et al., 2020 | 22(7/32) | 50(7/14) |  |  |  |  | 56(5/9) | 36(5/14) | 86(6/7) | 43(6/14) | 63(5/8) | 36(5/14) | 50(2/4) | 14(2/14) |  |  | 0(0/1) | 0(0/14) |
| Wu C et al., 2020 | 47(60/128) | 71(60/84) |  |  |  |  | 59(23/39) | 27(23/84) | 73(16/22) | 19(16/84) | 63(5/8) | 6(5/84) |  |  |  |  |  |  |
| Yao Q et al., 2020 | 14(6/43) | 46(6/13) | 18(3/17) | 23(3/13) | 0(0/4) | 0(0/12) | 13(2/16) | 15(2/13) | 40(2/5) | 15(2/13) | 0(0/4) | 0(0/13) |  |  |  |  | 0(0/2) | 0(0/13) |
| Young BE et al., 2020 | 22(2/9) | 33(2/6) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yu X et al., 2020 | 12(20/172) | 77(20/26) | 20(21/107) | 81(21/26) | 8(2/26) | 8(2/26) | 14(9/64) | 35(9/26) | 18(5/28) | 19(5/26) | 33(8/24) | 31(8/26) |  |  |  |  |  |  |
| Zhang G et al., 2020 | 40(21/53) | 66(21/32) | 41(7/17) | 22(7/32) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Zhang JJ et at., 2020 | 46(33/71) | 57(33/58) | 34(20/58) | 34(20/58) | 67(6/9) | 10(6/58) | 52(22/42) | 38(22/58) | 47(8/17) | 14(8/58) | 57(4/7) | 7(4/58) | 100(2/2) | 3(2/58) | 100(2/2) | 3(2/58) | 50(4/8) | 7(4/58) |
| Zhao X-Y et al., 2020 | 29(14/49) | 47(14/30) | 50(8/16) | 27(8/30) |  |  |  |  | 33(1/3) | 3(1/30) |  |  |  |  | 100(1/1) | 3(1/30) |  |  |
| Zheng S et al., 2020 |  |  |  |  |  |  | 89(31/35) | 42(31/74) | 91(10/11) | 14(10/74) | 100(7/7) | 9(7/74) | 100(4/4) | 5(4/74) | 100(1/1) | 1(1/74) | 67(2/3) | 3(2/74) |
| Zheng Y et al., 2020 |  |  |  |  | 25(2/8) | 7(2/30) |  |  | 25(1/4) | 3(1/30) |  |  |  |  |  |  |  |  |
| Zhang J et al., 2020 | 64 (205/321) | 50 (205/409) | 78 (246/315) | 60 (246/409) |  |  |  |  |  |  | 80 (131/164) | 32 (131/409) |  |  |  |  |  |  |
| Kalligeros M 2020 | 46 (29/63) | 66 (29/44) |  |  | 42 (20/48) | 45 (20/44) | 47 (31/66) | 70 (31/44) | 55 (21/38) | 48 (21/44) | 56 (14/25) | 32 (14/44) | 55 (11/20) | 25 (11/44) | 36 (4/11) | 9 (4/44) | 0 (0/44) | 0 (0/44) |
| Cao Z 2020 | 42 (16/38) | 59 (16/27) |  |  | 80 (4/5) | 15 (4/27) | 20 (4/20) | 15 (4/27) | 50 (3/6) | 11 (3/27) | 50 (5/10) | 19 (5/27) | 0 (0/5) | 0 (0/27) |  |  |  |  |
| Hsu H 2020 | 10 (127/1312) | 68 (127/188) | 10 (91/928) | 48 (91/188) |  |  | 8 (105/1248) | 56 (105/188) | 10 (71/708) | 38 (71/188) | 8 (16/190) | 9 (16/188) | 12 (17/146) | 9 (17/188) | 11 (46/438) | 24 (46/188) |  |  |
| Hur K 2020 | 32 (88/271) | 64 (88/138) | 38 (83/217) | 60 (83/138) | 34 (55/163) | 40 (55/138) | 31 (82/267) | 59 (82/138) | 35 (56/160) | 41 (56/138) | 36 (40/111) | 29 (40/138) | 29 (23/78) | 17 (23/138) | 29 (12/42) | 9 (12/138) |  |  |
| Shabrawishi M 2020 | 14 (13/90) | 81 (13/16) |  |  |  |  | 7 (3/42) | 19 (3/16) | 18 (7/38) | 44 (7/16) | 27 (3/11) |  | 0 (1/1) | 6 (1/16) | 40 (4/10) | 25 (4/16) | 0 (1/16) | 6 (1/16) |
