

Supplementary Table 1: Comparisons of the clinical and laboratory features between SARS and MERS

	SARS ¹⁻¹²	MERS ¹³⁻³¹
Date of first case (place)	November 2002 (Guangdong, China)	April 2012 (Zarqa, Jordan) June 2012 (Jeddah, KSA)
Incubation period	Mean: 4.6 days (95% CI: 3.8-5.8) Range: 2-14 days	Mean: 5.2 days (95% CI: 1.9-14.7) Range: 2-15 days
Serial interval	8.4 days	7.6 days
Basic reproduction number	0.3-4.1	0.3-1.3
Age group distribution		
Adults	Adults (93%)	Adults (98%)
Children	Children (5-7%)	Children (2%)
Age (years):	Range: 1-91 Mean: 40	Range: 1-94 Median: 50
Gender	M: 43%, F: 57%	M: 65%, F: 36%
Mortality		
CFR (overall)	10%	36%*
CFR (patients with co-morbidities)	46%	60%
Disease progression		
Time from onset to mechanical ventilation	11 days (mean)	7 days (median)
Time from onset to acute renal failure	20 days (median)	11 days (median)
Time from onset to death	24 days (mean)	12 days (median)
Presenting symptoms		
Fever >38°C	99-100%	98%
Chills / rigors	15-73%	87%
Cough	62-100%	83%
Shortness of breath	40-42%	72%
Headache	20-56%	11%
Myalgia/Malaise	31-61%	32-38%
Nausea, vomiting, and/or diarrhoea	20-35%	21-26% ^o
Investigations		
CXR abnormalities	94-100%	90-100%
Leukopenia (<4.0 x 10 ⁹ /L)	25-35%	14%
Lymphopenia (<1.5 x 10 ⁹ /L)	68-85%	32%
Thrombocytopenia (<140 x 10 ⁹ /L)	40-45%	36%
Abnormal liver function tests	20-30%	11-14%
Acute renal failure	7%	43-100%
Risk factors associated with poor clinical outcome (severe disease or death)	Advanced age, male gender, comorbidities (eg: DM), high initial or peak LDH, high initial neutrophil count, and low initial CD4/CD8 lymphocyte counts at presentation.	Advanced age, male gender, comorbid illness (eg: obesity, DM, heart and lung diseases, and immunocompromising states), low serum albumin, concomitant infections, positive plasma MERS-CoV RNA.

*The lower CFR (36/186; 19%) in the Republic of Korea may be related to the higher proportion of asymptomatic and mild cases among healthcare workers and household contacts detected in active contact tracing, and the availability of intensive supportive care.

Abbreviations: CFR, case-fatality rate; CI, confidence interval; CXR, chest X-ray; DM, diabetes mellitus; F, female; KSA, Kingdom of Saudi Arabia; LDH, lactate dehydrogenase; M, male; MERS, Middle East respiratory syndrome; SARS, severe acute respiratory syndrome.

Supplementary References

1. Cheng VC, Lau SK, Woo PC, Yuen KY. Severe acute respiratory syndrome coronavirus as an agent of emerging and reemerging infection. *Clinical microbiology reviews*. 2007;20(4):660-94.
2. Lee N, Hui D, Wu A, Chan P, Cameron P, Joynt GM, et al. A major outbreak of severe acute respiratory syndrome in Hong Kong. *The New England journal of medicine*. 2003;348(20):1986-94.
3. Tsang KW, Ho PL, Ooi GC, Yee WK, Wang T, Chan-Yeung M, et al. A cluster of cases of severe acute respiratory syndrome in Hong Kong. *The New England journal of medicine*. 2003;348(20):1977-85.
4. Zhao Z, Zhang F, Xu M, Huang K, Zhong W, Cai W, et al. Description and clinical treatment of an early outbreak of severe acute respiratory syndrome (SARS) in Guangzhou, PR China. *Journal of medical microbiology*. 2003;52(Pt 8):715-20.
5. Xu RH, He JF, Evans MR, Peng GW, Field HE, Yu DW, et al. Epidemiologic clues to SARS origin in China. *Emerging infectious diseases*. 2004;10(6):1030-7.
6. Peiris JS, Lai ST, Poon LL, Guan Y, Yam LY, Lim W, et al. Coronavirus as a possible cause of severe acute respiratory syndrome. *Lancet*. 2003;361(9366):1319-25.
7. Hsu LY, Lee CC, Green JA, Ang B, Paton NI, Lee L, et al. Severe acute respiratory syndrome (SARS) in Singapore: clinical features of index patient and initial contacts. *Emerging infectious diseases*. 2003;9(6):713-7.
8. Booth CM, Matukas LM, Tomlinson GA, Rachlis AR, Rose DB, Dwosh HA, et al. Clinical features and short-term outcomes of 144 patients with SARS in the greater Toronto area. *JAMA*. 2003;289(21):2801-9.
9. Hui DS, Sung JJ. Severe acute respiratory syndrome. *Chest*. 2003;124(1):12-5.
10. Peiris JS, Chu CM, Cheng VC, Chan KS, Hung IF, Poon LL, et al. Clinical progression and viral load in a community outbreak of coronavirus-associated SARS pneumonia: a prospective study. *Lancet*. 2003;361(9371):1767-72.
11. Chu KH, Tsang WK, Tang CS, Lam MF, Lai FM, To KF, et al. Acute renal impairment in coronavirus-associated severe acute respiratory syndrome. *Kidney international*. 2005;67(2):698-705.
12. Zhong NS, Zheng BJ, Li YM, Poon, Xie ZH, Chan KH, et al. Epidemiology and cause of severe acute respiratory syndrome (SARS) in Guangdong, People's Republic of China, in February, 2003. *Lancet*. 2003;362(9393):1353-8.
13. Chan JF, Lau SK, To KK, Cheng VC, Woo PC, Yuen KY. Middle East respiratory syndrome coronavirus: another zoonotic betacoronavirus causing SARS-like disease. *Clinical microbiology reviews*. 2015;28(2):465-522.
14. Zaki AM, van Boheemen S, Bestebroer TM, Osterhaus AD, Fouchier RA. Isolation of a novel coronavirus from a man with pneumonia in Saudi Arabia. *The New England journal of medicine*. 2012;367(19):1814-20.
15. World Health Organization. Middle East Respiratory Syndrome coronavirus (MERS-CoV) – Saudi Arabia. <http://www.who.int/csr/don/01-october-2015-mers-jordan/en/>. [accessed on 10 October 2015]
16. Assiri A, McGeer A, Perl TM, Price CS, Al Rabeeah AA, Cummings DA, et al. Hospital outbreak of Middle East respiratory syndrome coronavirus. *The New England journal of medicine*. 2013;369(5):407-16.

