

COVID-19 Clinical Features

3/26/2020

Clinical Feature	Rationale	Ref.
Symptom Features		
• Fever	Present in 77-99% of cases, present initially in 43.8%	2-6,12
• Cough	48-82% of cases	2-6,12
• Fatigue/Myalgia	32-52% of cases	2-6,12
• Unexplained ARDS	14-29%; median from 8 days to ARDS onset, progresses rapidly after onset of dyspnea/hypoxia	2-6,12
• Dyspnea	Delayed symptom (5-7 days), associated with severe disease	2-6,12
• Rhinorrhea or nasal congestion	Sino-nasal symptoms are uncommon (<4%). Sore throat in 14%	2-6,12
• Diarrhea	Up to 14% of patients have diarrhea; in 3% of cases, this is the only presenting complaint	Lei Pan et al pre print, 12
• Anosmia	Increasingly reported cases of loss of sense of smell and	Unpublished data
• Duration of Symptoms (days)	Median time to progress to lower respiratory disease is 5-7 days	2-6,12
• Demographic Features		
• Age >40	73% of symptomatic cases occur in age >40; median age 51	1-6,12
• Comorbidit(ies) present	23-50% of symptomatic patients had at least one comorbidity; associated with more severe disease	1-6,12
Laboratory Features		
• White Blood Cell count <10 K/ μ L	WBC is <10 K/ μ L in 70-99% of cases; median is 4.7-6.0 K/ μ L and is <4.0 k/ μ L in up to 34%	2-6,12
• Absolute Lymphocyte count <1.0 k/ μ L	~55% (35-72%) have lymphopenia; median range (0.8-1.0 k/ μ L)	2-6,12
• Lactate Dehydrogenase >245 U/L	LDH elevated in 41-76% of cases, median (205-286 U/L)	3-6,12
• Mild thrombocytopenia	Median platelet count is 160 k/ μ L	3-6,12
• Procalcitonin <0.1	Procalcitonin levels are often low in early disease	3-6,12
• Viral Co-Infection	Viral co-infection may occur in up to 9% of cases overall; is more common in children and immunocompromised hosts. Co-infection with influenza is less common than with other respiratory viruses	Unpublished Stanford data
CT Imaging Features		
• CT Chest positive for Ground Glass Opacities (GGO)	GGO in 86%; often bilateral, peripheral & posterior; "crazy paving" may be visible. Not specific to COVID-19. More consolidation later in course. GGO visible as early as 2 days after symptom onset. Current ACR guidelines state that CT Imaging only rarely adds to diagnostic work-up for COVID-19	7-12

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References

1. Chinese Centers for Disease Control. An update on the epidemiological characteristics of novel coronavirus pneumonia (COVID-19). Chin J Epidemiol. 2020;41.
2. Chen N, Zhou M, Dong X, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. Lancet. Feb 15 2020;395(10223):507-513.
3. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet. Feb 15 2020;395(10223):497-506.
4. Kui L, Fang YY, Deng Y, et al. Clinical characteristics of novel coronavirus cases in tertiary hospitals in Hubei Province. Chinese medical journal. Feb 7 2020.
5. Wang D, Hu B, Hu C, et al. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. Jama. Feb 7 2020.
6. Xu XW, Wu XX, Jiang XG, et al. Clinical findings in a group of patients infected with the 2019 novel coronavirus (SARS-Cov-2) outside of Wuhan, China: retrospective case series. Bmj. Feb 19 2020;368:m606.
7. Bernheim A, Mei X, Huang M, et al. Chest CT Findings in Coronavirus Disease-19 (COVID-19): Relationship to Duration of Infection. Radiology. Feb 20 2020:200463.
8. Zhang L, Qianqian; Chen, Wei; Lu, Guang Ming. Implications of Chest Computed Tomography for Prevention and Control of 2019 Novel Coronavirus Disease (COVID-19): A Chinese Multicenter Cohort Study. In Press. 2020.
9. Ai T, Yang Z, Hou H, et al. Correlation of Chest CT and RT-PCR Testing in Coronavirus Disease 2019 (COVID-19) in China: A Report of 1014 Cases. Radiology. Feb 26 2020:200642.
10. Huang P, Liu T, Huang L, et al. Use of Chest CT in Combination with Negative RT-PCR Assay for the 2019 Novel Coronavirus but High Clinical Suspicion. Radiology. Feb 12 2020:200330.
11. Xie X, Zhong Z, Zhao W, Zheng C, Wang F, Liu J. Chest CT for Typical 2019-nCoV Pneumonia: Relationship to Negative RT-PCR Testing. Radiology. Feb 12 2020:200343.
12. Wei-jie Guan, et al. for the China Medical Treatment Expert Group for Covid-19. Clinical characteristics of coronavirus disease 2019 in China. N Eng J Med. ePub Feb 28. DOI: 10.1056/NEJMoa2002032