| Garibaldi B 2020 | 22 (96/443) | 56 (96/171) | 0 (NR/) | 0 (NR/) | 24 (58/239) | 34 (58/171) | 18 (71/389) | 42 (71/171) | 22 (56/252) | 33 (56/171) | 24 (64/266) |  | 19 (28/151) |  | 22 (23/106) | 13 (23/171) | 44 (15/171) | 9 (15/171) |
| Zhan et al., 2020 | 39 (73/186) | 49 (73/148) | 48 (105/221) | 71 (105/148) | 54 (25/46) | 17 (25/148) |  |  | 52 (46/88) | 31 (46/148) | 49 (77/156) |  | 77 (24/31) |  | 57 (16/28) | 11 (16/148) |  |  |
| Wei et al., 2020 | 6 (10/155) | 71 (10/14) | 18 (11/60) | 79 (11/14) | 7 (2/28) | 14 (2/14) | 17 (8/47) | 57 (8/14) | 14 (2/14) | 14 (2/14) | 33 (4/12) |  | 29 (2/7) |  |  |  |  |  |
| Sun L et al., 2020 | 26 (8/31) | 53 (8/15) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Khamis F et al., 2020 | 40 (21/53) | 88 (21/24) |  |  | 25 (1/4) | 4 (1/24) | 35 (7/20) | 29 (7/24) | 55 (11/20) | 46 (11/24) | 50 (2/4) | 8 (2/24) |  |  | 25 (1/4) | 4 (1/24) |  |  |
| Gregoriano et al., 2020 | 45 (28/62) | 80 (28/35) |  |  | 33 (2/6) | 8 (2/24) | 34 (19/56) | 54 (19/35) | 36 (8/22) | 23 (8/35) | 32 (9/28) | 26 (9/35) | 57 (4/7) | 11 (4/35) | 36 (10/28) | 29 (10/35) |  |  |
| Pellaud et al., 2020 | 29 (34/119) | 69 (34/49) | 23 (34/148) | 69 (34/49) | 32 (18/56) | 37 (18/49) | 23 (27/118) | 55 (27/49) | 21 (11/52) | 22 (11/49) | 23 (6/26) | 12 (6/49) | 31 (5/16) | 10 (5/49) |  |  |  |  |
| Liu S et al., 2020 | 12 (41/329) | 64 (41/64) | 33 (26/79) | 41 (26/64) |  |  | 21 (19/91) | 30 (19/64) | 25 (10/40) | 16 (10/64) |  |  |  |  |  |  |  |  |
| Shahriarirad R et al., 2020 | 10 (7/71) | 64 (7/11) | 11 (3/28) | 27 (3/11) |  |  | 23 (5/22) | 45 (5/11) | 13 (2/16) | 18 (2/11) | 25 (4/16) | 36 (4/11) | 11 (1/9) | 9 (1/11) | 0 (0/6) | 0 (0/11) |  |  |
| Suleyman et al., 2020 | 48 (80/165) | 57 (80/141) | 46 (92/202) | 65 (92/141) | 42 (58/137) | 41 (58/141) | 43 (111/258) | 79 (111/141) | 47 (73/156) | 52 (73/141) | 46 (26/56) | 18 (26/141) | 44 (18/41) | 13 (18/141) | 52 (83/161) | 59 (83/141) |  |  |
| Shekhar et al., 2020 | 65 (15/23) | 44 (15/34) | 64 (9/14) | 26 (9/34) |  |  | 82 (14/17) | 41 (14/34) | 89 (16/18) | 47 (16/34) |  |  |  |  |  |  | 0 (2/34) | 6 (2/34) |
| Lendorf et al., 2020 | 25 (17/67) | 85 (17/20) |  |  | 16 (7/43) | 35 (7/20) | 24 (9/38) | 45 (9/20) | 44 (7/16) | 35 (7/20) | 16 (3/19) | 15 (3/20) | 0 (0/8) | 0 (0/20) | 38 (3/8) | 15 (3/20) |  |  |
| Jang et al., 2020 | 29 (14/48) | 61 (14/23) |  |  |  |  | 32 (12/37) | 52 (12/23) | 48 (14/29) | 61 (14/23) | 10 (1/10) | 4 (1/23) | 50 (2/4) | 9 (2/23) |  |  | 0 (0/23) | 0 (0/23) |
| Argenziano et al., 2020 | 31 (158/511) | 67 (158/236) | 26 (101/388) | 43 (101/236) | 30 (59/198) | 25 (59/236) | 30 (158/525) | 67 (158/236) | 30 (101/333) | 43 (101/236) | 25 (29/115) | 12 (29/236) | 25 (14/56) | 6 (14/236) | 22 (27/125) | 11 (27/236) | 29 (5/236) | 2 (5/236) |

Note: cells are shaded for no data in the study.