17. Memish ZA, Zumla AI, Al-Hakeem RF, Al-Rabeeah AA, Stephens GM. Family cluster of Middle East respiratory syndrome coronavirus infections. *The New England journal of medicine*. 2013;368(26):2487-94.
18. Oboho IK, Tomczyk SM, Al-Asmari AM, Banjar AA, Al-Mugti H, Aloraini MS, et al. 2014 MERS-CoV outbreak in Jeddah--a link to health care facilities. *The New England journal of medicine*. 2015;372(9):846-54.
19. Hui DS, Peiris M. Middle East Respiratory Syndrome. *American journal of respiratory and critical care medicine*. 2015;192(3):278-9.
20. Zumla A, Hui DS, Perlman S. Middle East respiratory syndrome. *Lancet*. 2015.
21. Hui DS, Memish ZA, Zumla A. Severe acute respiratory syndrome vs. the Middle East respiratory syndrome. *Current opinion in pulmonary medicine*. 2014;20(3):233-41. A comprehensive review and comparison of SARS and MERS.
22. Arabi YM, Arifi AA, Balkhy HH, Najm H, Aldawood AS, Ghabashi A, et al. Clinical course and outcomes of critically ill patients with Middle East respiratory syndrome coronavirus infection. *Annals of internal medicine*. 2014;160(6):389-97.
23. Assiri A, Al-Tawfiq JA, Al-Rabeeah AA, Al-Rabiah FA, Al-Hajjar S, Al-Barrak A, et al. Epidemiological, demographic, and clinical characteristics of 47 cases of Middle East respiratory syndrome coronavirus disease from Saudi Arabia: a descriptive study. *The Lancet infectious diseases*. 2013;13(9):752-61.
24. Eckerle I, Muller MA, Kallies S, Gotthardt DN, Drosten C. In-vitro renal epithelial cell infection reveals a viral kidney tropism as a potential mechanism for acute renal failure during Middle East Respiratory Syndrome (MERS) Coronavirus infection. *Virology journal*. 2013;10:359.
25. Saad M, Omrani AS, Baig K, Bahloul A, Elzein F, Matin MA, et al. Clinical aspects and outcomes of 70 patients with Middle East respiratory syndrome coronavirus infection: a single-center experience in Saudi Arabia. *International journal of infectious diseases*. 2014;29:301-6.
26. Al-Tawfiq JA, Hinedi K, Ghandour J, Khairalla H, Musleh S, Ujayli A, et al. Middle East respiratory syndrome coronavirus: a case-control study of hospitalized patients. *Clinical infectious diseases*. 2014;59(2):160-5.
27. Breban R, Riou J, Fontanet A. Interhuman transmissibility of Middle East respiratory syndrome coronavirus: estimation of pandemic risk. *Lancet*. 2013;382(9893):694-9.
28. Cauchemez S, Fraser C, Van Kerkhove MD, Donnelly CA, Riley S, Rambaut A, et al. Middle East respiratory syndrome coronavirus: quantification of the extent of the epidemic, surveillance biases, and transmissibility. *The Lancet infectious diseases*. 2014;14(1):50-6.
29. Omrani AS, Saad MM, Baig K, Bahloul A, Abdul-Matin M, Alaidaroos AY, et al. Ribavirin and interferon alfa-2a for severe Middle East respiratory syndrome coronavirus infection: a retrospective cohort study. *The Lancet infectious diseases*. 2014;14(11):1090-5.
30. Shalhoub S, Farahat F, Al-Jiffri A, Simhairi R, Shamma O, Siddiqi N, et al. IFN-alpha2a or IFN-beta1a in combination with ribavirin to treat Middle East respiratory syndrome coronavirus pneumonia: a retrospective study. *The Journal of antimicrobial chemotherapy*. 2015;70(7):2129-32.

31. Al-Abdallat MM, Payne DC, Alqasrawi S, Rha B, Tohme RA, Abedi GR, et al. Hospital-associated outbreak of middle East respiratory syndrome coronavirus: a serologic, epidemiologic, and clinical description. *Clinical infectious diseases*. 2014;59(9):1225-33.